ESD 80-728 PDR 40-8697

ROCKY MOUNTAIN ENERGY COMPANY

THIS DOCUMENT CONTAINS POOR QUALITY PAGES

ENVIRONMENTAL SERVICES
CLARK M. BOLSER
MANAGER

August 1, 1980

Mr. J. E. Rothfleisch
U. S. Nuclear Regulatory Commission
Uranium Recovery Licensing Branch 396-SS
Willste Building
7915 Eastern Avenue
Silver Springs, Maryland 20910

RECEIVED
1980 AUG 6 AM 11 12
U.S. NUCLEAR REG
NMSS MAIL SECTION

Dear Mr. Rothfleisch:

Re: Docket No. 40-8697
License No. SUA-1338
Pattern II Baseline Data and Analysis

Enclosed is a copy of the information you requested for Pattern II monitor wells at the Company's Reno Creek site. This includes the raw laboratory data obtained from baseline samples and the results of statistical analyses used to calculate Upper Control Limits. These data are the basis for the "Preliminary Water Quality" and "Preliminary Control Limit" tables presented in our July 25, 1980 letter.

Please note that computer printouts were not available for the tests performed using Chauvenet's Criteria. All data were hand transcribed from a computer television monitor. You can, however, verify our results if you use the following formula to remove outlying data:

$$\frac{|n-\bar{n}|}{s}$$

where: n is the suspected outlying data point;

$\bar{n}$ is the average of all data for a certain parameter and;

s is the standard deviation.

If the resulting value exceeds the theoretical values shown in the table below, the data point should be rejected.

FEE EXEMPT rifo

17038

4704 HARLAN STREET DENVER COLORADO 80212 (303) 433-6841

8008270 191

Chauvenet's Criterion for Rejection of Data

Number of Measurements	Theoretical Value of $\frac{\lvert n-\bar{n}\rvert}{s}$	Number of Measurements	Theoretical Value of $\frac{\lvert n-\bar{n}\rvert}{s}$
2	1.15	15	2.13
3	1.38	20	2.24
4	1.54	25	2.33
5	1.65	30	2.40
6	1.73	35	2.45
7	1.80	40	2.50
8	1.86	50	2.58
9	1.91	75	2.71
10	1.96	100	2.81
12	2.04	200	3.02

We hope this information will answer any questions you might have. Please contact me or Mike Neumann should you wish to discuss the matter in more detail.

Sincerely,

Richard E. Iwanicki

Richard E. Iwanicki
Environmental Specialist

/afg

cc: J. A. Yopps
P. J. Bosse
R. E. Hynes
C. M. Bolser
D. Morrow (DEQ)
M. Hulbert (DEQ)
K. W. Loest
M. R. Neumann

Enclosure

DESCRIPTIVE STATISTICS

N =	4
MEAN =	0.0425
VARIANCE =	0.00149166666667
STD DEV =	0.0386221007542
DATA MIN =	0.02
DATA MAX =	0.1
DATA RANGE =	0.08
STANDARD ERR OF MEAN =	0.0193110503771
COEFFICIENT OF VARIATION =	90.8755311863
SKEWNESS =	1.10486774046
KURTOSIS =	2.29072126338

```
M16 MN

     ↓ SYNTAX ERROR
M16 MN
```

DESCRIPTIVE STATISTICS

N =	4
MEAN =	14.1
VARIANCE =	33.1066666667
STD DEV =	5.75383929795
DATA MIN =	8.4
DATA MAX =	22
DATA RANGE =	13.6
STANDARD ERR OF MEAN =	2.87691964898
COEFFICIENT OF VARIATION =	40.8073709075
SKEWNESS =	0.603311301975
KURTOSIS =	2.01533796713

M16 MG

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0525
VARIANCE =	0.0045125
STD DEV =	0.0671751442127
DATA MIN =	0.005
DATA MAX =	0.1
DATA RANGE =	0.095
STANDARD ERR OF MEAN =	0.0475
COEFFICIENT OF VARIATION =	127.952655643
SKEWNESS =	3.237273727E-14
KURTOSIS =	1

M16 PB

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.0566666666667
VARIANCE =	7.466666667E-4
STD DEV =	0.0273252020426
DATA MIN =	0.03
DATA MAX =	0.1
DATA RANGE =	0.0,
STANDARD ERR OF MEAN =	0.0111554670205
COEFFICIENT OF VARIATION =	48.220944781
SKEWNESS =	0.703947021108
KURTOSIS =	1.93048469388

M16 FE

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.0166666666667
VARIANCE =	3.333333333E-5
STD DEV =	0.0057735026919
DATA MIN =	0.01
DATA MAX =	0.02
DATA RANGE =	0.01
STANDARD ERR OF MEAN =	0.00333333333333
COEFFICIENT OF VARIATION =	34.6410161514
SKEWNESS =	-0.707106781187
KURTOSIS =	1.50000000001

M16 CU

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.04333333333333
VARIANCE =	0.00123333333333
STD DEV =	0.0351188458428
DATA MIN =	0.01
DATA MAX =	0.08
DATA RANGE =	0.07
STANDARD ERR OF MEAN =	0.0202 5875101
COEFFICIENT OF VARIATION =	81.0434904066
SKEWNESS =	0.172800544079
KURTOSIS =	1.5

M16 G CR

DESCRIPTIVE STATISTICS

N =	8
MEAN =	8.4875
VARIANCE =	8.81839285714
STD DEV =	2.96957789208
DATA MIN =	3.5
DATA MAX =	13
DATA RANGE =	9.5
STANDARD ERR OF MEAN =	1.04990433238
COEFFICIENT OF VARIATION =	34.9876629406
SKEWNESS =	-0.402837004777
KURTOSIS =	2.49604048962

M16 CL

DESCRIPTIVE STATISTICS

N =	4
MEAN =	1.675
VARIANCE =	7.4225
STD DEV =	2.72442654517
DATA MIN =	0
DATA MAX =	5.7
DATA RANGE =	5.7
STANDARD ERR OF MEAN =	1.36221327258
COEFFICIENT OF VARIATION =	162.652331055
SKEWNESS =	1.05639875173
KURTOSIS =	2.245966715

M16 C03

DESCRIPTIVE STATISTICS

N =	7
MEAN =	46.5714285714
VARIANCE =	252.619047619
STD DEV =	15.8939940738
DATA MIN =	30
DATA MAX =	73
DATA RANGE =	43
STANDARD ERR OF MEAN =	6.00736509413
COEFFICIENT OF VARIATION =	34.128208134
SKEWNESS =	0.501545682833
KURTOSIS =	2.06199253634

M16 HCO3

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.186666666667
VARIANCE =	0.00653333333333
STD DEV =	0.0808290376866
DATA MIN =	0.1
DATA MAX =	0.26
DATA RANGE =	0.16
STANDARD ERR OF MEAN =	0.0466666666667
COEFFICIENT OF VARIATION =	43.3012701892
SKEWNESS =	-0.294799620146
KURTOSIS =	1.5

M16 BA

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.00716666666667
VARIANCE =	8.966666667E-6
STD DEV =	0.00299443929086
DATA MIN =	0.005
DATA MAX =	0.011
DATA RANGE =	0.006
STANDARD ERR OF MEAN =	0.00122247472139
COEFFICIENT OF VARIATION =	41.782873826
SKEWNESS =	0.657308998685
KURTOSIS =	1.4919777228

16 U308

DESCRIPTIVE STATISTICS

N =	6
MEAN =	105.666666667
VARIANCE =	46.6666666668
STD DEV =	6.83130051065
DATA MIN =	98
DATA MAX =	117
DATA RANGE =	19
STANDARD ERR OF MEAN =	2.78886675512
COEFFICIENT OF VARIATION =	6.46495316465
SKEWNESS =	0.587974732141
KURTOSIS =	2.32697143398

16 CA

DESCRIPTIVE STATISTICS

N =	5
MEAN =	1957
VARIANCE =	220
STD DEV =	14.8323969742
DATA MIN =	1940
DATA MAX =	1975
DATA RANGE =	35
STANDARD ERR OF MEAN =	6.63324958071
COEFFICIENT OF VARIATION =	0.757915021676
SKEWNESS =	0.208145615717
KURTOSIS =	1.43244447314

16 COND

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.075
VARIANCE =	4.5E-4
STD DEV =	0.0212132034356
DATA MIN =	0.06
DATA MAX =	0.09
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.015
COEFFICIENT OF VARIATION =	28.2842712475
SKEWNESS =	-2.055968564E-12
KURTOSIS =	1

M16 NH3

↓ SYNTAX ERROR

M16 NH3

DESCRIPTIVE STATISTICS

N =	4
MEAN =	45.25
VARIANCE =	163.583333333
STD DEV =	12.7899700286
DATA MIN =	30
DATA MAX =	60
DATA RANGE =	30
STANDARD ERR OF MEAN =	6.39498501432
COEFFICIENT OF VARIATION =	28.2651271351
SKEWNESS =	-0.0565008137469
KURTOSIS =	1.69832191

M16 ALK

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.253333333333
VARIANCE =	0.0465333333333
STD DEV =	0.215715862498
DATA MIN =	0.1
DATA MAX =	0.5
DATA RANGE =	0.4
STANDARD ERR OF MEAN =	0.124543611282
COEFFICIENT OF VARIATION =	85.1509983545
SKEWNESS =	0.646062393205
KURTOSIS =	1.5

M16 AL

ENTER SAMPLE IDENTIFICATION RC-LSM 21

ENTER YOUR CALCULATED MEAN .004

ENTER YOUR CALCULATED STANDARD DEVIATION .0024

FOR SAMPLE RC-LSM 21

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.0092

$d_3 = 1.18$

```
ENTER SAMPLE IDENTIFICATION  21-V

ENTER YOUR CALCULATED MEAN  .023

ENTER YOUR CALCULATED STANDARD DEVIATION  .021

FOR SAMPLE 21-V

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.0673
```

```
ENTER SAMPLE IDENTIFICATION  21 PH

ENTER YOUR CALCULATED MEAN  11.78

ENTER YOUR CALCULATED STANDARD DEVIATION  .29


FOR SAMPLE 21 PH

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 10.022
YOUR UPPER CONTROL LIMIT IS 13.538
```

ENTER SAMPLE IDENTIFICATION 21 COND

ENTER YOUR CALCULATED MEAN 2680

ENTER YOUR CALCULATED STANDARD DEVIATION 743

FOR SAMPLE 21 COND

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 926
YOUR UPPER CONTROL LIMIT IS 4434

```
ENTER SAMPLE IDENTIFICATION  21-C03

ENTER YOUR CALCULATED MEAN  167

ENTER YOUR CALCULATED STANDARD DEVIATION  50

FOR SAMPLE 21-C03

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 50.3
YOUR UPPER CONTROL LIMIT IS 283.7
```

```
ENTER SAMPLE IDENTIFICATION  RC-19  U308

ENTER YOUR CALCULATED MEAN  .026

ENTER YOUR CALCULATED STANDARD DEVIATION  .008


FOR SAMPLE RC-19  U308

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0.0074
YOUR UPPER CONTROL LIMIT IS 0.0446
```

```
ENTER SAMPLE IDENTIFICATION  19-V

ENTER YOUR CALCULATED MEAN  .056

ENTER YOUR CALCULATED STANDARD DEVIATION  .028


FOR SAMPLE 19-V

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.1176
```

```
ENTER SAMPLE IDENTIFICATION  19-PH

ENTER YOUR CALCULATED MEAN  9.47

ENTER YOUR CALCULATED STANDARD DEVIATION  .4


FOR SAMPLE 19-PH

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 7.723
YOUR UPPER CONTROL LIMIT IS 11.217
```

```
ENTER SAMPLE IDENTIFICATION  19 COMD

ENTER YOUR CALCULATED MEAN  1968

ENTER YOUR CALCULATED STANDARD DEVIATION  64


FOR SAMPLE 19 COMD

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1643.2
YOUR UPPER CONTROL LIMIT IS 2292.8
```

ENTER SAMPLE IDENTIFICATION 19-HCO3

ENTER YOUR CALCULATED MEAN 55.4

ENTER YOUR CALCULATED STANDARD DEVIATION 5.1

FOR SAMPLE 19-HCO3

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 39.66
YOUR UPPER CONTROL LIMIT IS 71.14

```
ENTER SAMPLE IDENTIFICATION  18-U

ENTER YOUR CALCULATED MEAN  .037

ENTER YOUR CALCULATED STANDARD DEVIATION  .022

FOR SAMPLE 18-U

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.0847
```

ENTER SAMPLE IDENTIFICATION 18-CL

ENTER YOUR CALCULATED MEAN 8.65

ENTER YOUR CALCULATED STANDARD DEVIATION 2.92

FOR SAMPLE 18-CL

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1.945
YOUR UPPER CONTROL LIMIT IS 15.355

ENTER SAMPLE IDENTIFICATION 18-HCO3

ENTER YOUR CALCULATED MEAN 11.2

ENTER YOUR CALCULATED STANDARD DEVIATION 12.5

FOR SAMPLE 18-HCO3

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 37.32

ENTER SAMPLE IDENTIFICATION 18-U308

ENTER YOUR CALCULATED MEAN .022

ENTER YOUR CALCULATED STANDARD DEVIATION .017

FOR SAMPLE 18-U308

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.0582

```
ENTER SAMPLE IDENTIFICATION  18-PH

ENTER YOUR CALCULATED MEAN  10.6

ENTER YOUR CALCULATED STANDARD DEVIATION  .44


FOR SAMPLE 18-PH

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 8.66
YOUR UPPER CONTROL LIMIT IS 12.54
```

ENTER SAMPLE IDENTIFICATION 18 COND

ENTER YOUR CALCULATED MEAN 2060

ENTER YOUR CALCULATED STANDARD DEVIATION 89

FOR SAMPLE 18 COND

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1676
YOUR UPPER CONTROL LIMIT IS 2444

```
ENTER SAMPLE IDENTIFICATION  17-U308

ENTER YOUR CALCULATED MEAN  .033

ENTER YOUR CALCULATED STANDARD DEVIATION  .013

FOR SAMPLE 17-U308

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0.0037
YOUR UPPER CONTROL LIMIT IS 0.0623
```

```
ENTER SAMPLE IDENTIFICATION  17-U

ENTER YOUR CALCULATED MEAN  .056

ENTER YOUR CALCULATED STANDARD DEVIATION  .045

FOR SAMPLE 17-U

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.1516
```

```
ENTER SAMPLE IDENTIFICATION  17-PH

ENTER YOUR CALCULATED MEAN  9.46

ENTER YOUR CALCULATED STANDARD DEVIATION  .8


FOR SAMPLE 17-PH

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 6.914
YOUR UPPER CONTROL LIMIT IS 12.006
```

ENTER SAMPLE IDENTIFICATION 17-COND

ENTER YOUR CALCULATED MEAN 1928

ENTER YOUR CALCULATED STANDARD DEVIATION 39

FOR SAMPLE 17-COND

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1657.2
YOUR UPPER CONTROL LIMIT IS 2198.8

ENTER SAMPLE IDENTIFICATION 17-CL

ENTER YOUR CALCULATED MEAN 8.4

ENTER YOUR CALCULATED STANDARD DEVIATION 2.6

FOR SAMPLE 17-CL

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 2.36
YOUR UPPER CONTROL LIMIT IS 14.44

```
ENTER SAMPLE IDENTIFICATION  17-HCO3

ENTER YOUR CALCULATED MEAN  60.5

ENTER YOUR CALCULATED STANDARD DEVIATION  10


FOR SAMPLE 17-HCO3

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 34.45
YOUR UPPER CONTROL LIMIT IS 86.55
```

ENTER SAMPLE IDENTIFICATION 16-U308

ENTER YOUR CALCULATED MEAN .007

ENTER YOUR CALCULATED STANDARD DEVIATION .003

FOR SAMPLE 16-U308

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 3.0E-4
YOUR UPPER CONTROL LIMIT IS 0.0137

ENTER SAMPLE IDENTIFICATION 16-COND

ENTER YOUR CALCULATED MEAN 1957

ENTER YOUR CALCULATED STANDARD DEVIATION 15

FOR SAMPLE 16-COND

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1731.3
YOUR UPPER CONTROL LIMIT IS 2182.7

DESCRIPTIVE STATISTICS

N =	3
MEAN =	31.6666666667
VARIANCE =	358.333333333
STD DEV =	18.929694486
DATA MIN =	10
DATA MAX =	45
DATA RANGE =	35
STANDARD ERR OF MEAN =	10.9290642072
COEFFICIENT OF VARIATION =	59.7779825874
SKEWNESS =	-0.652012117044
KURTOSIS =	1.5

M18 C03

DESCRIPTIVE STATISTICS

N =	7
MEAN =	101.857142857
VARIANCE =	65.4761904763
STD DEV =	8.09173593713
DATA MIN =	88
DATA MAX =	114
DATA RANGE =	26
STANDARD ERR OF MEAN =	3.05838870921
COEFFICIENT OF VARIATION =	7.94420077979
SKEWNESS =	-0.30600948416
KURTOSIS =	2.69947266122

M18 CA

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.09
VARIANCE =	0.0018
STD DEV =	0.04242640687 12
DATA MIN =	0.06
DATA MAX =	0.12
DATA RANGE =	0.06
STANDARD ERR OF MEAN =	0.03
COEFFICIENT OF VARIATION =	47.1404520791
SKEWNESS =	0
KURTOSIS =	1

M18NH3

DESCRIPTIVE STATISTICS

N =	3
MEAN =	89.3333333333
VARIANCE =	2021.33333333
STD DEV =	44.9592408002
DATA MIN =	40
DATA MAX =	128
DATA RANGE =	88
STANDARD ERR OF MEAN =	25.9572297786
COEFFICIENT OF VARIATION =	50.3275083585
SKEWNESS =	-0.411325752132
KURTOSIS =	1.5

M18 ALK

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.3
VARIANCE =	0.08
STD DEV =	0.282842712475
DATA MIN =	0.1
DATA MAX =	0.5
DATA RANGE =	0.4
STANDARD ERR OF MEAN =	0.2
COEFFICIENT OF VARIATION =	94.2809041582
SKEWNESS =	0
KURTOSIS =	1

M18 AL

DESCRIPTIVE STATISTICS

N =	9
MEAN =	0.0373333333333
VARIANCE =	4.8325E-4
STD DEV =	0.021982947937
DATA MIN =	0.009
DATA MAX =	0.06
DATA RANGE =	0.051
STANDARD ERR OF MEAN =	0.00732764931233
COEFFICIENT OF VARIATION =	58.8828962598
SKEWNESS =	0.0887439592321
KURTOSIS =	1.1938160396

18 V

DESCRIPTIVE STATISTICS

N =	8
MEAN =	8.65
VARIANCE =	8.50285714286
ST. DEV =	2.91596590221
DATA MIN =	5
DATA MAX =	13
DATA RANGE =	8
STANDARD ERR OF MEAN =	1.03094963158
COEFFICIENT OF VARIATION =	33.7105884649
SKEWNESS =	0.290208283947
KURTOSIS =	1.94478306289

```
18 CL

     ↓ SYNTAX ERROR
18 CL
```

DESCRIPTIVE STATISTICS

N =	5
MEAN =	11.2
VARIANCE =	157.2
STD DEV =	12.5379424149
DATA MIN =	0
DATA MAX =	30
DATA RANGE =	30
STANDARD ERR OF MEAN =	5.60713830755
COEFFICIENT OF VARIATION =	111.945914419
SKEWNESS =	0.55926529552
KURTOSIS =	1.98441233028

18 HCO3

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.022
VARIANCE =	2.865E-4
STD DEV =	0.0169263108798
DATA MIN =	0.007
DATA MAX =	0.048
DATA RANGE =	0.041
STANDARD ERR OF MEAN =	0.00756967634711
COEFFICIENT OF VARIATION =	76.9377767264
SKEWNESS =	0.748370367001
KURTOSIS =	2.01116106101

M18 U308

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.015
VARIANCE =	5.0E-5
STD DEV =	0.007071067811187
DATA MIN =	0.01
DATA MAX =	0.02
DATA RANGE =	0.01
STANDARD ERR OF MEAN =	0.005
COEFFICIENT OF VARIATION =	47.1404520791
SKEWNESS =	0
KURTOSIS =	1

M18 ZN

DESCRIPTIVE STATISTICS

N =	7
MEAN =	1384.28571429
VARIANCE =	3128.5714286
STD DEV =	55.9336341444
DATA MIN =	1310
DATA MAX =	1460
DATA RANGE =	150
STANDARD ERR OF MEAN =	21.1409265529
COEFFICIENT OF VARIATION =	4.04061340568
SKEWNESS =	-0.066762727992
KURTOSIS =	1.78972843248

M18 TDS

DESCRIPTIVE STATISTICS

N =	7
MEAN =	904.571428571
VARIANCE =	6120.28571429
STD DEV =	78.2322549483
DATA MIN =	777
DATA MAX =	1020
DATA RANGE =	243
STANDARD ERR OF MEAN =	29.5690130138
COEFFICIENT OF VARIATION =	8.64854366137
SKEWNESS =	-0.20279332404
KURTOSIS =	2.39659559036

M18 S04

DESCRIPTIVE STATISTICS

N =	7
MEAN =	287
VARIANCE =	654.666666667
STD DEV =	25.5864547499
DATA MIN =	252
DATA MAX =	315
DATA RANGE =	63
STANDARD ERR OF MEAN =	9.67077088571
COEFFICIENT OF VARIATION =	8.91514102783
SKEWNESS =	-0.0824733425158
KURTOSIS =	1.44182945773

M18 NA

DESCRIPTIVE STATISTICS

N =	7
MEAN =	7.35714285714
VARIANCE =	5.62285714286
STD DEV =	2.37125644814
DATA MIN =	4
DATA MAX =	10.6
DATA RANGE =	6.6
STANDARD ERR OF MEAN =	0.896250693792
COEFFICIENT OF VARIATION =	32.2306701689
SKEWNESS =	0.144483544765
KURTOSIS =	1.80245205899

M18 SIO2

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0035
VARIANCE =	4.5E-6
STD DEV =	0.002121320343560
DATA MIN =	0.002
DATA MAX =	0.005
DATA RANGE =	0.003
STANDARD ERR OF MEAN =	0.0015
COEFFICIENT OF VARIATION =	60.60915267310
SKEWNESS =	0
KURTOSIS =	1

M18 SE

DESCRIPTIVE STATISTICS

N =	3
MEAN =	44
VARIANCE =	112
STD DEV =	10.583005244
DATA MIN =	36
DATA MAX =	56
DATA RANGE =	20
STANDARD ERR OF MEAN =	6.11010092661
COEFFICIENT OF VARIATION =	24.052284646
SKEWNESS =	0.59517006414
KURTOSIS =	1.5

M18 K

DESCRIPTIVE STATISTICS

N =	5
MEAN =	10.612
VARIANCE =	0.192770000001
STD DEV =	0.43905580511
DATA MIN =	9.93
DATA MAX =	11.1
DATA RANGE =	1.17
STANDARD ERR OF MEAN =	0.196351725228
COEFFICIENT OF VARIATION =	4.13735210243
SKEWNESS =	-0.63196786452
KURTOSIS =	2.31706413701

M18 PH

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0175
VARIANCE =	3.125E-4
STD DEV =	0.0176776695297
DATA MIN =	0.005
DATA MAX =	0.03
DATA RANGE =	0.025
STANDARD ERR OF MEAN =	0.0125
COEFFICIENT OF VARIATION =	101.015254455
SKEWNESS =	0
KURTOSIS =	1

M18 M0

DESCRIPTIVE STATISTICS

N =	3
MEAN =	12.3333333333
VARIANCE =	36.3333333333
STD DEV =	6.02771377334
DATA MIN =	6
DATA MAX =	18
DATA RANGE =	12
STANDARD ERR OF MEAN =	3.48010216964
COEFFICIENT OF VARIATION =	48.873354919
SKEWNESS =	-0.200700187209
KURTOSIS =	1.5

M18 MG

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0125
VARIANCE =	1.125E-4
STD DEV =	0.0106066017178
DATA MIN =	0.005
DATA MAX =	0.02
DATA RANGE =	0.015
STANDARD ERR OF MEAN =	0.0075
COEFFICIENT OF VARIATION =	84.8528137424
SKEWNESS =	0
KURTOSIS =	1

M18 PB

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.03
VARIANCE =	3.6E-4
STD DEV =	0.018973665961
DATA MIN =	0.01
DATA MAX =	0.05
DATA RANGE =	0.04
STANDARD ERR OF MEAN =	0.00774596669241
COEFFICIENT OF VARIATION =	63.2455532034
SKEWNESS =	-1.112825629E-13
KURTOSIS =	1.22222222222

N18 FE

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.02
VARIANCE =	2.0E-4
STD DEV =	0.0141421356237
DATA MIN =	0.01
DATA MAX =	0.03
DATA RANGE =	0.02
STANDARD ERR OF MEAN =	0.01
COEFFICIENT OF VARIATION =	70.7106781187
SKEWNESS =	2.168404345E-13
KURTOSIS =	0.999999999999

M18 CU

DESCRIPTIVE STATISTICS

N =	5
MEAN =	2060
VARIANCE =	8000
STD DEV =	89.4427191
DATA MIN =	2000
DATA MAX =	2200
DATA RANGE =	200
STANDARD ERR OF MEAN =	40
COEFFICIENT OF VARIATION =	4.34187956796
SKEWNESS =	0.84375
KURTOSIS =	2.078125

M18 COND

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.025
VARIANCE =	4.5E-4
STD DEV =	0.0212132034356
DATA MIN =	0.01
DATA MAX =	0.04
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.015
COEFFICIENT OF VARIATION =	84.8528137424
SKEWNESS =	0
KURTOSIS =	1

M18 CR

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.036
VARIANCE =	1.3E-4
STD DEV =	0.011401754251
DATA MIN =	0.02
DATA MAX =	0.05
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.00509901951359
COEFFICIENT OF VARIATION =	31.6715395861
SKEWNESS =	-0.271545417885
KURTOSIS =	1.95562130178

17 FE

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.033
VARIANCE =	1.655E-4
STD DEV =	0.0128646803303
DATA MIN =	0.021
DATA MAX =	0.052
DATA RANGE =	0.031
STANDARD ERR OF MEAN =	0.00575325994546
COEFFICIENT OF VARIATION =	38.9838797887
SKEWNESS =	0.451340068374
KURTOSIS =	1.96112211462

M17 U308

DESCRIPTIVE STATISTICS

N =	10
MEAN =	0.0561
VARIANCE =	0.00202832222222
STD DEV =	0.0450368984525
DATA MIN =	0.005
DATA MAX =	0.12
DATA RANGE =	0.115
STANDARD ERR OF MEAN =	0.014241917786
COEFFICIENT OF VARIATION =	80.2796763859
SKEWNESS =	0.190183590942
KURTOSIS =	1.33136667164

M17 U

DESCRIPTIVE STATISTICS

N =	6
MEAN =	1398.33333333
VARIANCE =	3456.6666667
STD DEV =	58.7934236688
DATA MIN =	1330
DATA MAX =	1480
DATA RANGE =	150
STANDARD ERR OF MEAN =	24.0023147033
COEFFICIENT OF VARIATION =	4.20453566165
SKEWNESS =	0.111517118021
KURTOSIS =	1.63122518314

M17 TDS

DESCRIPTIVE STATISTICS

N =	7
MEAN =	923.142857143
VARIANCE =	6853.80952382
STD DEV =	82.7877377624
DATA MIN =	781
DATA MAX =	1017
DATA RANGE =	236
STANDARD ERR OF MEAN =	31.290823675
COEFFICIENT OF VARIATION =	8.96803101728
SKEWNESS =	-0.600610416182
KURTOSIS =	2.19569808487

SP-4
M17 3A

DESCRIPTIVE STATISTICS

N =	7
MEAN =	273.857142857
VARIANCE =	298.476190477
STD DEV =	17.2764634829
DATA MIN =	252
DATA MAX =	298
DATA RANGE =	46
STANDARD ERR OF MEAN =	6.529839 379
COEFFICIENT OF VARIATION =	6.30856778198
SKEWNESS =	0.129606758178
KURTOSIS =	1.59480950292

M17 NA

DESCRIPTIVE STATISTICS

N =	7
MEAN =	10.1142857143
VARIANCE =	5.82476190476
STD DEV =	2.41345435108
DATA MIN =	7
DATA MAX =	13.8
DATA RANGE =	6.8
STANDARD ERR OF MEAN =	0.912200001939
COEFFICIENT OF VARIATION =	23.8618368045
SKEWNESS =	-0.111292385008
KURTOSIS =	2.1440959509

M17 SI02

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0035
VARIANCE =	4.5E-6
STD DEV =	0.00212132034356
DATA MIN =	0.002
DATA MAX =	0.005
DATA RANGE =	0.003
STANDARD ERR OF MEAN =	0.0015
COEFFICIENT OF VARIATION =	60.6091526731
SKEWNESS =	0
KURTOSIS =	1

M17 SE

DESCRIPTIVE STATISTICS

N =	4
MEAN =	17.95
VARIANCE =	70.41
STD DEV =	8.39106667832
DATA MIN =	10
DATA MAX =	27
DATA RANGE =	17
STANDARD ERR OF MEAN =	4.19553333916
COEFFICIENT OF VARIATION =	49.2144673215
SKEWNESS =	0.244226251532
KURTOSIS =	1.31937382094

M17 K

DESCRIPTIVE STATISTICS

N =	5
MEAN =	9.456
VARIANCE =	0.637370000001
STD DEV =	0.798354557826
DATA MIN =	8.68
DATA MAX =	10.66
DATA RANGE =	1.98
STANDARD ERR OF MEAN =	0.357035012289
COEFFICIENT OF VARIATION =	8.44105051624
SKEWNESS =	0.645137734128
KURTOSIS =	1.95829711749

M17 PH

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.035
VARIANCE =	4.5E-4
STD DEV =	0.0212132034356
DATA MIN =	0.02
DATA MAX =	0.05
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.015
COEFFICIENT OF VARIATION =	60.6091526731
SKEWNESS =	0
KURTOSIS =	0.999999999999

M17 NI

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0225
VARIANCE =	6.125E-4
STD DEV =	0.0247487373415
DATA MIN =	0.005
DATA MAX =	0.04
DATA RANGE =	0.035
STANDARD ERR OF MEAN =	0.0175
COEFFICIENT OF VARIATION =	109.994388185
SKEWNESS =	0
KURTOSIS =	1

M17 M0

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.0566666666667
VARIANCE =	0.00143333333333
STD DEV =	0.037859388972
DATA MIN =	0.03
DATA MAX =	0.1
DATA RANGE =	0.07
STANDARD ERR OF MEAN =	0.0218581284143
COEFFICIENT OF VARIATION =	66.8106864212
SKEWNESS =	0.652012117044
KURTOSIS =	1.5

M17 MN

DESCRIPTIVE STATISTICS

N =	3
MEAN =	23
VARIANCE =	3
STD DEV =	1.73205080757
DATA MIN =	21
DATA MAX =	24
DATA RANGE =	3
STANDARD ERR OF MEAN =	1
COEFFICIENT OF VARIATION =	7.53065568508
SKEWNESS =	-0.707106781187
KURTOSIS =	1.5

M17 MG

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0125
VARIANCE =	1.125E-4
STD DEV =	0.0106066017178
DATA MIN =	0.005
DATA MAX =	0.02
DATA RANGE =	0.015
STANDARD ERR OF MEAN =	0.0075
COEFFICIENT OF VARIATION =	84.8528137424
SKEWNESS =	0
KURTOSIS =	1

M17 PB

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.025
VARIANCE =	5.0E-5
STD DEV =	0.007071067811187
DATA MIN =	0.02
DATA MAX =	0.03
DATA RANGE =	0.01
STANDARD ERR OF MEAN =	0.005
COEFFICIENT OF VARIATION =	28.2842712475
SKEWNESS =	0
KURTOSIS =	1.00000000002

M17 CU

DESCRIPTIVE STATISTICS

N =	6
MEAN =	1927.5
VARIANCE =	1497.5
STD DEV =	38.6975451418
DATA MIN =	1870
DATA MAX =	1980
DATA RANGE =	110
STANDARD ERR OF MEAN =	15.7982066493
COEFFICIENT OF VARIATION =	2.00765474147
SKEWNESS =	-0.0637990414346
KURTOSIS =	2.11272807824

M17 COND

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.02
VARIANCE =	2.0E-4
STD DEV =	0.0141421356237
DATA MIN =	0.01
DATA MAX =	0.03
DATA RANGE =	0.02
STANDARD ERR OF MEAN =	0.01
COEFFICIENT OF VARIATION =	70.7106781187
SKEWNESS =	2.168404345E-13
KURTOSIS =	0.999999999999

M17 CR

DESCRIPTIVE STATISTICS

N =	8
MEAN =	8.375
VARIANCE =	6.91928571429
STD DEV =	2.63045351875
DATA MIN =	4.4
DATA MAX =	12.4
DATA RANGE =	8
STANDARD ERR OF MEAN =	0.930005760351
COEFFICIENT OF VARIATION =	31.4084002238
SKEWNESS =	-0.10249634933
KURTOSIS =	1.9798090579

M17 CL

DESCRIPTIVE STATISTICS

N =	3
MEAN =	11.9666666667
VARIANCE =	52.6033333333
STD DEV =	7.25281554524
DATA MIN =	5.9
DATA MAX =	20
DATA RANGE =	14.1
STANDARD ERR OF MEAN =	4.18741500743
COEFFICIENT OF VARIATION =	60.6084864505
SKEWNESS =	0.461523340053
KURTOSIS =	1.5

M17 C03

DESCRIPTIVE STATISTICS

N =	7
MEAN =	104.714285714
VARIANCE =	215.904761905
STD DEV =	14.6936980337
DATA MIN =	84
DATA MAX =	129
DATA RANGE =	45
STANDARD ERR OF MEAN =	5.55369583386
COEFFICIENT OF VARIATION =	14.0321809326
SKEWNESS =	0.150404779503
KURTOSIS =	2.42642099918

M17 CA

DESCRIPTIVE STATISTICS

N =	6
MEAN =	60.5
VARIANCE =	103.1
STD DEV =	10.1538170163
DATA MIN =	49
DATA MAX =	74
DATA RANGE =	25
STANDARD ERR OF MEAN =	4.14527843858
COEFFICIENT OF VARIATION =	16.7831686219
SKEWNESS =	0.133731427028
KURTOSIS =	1.60319052157

M17 HCO3

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.1
VARIANCE =	0.0032
STD DEV =	0.0565685424949
DATA MIN =	0.06
DATA MAX =	0.14
DATA RANGE =	0.08
STANDARD ERR OF MEAN =	0.04
COEFFICIENT OF VARIATION =	56.5685424949
SKEWNESS =	-2.168404345E-13
KURTOSIS =	1

M17 NH3

DESCRIPTIVE STATISTICS

N =	4
MEAN =	76.25
VARIANCE =	189.583333333
STD DEV =	13.7689263682
DATA MIN =	60
DATA MAX =	90
DATA RANGE =	30
STANDARD ERR OF MEAN =	6.88446318411
COEFFICIENT OF VARIATION =	18.0576083518
SKEWNESS =	-0.186617740164
KURTOSIS =	1.3956043956

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M17 ALK

      ↓ SYNTAX ERROR
M17 ALK
```

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.23
VARIANCE =	0.0547
STD DEV =	0.233880311271
DATA MIN =	0.09
DATA MAX =	0.5
DATA RANGE =	0.41
STANDARD ERR OF MEAN =	0.13503096067
COEFFICIENT OF VARIATION =	101.687091857
SKEWNESS =	0.705652770904
KURTOSIS =	1.5

M17 AL

ENTER SAMPLE IDENTIFICATION 16-U

ENTER YOUR CALCULATED MEAN .0325

ENTER YOUR CALCULATED STANDARD DEVIATION .0258

FOR SAMPLE 16-U

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 0
YOUR UPPER CONTROL LIMIT IS 0.08735

```
ENTER SAMPLE IDENTIFICATION  16-PH

ENTER YOUR CALCULATED MEAN  9.54

ENTER YOUR CALCULATED STANDARD DEVIATION  .49

FOR SAMPLE 16-PH

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 7.606
YOUR UPPER CONTROL LIMIT IS 11.474
```

```
ENTER SAMPLE IDENTIFICATION  16-CL

ENTER YOUR CALCULATED MEAN  8.5

ENTER YOUR CALCULATED STANDARD DEVIATION  3

FOR SAMPLE 16-CL

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 1.65
YOUR UPPER CONTROL LIMIT IS 15.35
```

ENTER SAMPLE IDENTIFICATION 16-HCO3

ENTER YOUR CALCULATED MEAN 46.6

ENTER YOUF CALCULATED STANDARD DEVIATION 15.9

FOR SAMPLE 16-HCO3

USING 2 STD DEV + 10% MEAN

YOUR LOWER CONTROL LIMIT IS 10.14
YOUR UPPER CONTROL LIMIT IS 83.06

DESCRIPTIVE STATISTICS

N =	5
MEAN =	203.2
VARIANCE =	2822.2
STD DEV =	53.1243823494
DATA MIN =	147
DATA MAX =	287
DATA RANGE =	140
STANDARD ERR OF MEAN =	23.7579460292
COEFFICIENT OF VARIATION =	26.1438889515
SKEWNESS =	0.731002197581
KURTOSIS =	2.34826820237

21 CL

DESCRIPTIVE STATISTICS

N =	3
MEAN =	6.4
VARIANCE =	1.12
STD DEV =	1.05830052443
DATA MIN =	5.6
DATA MAX =	7.6
DATA RANGE =	2
STANDARD ERR OF MEAN =	0.611010092661
COEFFICIENT OF VARIATION =	16.5359456942
SKEWNESS =	0.595170064133
KURTOSIS =	1.49999999997

21 SI02

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.004
VARIANCE =	5.78E-6
STD DEV =	0.00240416305603
DATA MIN =	0.0023
DATA MAX =	0.0057
DATA RANGE =	0.0034
STANDARD ERR OF MEAN =	0.0017
COEFFICIENT OF VARIATION =	60.1040764009
SKEWNESS =	-3.448129238E-13
KURTOSIS =	1

21 U308

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.023
VARIANCE =	4.45E-4
STD DEV =	0.0210950231097
DATA MIN =	0.01
DATA MAX =	0.06
DATA RANGE =	0.05
STANDARD ERR OF MEAN =	0.009433981132O6
COEFFICIENT OF VARIATION =	91.7174917814
SKEWNESS =	1.36132312005
KURTOSIS =	3.05431763666

21 V

DESCRIPTIVE STATISTICS

N =	4
MEAN =	1475
VARIANCE =	67833.3333333
STD DEV =	260.448331408
DATA MIN =	1240
DATA MAX =	1720
DATA RANGE =	480
STANDARD ERR OF MEAN =	130.224165704
COEFFICIENT OF VARIATION =	17.6575139938
SKEWNESS =	0.0089234493809
KURTOSIS =	1.01956812296

21 TDS

Dale 1226

DESCRIPTIVE STATISTICS

N =	5
MEAN =	421.8
VARIANCE =	17267.2
STD DEV =	131.404718332
DATA MIN =	235
DATA MAX =	578
DATA RANGE =	343
STANDARD ERR OF MEAN =	58.7659765511
COEFFICIENT OF VARIATION =	31.1533234548
SKEWNESS =	-0.32674624073
KURTOSIS =	1.94309235834

21 S04

DESCRIPTIVE STATISTICS

N =	4
MEAN =	296
VARIANCE =	480.666666667
STD DEV =	21.9241115365
DATA MIN =	275
DATA MAX =	326
DATA RANGE =	51
STANDARD ERR OF MEAN =	10.9620557683
COEFFICIENT OF VARIATION =	7.40679443802
SKEWNESS =	0.611417068913
KURTOSIS =	1.95152363896

21 NA

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.003
VARIANCE =	2.0E-6
STD DEV =	0.00141421356237
DATA MIN =	0.002
DATA MAX =	0.004
DATA RANGE =	0.002
STANDARD ERR OF MEAN =	1.0E-3
COEFFICIENT OF VARIATION =	47.1404520791
SKEWNESS =	4.235164736E-13
KURTOSIS =	1

21 SE

DESCRIPTIVE STATISTICS

N =	5
MEAN =	27.54
VARIANCE =	45.788
STD DEV =	6.76668308701
DATA MIN =	17.6
DATA MAX =	34
DATA RANGE =	16.4
STANDARD ERR OF MEAN =	3.02615267295
COEFFICIENT OF VARIATION =	24.5703815796
SKEWNESS =	-0.481826339328
KURTOSIS =	1.90015139193

21 K

DESCRIPTIVE STATISTICS

N =	3
MEAN =	11.7833333333
VARIANCE =	0.0858333333335
STD DEV =	0.292973263854
DATA MIN =	11.45
DATA MAX =	12
DATA RANGE =	0.55
STANDARD ERR OF MEAN =	0.169148192752
COEFFICIENT OF VARIATION =	2.48633604403
SKEWNESS =	-0.615560235239
KURTOSIS =	1.50000004597

21 PH

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.0786666666667
VARIANCE =	0.0149813333333
STD DEV =	0.122398257068
DATA MIN =	0.008
DATA MAX =	0.22
DATA RANGE =	0.212
STANDARD ERR OF MEAN =	0.0706666666667
COEFFICIENT OF VARIATION =	155.591004748
SKEWNESS =	0.707106781186
KURTOSIS =	1.5

21 NI

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.07333333333333
VARIANCE =	0.004233333333333
STD DEV =	0.06506410709865
DATA MIN =	0.01
DATA MAX =	0.14
DATA RANGE =	0.13
STANDARD ERR OF MEAN =	0.03756475889886
COEFFICIENT OF VARIATION =	88.7237331634
SKEWNESS =	0.0938713409261
KURTOSIS =	1.5

21 MO

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.026
VARIANCE =	9.3E-4
STD DEV =	0.030495901364
DATA MIN =	0.01
DATA MAX =	0.08
DATA RANGE =	0.07
STANDARD ERR OF MEAN =	0.013638181697
COEFFICIENT OF VARIATION =	117.291928323
SKEWNESS =	1.42862673343
KURTOSIS =	3.14377384669

21 MN

DESCRIPTIVE STATISTICS

N =	3
MEAN =	1.32
VARIANCE =	1.0512
STD DEV =	1.02528044944
DATA MIN =	0.36
DATA MAX =	2.4
DATA RANGE =	2.04
STANDARD ERR OF MEAN =	0.591945943478
COEFFICIENT OF VARIATION =	77.6727613211
SKEWNESS =	0.212072860756
KURTOSIS =	1.5

21 MG

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.05
VARIANCE =	0.0019
STD DEV =	0.0435889894354
DATA MIN =	0.02
DATA MAX =	0.1
DATA RANGE =	0.08
STANDARD ERR OF MEAN =	0.0251661147842
COEFFICIENT OF VARIATION =	87.1779788708
SKEWNESS =	0.665468866124
KURTOSIS =	1.5

21 PB

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.178
VARIANCE =	0.00902
STD DEV =	0.0949736805647
DATA MIN =	0.1
DATA MAX =	0.33
DATA RANGE =	0.23
STANDARD ERR OF MEAN =	0.0424735211632
COEFFICIENT OF VARIATION =	53.3560003172
SKEWNESS =	0.837720308781
KURTOSIS =	2.33591894328

21 FE

DESCRIPTIVE STATISTICS

N =	3
MEAN =	2680
VARIANCE =	551700
STD DEV =	742.765104188
DATA MIN =	1840
DATA MAX =	3250
DATA RANGE =	1410
STANDARD ERR OF MEAN =	428.835632848
COEFFICIENT OF VARIATION =	27.7151158279
SKEWNESS =	-0.579562555266
KURTOSIS =	1.5

21 COND

DESCRIPTIVE STATISTICS

N =	2
MEAN =	~~314~~ 167
VARIANCE =	32
STD DEV =	5.6568542949
DATA MIN =	310
DATA MAX =	318
DATA RANGE =	8
STANDARD ERR OF MEAN =	4
COEFFICIENT OF VARIATION =	1.80154593933
SKEWNESS =	0
KURTOSIS =	1

21 C03

DESCRIPTIVE STATISTICS

N =	3
MEAN =	108.666666667
VARIANCE =	3544.33333333
STD DEV =	59.5343038368
DATA MIN =	68
DATA MAX =	177
DATA RANGE =	109
STANDARD ERR OF MEAN =	34.3721463462
COEFFICIENT OF VARIATION =	54.786169175
SKEWNESS =	0.669365107468
KURTOSIS =	1.5

21 CA

DESCRIPTIVE STATISTICS

N =	2
MEAN =	650
VARIANCE =	45000
STD DEV =	212.132034356
DATA MIN =	500
DATA MAX =	800
DATA RANGE =	300
STANDARD ERR OF MEAN =	150
COEFFICIENT OF VARIATION =	32.6356975932
SKEWNESS =	0
KURTOSIS =	1

21 ALK

DESCRIPTIVE STATISTICS

N =	4
MEAN =	0.2065
VARIANCE =	0.0240756666667
STD DEV =	0.15516335478
DATA MIN =	0.07
DATA MAX =	0.39
DATA RANGE =	0.32
STANDARD ERR OF MEAN =	0.0775816773901
COEFFICIENT OF VARIATION =	75.1396391188
SKEWNESS =	0.235219550846
KURTOSIS =	1.31960057862

221 AL

DESCRIPTIVE STATISTICS

N =	8
MEAN =	8.4875
VARIANCE =	6.91267857143
STD DEV =	2.62919732455
DATA MIN =	4.4
DATA MAX =	13.3
DATA RANGE =	8.9
STANDARD ERR OF MEAN =	0.929561628634
COEFFICIENT OF VARIATION =	30.9772880654
SKEWNESS =	0.291526257388
KURTOSIS =	2.89870280411

M19 CL

14.6

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.015
VARIANCE =	3.0E-5
STD DEV =	0.00547722557505
DATA MIN =	0.01
DATA MAX =	0.02
DATA RANGE =	0.01
STANDARD ERR OF MEAN =	0.0022360679775
COEFFICIENT OF VARIATION =	36.514837167
SKEWNESS =	-2.891205793E-13
KURTOSIS =	1

19 FE

DESCRIPTIVE STATISTICS

N =	7
MEAN =	0.0255714285714
VARIANCE =	6.828571429E-5
STD DEV =	0.00826351706513
DATA MIN =	0.015
DATA MAX =	0.039
DATA RANGE =	0.024
STANDARD ERR OF MEAN =	0.00312331587273
COEFFICIENT OF VARIATION =	32.3154298636
SKEWNESS =	0.527136678453
KURTOSIS =	2.11901781597

M19 U308

DESCRIPTIVE STATISTICS

N =	10
MEAN =	0.0556
VARIANCE =	7.600444444E-4
STD DEV =	0.0275689035771
DATA MIN =	0.02
DATA MAX =	0.1
DATA RANGE =	0.08
STANDARD ERR OF MEAN =	0.00871805278973
COEFFICIENT OF VARIATION =	49.5843589517
SKEWNESS =	0.468970484867
KURTOSIS =	2.32545830854

M19 V

DESCRIPTIVE STATISTICS

N =	8
MEAN =	1461.25
VARIANCE =	6069.64285714
STD DEV =	77.9079126735
DATA MIN =	1380
DATA MAX =	1600
DATA RANGE =	220
STANDARD ERR OF MEAN =	27.5446066798
COEFFICIENT OF VARIATION =	5.33159368168
SKEWNESS =	0.518568104589
KURTOSIS =	2.15868251176

M19 TDS

Cole 1430

DESCRIPTIVE STATISTICS

N =	8
MEAN =	947.625
VARIANCE =	1400.26785714
STD DEV =	37.4201530882
DATA MIN =	904
DATA MAX =	1010
DATA RANGE =	106
STANDARD ERR OF MEAN =	13.2300220008
COEFFICIENT OF VARIATION =	3.9488355719
SKEWNESS =	0.377898921416
KURTOSIS =	1.85423429166

M19 S04

DESCRIPTIVE STATISTICS

N =	8
MEAN =	296.75
VARIANCE =	599.928571429
STD DEV =	24.4934393548
DATA MIN =	270
DATA MAX =	335
DATA RANGE =	65
STANDARD ERR OF MEAN =	8.65973853119
COEFFICIENT OF VARIATION =	8.25389700247
SKEWNESS =	0.425016267257
KURTOSIS =	1.74787505035

M19 NA

DESCRIPTIVE STATISTICS

N =	8
MEAN =	10.1625
VARIANCE =	3.82267857143
STD DEV =	1.95516714667
DATA MIN =	7
DATA MAX =	13.4
DATA RANGE =	6.4
STANDARD ERR OF MEAN =	0.691255973883
COEFFICIENT OF VARIATION =	19.2390371136
SKEWNESS =	-0.130902525245
KURTOSIS =	2.60421206978

M19 SI02

DESCRIPTIVE STATISTICS

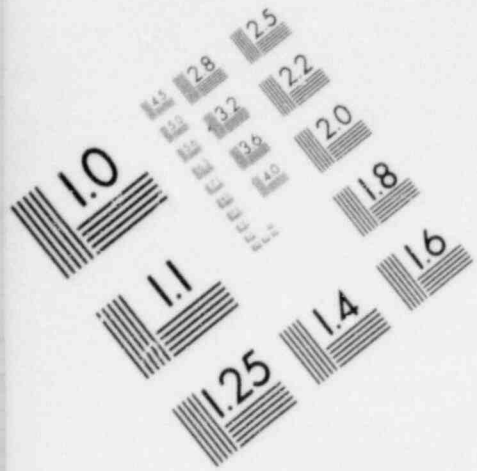
N =	5
MEAN =	15.98
VARIANCE =	31.432
STD DEV =	5.60642488579
DATA MIN =	9.6
DATA MAX =	23
DATA RANGE =	13.4
STANDARD ERR OF MEAN =	2.50726943107
COEFFICIENT OF VARIATION =	35.0840105494
SKEWNESS =	-0.0355724351771
KURTOSIS =	1.51899865901

M19 K

DESCRIPTIVE STATISTICS

N =	4
MEAN =	9.47
VARIANCE =	0.159599999999
STD DEV =	0.399499687108
DATA MIN =	9
DATA MAX =	9.9
DATA RANGE =	0.9
STANDARD ERR OF MEAN =	0.199749843554
COEFFICIENT OF VARIATION =	4.21858170124
SKEWNESS =	-0.120540600657
KURTOSIS =	1.49644577277

M19 PH



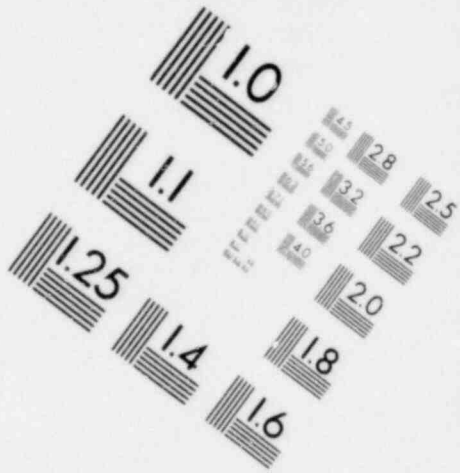
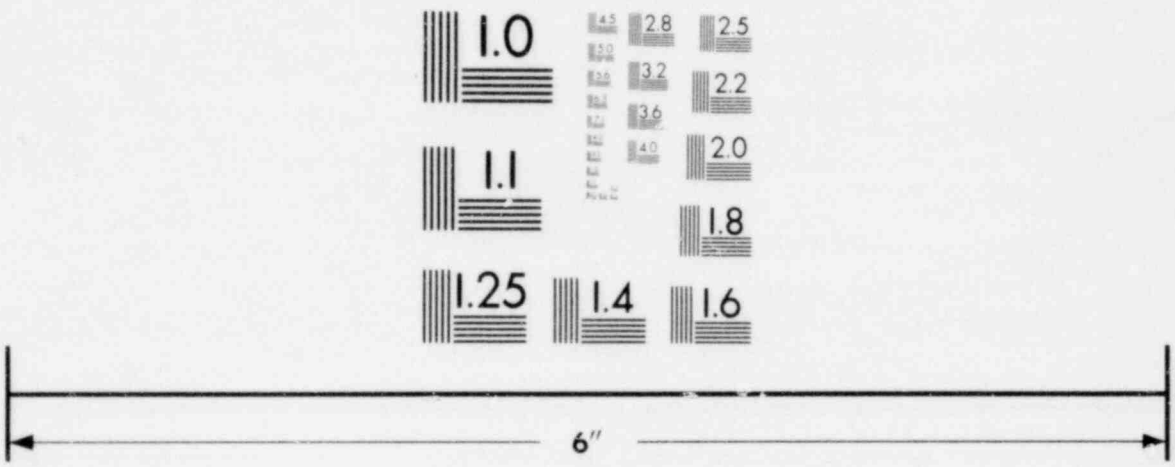
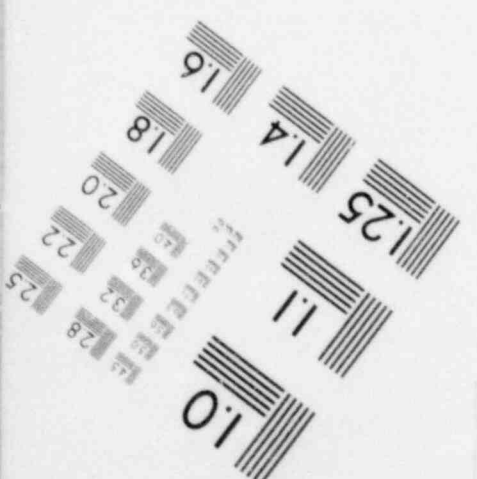
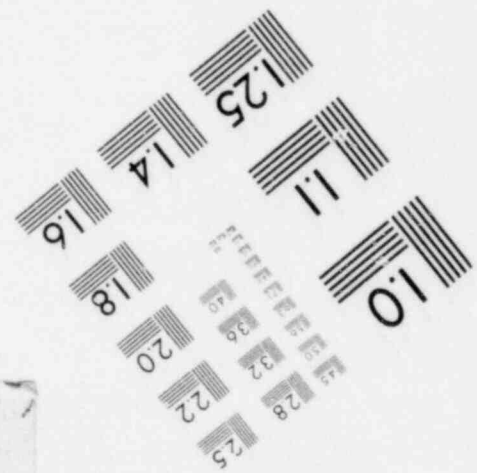
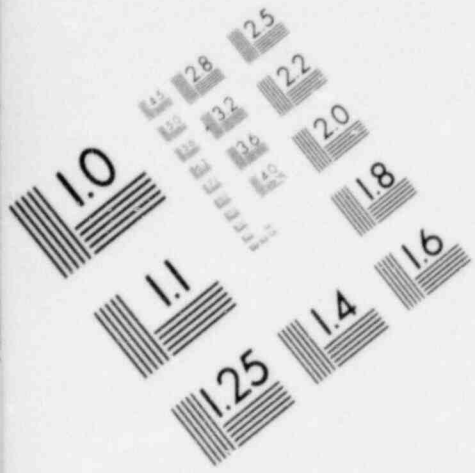


IMAGE EVALUATION TEST TARGET (MT-3)









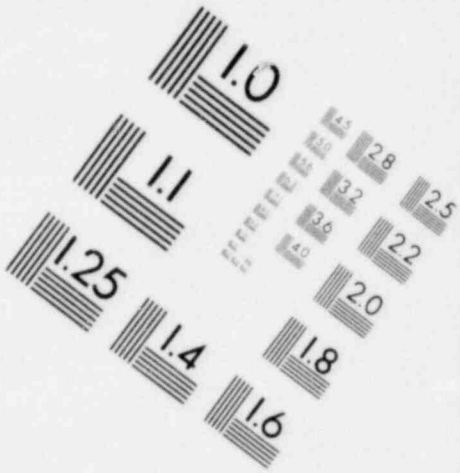
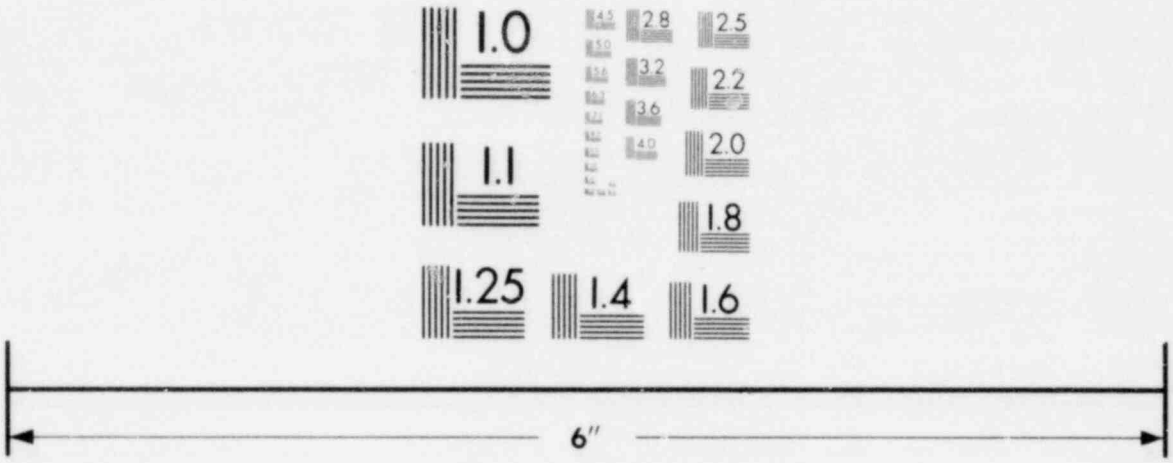
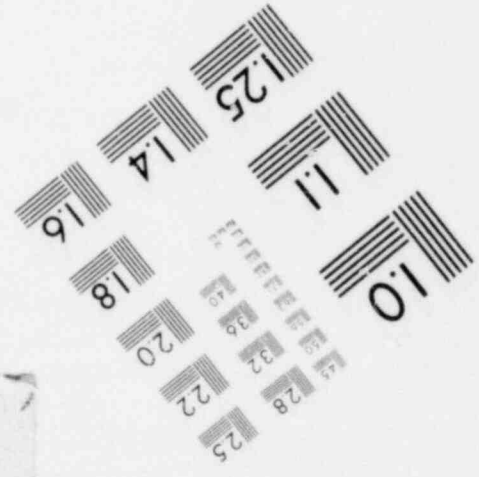


IMAGE EVALUATION TEST TARGET (MT-3)





DESCRIPTIVE STATISTICS

N =	4
MEAN =	0.0425
VARIANCE =	2.25E-4
STD DEV =	0.015
DATA MIN =	0.03
DATA MAX =	0.06
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.0075
COEFFICIENT OF VARIATION =	35.2941176471
SKEWNESS =	0.213833433033
KURTOSIS =	1.27983539094

M19 MH

DESCRIPTIVE STATISTICS

N =	5
MEAN =	19.6
VARIANCE =	4.3
STD DEV =	2.07364413533
DATA MIN =	18
DATA MAX =	23
DATA RANGE =	5
STANDARD ERR OF MEAN =	0.92736184955
COEFFICIENT OF VARIATION =	10.579817017
SKEWNESS =	0.970494958785
KURTOSIS =	2.48269334797

M19 MG

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0175
VARIANCE =	3.125E-4
STD DEV =	0.0176776695297
DATA MIN =	0.005
DATA MAX =	0.03
DATA RANGE =	0.025
STANDARD ERR OF MEAN =	0.0125
COEFFICIENT OF VARIATION =	101.015254455
SKEWNESS =	0
KURTOSIS =	1

M19 PB

DESCRIPTIVE STATISTICS

N =	6
MEAN =	1968.33333333
VARIANCE =	4096.6666667
STD DEV =	64.0052081217
DATA MIN =	1890
DATA MAX =	2060
DATA RANGE =	170
STANDARD ERR OF MEAN =	26.1300167965
COEFFICIENT OF VARIATION =	3.2517463906
SKEWNESS =	0.00454912844579
KURTOSIS =	1.87485971048

M19 COND

DESCRIPTIVE STATISTICS

N =	8
MEAN =	114.75
VARIANCE =	199.357142857
STD DEV =	14.1193888981
DATA MIN =	93
DATA MAX =	138
DATA RANGE =	45
STANDARD ERR OF MEAN =	4.99195781805
COEFFICIENT OF VARIATION =	12.3044703426
SKEWNESS =	0.042360611928
KURTOSIS =	2.30102734631

M19 CA

DESCRIPTIVE STATISTICS

N =	5
MEAN =	55.4
VARIANCE =	25.8
STD DEV =	5.07937003968
DATA MIN =	50
DATA MAX =	60
DATA RANGE =	10
STANDARD ERR OF MEAN =	2.27156333832
COEFFICIENT OF VARIATION =	9.16853797777
SKEWNESS =	-0.247754789991
KURTOSIS =	1.22187669195

M19 HCO3

DESCRIPTIVE STATISTICS

N =	2
MEAN =	45
VARIANCE =	50
STD DEV =	7.07106781187
DATA MIN =	40
DATA MAX =	50
DATA RANGE =	10
STANDARD ERR OF MEAN =	5
COEFFICIENT OF VARIATION =	15.7134840264
SKEWNESS =	0
KURTOSIS =	-1

M19 ALK

ENTER SAMPLE ID AND DATE RC-LSM 21 PRELIM BASELINE
ENTER BICARBONATE IN PPM 0
ENTER CARBONATE IN PPM 167
ENTER CHLORIDE IN PPM 203
ENTER SULFATE IN PPM 422
ENTER SODIUM IN PPM 296
ENTER POTASSIUM IN PPM 28
ENTER CALCIUM IN PPM 109
ENTER MAGNESIUM IN PPM 1.3

FOR RC-LSM 21 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	0.00
CO3	5.57
Cl	5.73
SO4	8.79
SUM	20.08
Na	12.88
K	0.72
Ca	5.44
Mg	0.11
SUM	19.14

ANION-CATION BALANCE 98 %

CALCULATED TDS ARE 1226 PPM

Evap 1Hol

ENTER SAMPLE ID AND DATE RC-M19 PRELIM BASELINE
ENTER BICARBONATE IN PPM 55.4
ENTER CARBONATE IN PPM 5
ENTER CHLORIDE IN PPM 8.5
ENTER SULFATE IN PPM 948
ENTER SODIUM IN PPM 297
ENTER POTASSIUM IN PPM 9.5
ENTER CALCIUM IN PPM 115
ENTER MAGNESIUM IN PPM 19.6

FOR RC-M19 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	0.91
CO3	0.17
Cl	0.24
SO4	19.74
SUM	21.05
Na	12.92
K	0.24
Ca	5.74
Mg	1.61
SUM	20.51

ANION-CATION BALANCE 99 %

CALCULATED TDS ARE 1430 PPM

Evap. 1461

ENTER SAMPLE ID AND DATE RC-M18 PRELIM BASELINE
ENTER BICARBONATE IN PPM 11
ENTER CARBONATE IN PPM 33
ENTER CHLORIDE IN PPM 8.65
ENTER SULFATE IN PPM 905
ENTER SODIUM IN PPM 287
ENTER POTASSIUM IN PPM 44
ENTER CALCIUM IN PPM 102
ENTER MAGNESIUM IN PPM 12

FOR RC-M18 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	0.18
CO3	1.07
Cl	0.24
SO4	18.84
SUM	20.33
Na	12.48
K	1.13
Ca	5.09
Mg	0.99
SUM	19.69

ANION-CATION BALANCE 98 %

CALCULATED TDS ARE 1396 PPM

Evap 1384

ENTER SAMPLE ID AND DATE RC M17 PRELIM BASELINE
ENTER BICARBONATE IN PPM 60.5
ENTER CARBONATE IN PPM 12
ENTER CHLORIDE IN PPM 8.4
ENTER SULFATE IN PPM 923
ENTER SODIUM IN PPM 274
ENTER POTASSIUM IN PPM 17.05
ENTER CALCIUM IN PPM 105
ENTER MAGNESIUM IN PPM 23

FOR RC M17 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	0.99
CO3	0.40
Cl	0.24
SO4	19.22
SUM	20.85
Na	11.92
K	0.44
Ca	5.24
Mg	1.89
SUM	19.49

ANION-CATION BALANCE 97 %

CALCULATED TDS ARE 1392 PPM

Evap. 1398

ENTER SAMPLE ID AND DATE RC-M16 PRELIM BASELINE
ENTER BICARBONATE IN PPM 47
ENTER CARBONATE IN PPM 1.7
ENTER CHLORIDE IN PPM 8.5
ENTER SULFATE IN PPM 933
ENTER SODIUM IN PPM 288
ENTER POTASSIUM IN PPM 20.7
ENTER CALCIUM IN PPM 106
ENTER MAGNESIUM IN PPM 14

FOR RC-M16 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	0.77
CO3	0.06
Cl	0.24
SO4	19.43
SUM	20.49
Na	12.53
K	0.53
Ca	5.29
Mg	1.15
SUM	19.50

ANION-CATION BALANCE 98 %

CALCULATED TDS ARE 1395 PPM

Evap 1413

ENTER SAMPLE ID AND DATE RC P11 PRELIM BASELINE
ENTER BICARBONATE IN PPM 96
ENTER CARBONATE IN PPM 2
ENTER CHLORIDE IN PPM 12
ENTER SULFATE IN PPM 899
ENTER SODIUM IN PPM 283
ENTER POTASSIUM IN PPM 10.3
ENTER CALCIUM IN PPM 104
ENTER MAGNESIUM IN PPM 12.7

FOR RC P11 PRELIM BASELINE

CONSTITUENT	EPM
HCO3	1.57
CO3	0.07
Cl	0.34
SO4	18.72
SUM	20.70
Na	12.31
K	0.26
Ca	5.19
Mg	1.04
SUM	18.81

ANION-CATION BALANCE 95 %

CALCULATED TDS ARE 1370 PPM

Evap. 1397

DESCRIPTIVE STATISTICS

N =	9
MEAN =	282.666666667
VARIANCE =	700.250000001
STD DEV =	26.4622372448
DATA MIN =	240
DATA MAX =	314
DATA RANGE =	74
STANDARD ERR OF MEAN =	8.82074574827
COEFFICIENT OF VARIATION =	9.36164053472
SKEWNESS =	-0.497502747451
KURTOSIS =	2.03139332502

P11 NA

DESCRIPTIVE STATISTICS

N =	11
MEAN =	899.272727273
VARIANCE =	10481.8181818
STD DEV =	102.380751032
DATA MIN =	692
DATA MAX =	1079
DATA RANGE =	387
STANDARD ERR OF MEAN =	30.8689579025
COEFFICIENT OF VARIATION =	11.3848388733
SKEWNESS =	-0.131313287571
KURTOSIS =	3.29801198489

P11 S04

DESCRIPTIVE STATISTICS

N =	9
MEAN =	1396.66666667
VARIANCE =	3075.00000002
STD DEV =	55.4526825322
DATA MIN =	1330
DATA MAX =	1500
DATA RANGE =	170
STANDARD ERR OF MEAN =	18.4842275107
COEFFICIENT OF VARIATION =	3.97035913118
SKEWNESS =	0.679345117287
KURTOSIS =	2.35742610795

11 TDS

DESCRIPTIVE STATISTICS

N =	10
MEAN =	0.0601
VARIANCE =	0.00143254444444
STD DEV =	0.037848968869
DATA MIN =	0.011
DATA MAX =	0.12
DATA RANGE =	0.109
STANDARD ERR OF MEAN =	0.011968[illegible]948715
COEFFICIENT OF VARIATION =	62.9766536921
SKEWNESS =	0.430039667129
KURTOSIS =	1.81333054654

11 V

DESCRIPTIVE STATISTICS

N =	4
MEAN =	0.775
VARIANCE =	0.189166666667
STD DEV =	0.434932945023
DATA MIN =	0.2
DATA MAX =	1.2
DATA RANGE =	1
STANDARD ERR OF MEAN =	0.217466472512
COEFFICIENT OF VARIATION =	56.120380003
SKEWNESS =	-0.478933385199
KURTOSIS =	1.7951250752

P11 TH-230

DESCRIPTIVE STATISTICS

N =	4
MEAN =	266.75
VARIANCE =	9035.58333333
STD DEV =	95.055685434
DATA MIN =	127
DATA MAX =	340
DATA RANGE =	213
STANDARD ERR OF MEAN =	47.527842717
COEFFICIENT OF VARIATION =	35.6347461796
SKEWNESS =	-1.0140419825
KURTOSIS =	2.24643808579

P11 RA-226

↓ SYNTAX ERROR
P11 RA-226

DESCRIPTIVE STATISTICS

N =	4
MEAN =	2.825
VARIANCE =	3.34916666667
STD DEV =	1.83007285829
DATA MIN =	1.1
DATA MAX =	5.4
DATA RANGE =	4.3
STANDARD ERR OF MEAN =	0.915036429147
COEFFICIENT OF VARIATION =	64.7813401166
SKEWNESS =	0.733813382074
KURTOSIS =	2.09899945896

P11 PO-210

DESCRIPTIVE STATISTICS

N =	4
MEAN =	36.25
VARIANCE =	1681.58333333
STD DEV =	41.0071132041
DATA MIN =	3
DATA MAX =	92
DATA RANGE =	89
STANDARD ERR OF MEAN =	20.503556602
COEFFICIENT OF VARIATION =	113.123070908
SKEWNESS =	0.637209298441
KURTOSIS =	1.81069438192

PB
P11 PD-210

DESCRIPTIVE STATISTICS

N =	9
MEAN =	0.0857777777778
VARIANCE =	2.064444444E-4
STD DEV =	0.0143681747082
DATA MIN =	0.069
DATA MAX =	0.111
DATA RANGE =	0.042
STANDARD ERR OF MEAN =	0.00478939156939
COEFFICIENT OF VARIATION =	16.7504627427
SKEWNESS =	1.00761773108
KURTOSIS =	2.58659490465

P11 U308

DESCRIPTIVE STATISTICS

N =	10
MEAN =	8.2
VARIANCE =	4.52666666667
STD DEV =	2.12759645296
DATA MIN =	6
DATA MAX =	11.8
DATA RANGE =	5.8
STANDARD ERR OF MEAN =	0.672805073306
COEFFICIENT OF VARIATION =	25.9462982069
SKEWNESS =	0.427288083844
KURTOSIS =	1.66907426168

P11 SI02

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.005
VARIANCE =	5.2E-6
STD DEV =	0.0022803508502
DATA MIN =	0.002
DATA MAX =	0.009
DATA RANGE =	0.007
STANDARD ERR OF MEAN =	9.309493363E-4
COEFFICIENT OF VARIATION =	45.607017004
SKEWNESS =	0.665147715805
KURTOSIS =	3

P11 SE

DESCRIPTIVE STATISTICS

N =	11
MEAN =	10.2636363636
VARIANCE =	7.06854545455
STD DEV =	2.65867362693
DATA MIN =	6.9
DATA MAX =	15
DATA RANGE =	8.1
STANDARD ERR OF MEAN =	0.80162026005
COEFFICIENT OF VARIATION =	25.9038174458
SKEWNESS =	0.408941376638
KURTOSIS =	1.87961020126

P1L L K

DESCRIPTIVE STATISTICS

N =	6
MEAN =	9.26833333333
VARIANCE =	0.231096666668
STD DEV =	0.480725146698
DATA MIN =	8.48
DATA MAX =	9.93
DATA RANGE =	1.45
STANDARD ERR OF MEAN =	0.196255219322
COEFFICIENT OF VARIATION =	5.18674857074
SKEWNESS =	-0.353952580076
KURTOSIS =	2.6260111911

P11 PH

DESCRIPTIVE STATISTICS

N =	8
MEAN =	0.03125
VARIANCE =	4.125E-4
STD DEV =	0.0203100960116
DATA MIN =	0.01
DATA MAX =	0.05
DATA RANGE =	0.04
STANDARD ERR OF MEAN =	0.00718070330817
COEFFICIENT OF VARIATION =	64.9923072371
SKEWNESS =	-0.0700675830996
KURTOSIS =	1.07668521954

P11 NI

DESCRIPTIVE STATISTICS

N =	8
MEAN =	0.017875
VARIANCE =	2.549821429E-4
STD DEV =	0.0159681602841
DATA MIN =	0.008
DATA MAX =	0.05
DATA RANGE =	0.042
STANDARD ERR OF MEAN =	0.00564559720996
COEFFICIENT OF VARIATION =	89.3323652255
SKEWNESS =	1.3312755708
KURTOSIS =	3.02362700356

P11 MO

DESCRIPTIVE STATISTICS

N =	10
MEAN =	0.018
VARIANCE =	8.444444444E-5
STD DEV =	0.00918936583473
DATA MIN =	0.01
DATA MAX =	0.04
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.00290593262903
COEFFICIENT OF VARIATION =	51.0520324151
SKEWNESS =	1.30404732937
KURTOSIS =	4.34072022161

P11 MN

DESCRIPTIVE STATISTICS

N =	11
MEAN =	12.6727272727
VARIANCE =	21.8281818182
STD DEV =	4.67206397839
DATA MIN =	4.8
DATA MAX =	21
DATA RANGE =	16.2
STANDARD ERR OF MEAN =	1.40868029208
COEFFICIENT OF VARIATION =	36.8670758697
SKEWNESS =	-0.196980613329
KURTOSIS =	2.69569769233

P11 MG

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.01783333333333
VARIANCE =	3.041666667E-4
STD DEV =	0.0174403746137
DATA MIN =	0.002
DATA MAX =	0.04
DATA RANGE =	0.038
STANDARD ERR OF MEAN =	0.0071200031211
COEFFICIENT OF VARIATION =	97.796493161
SKEWNESS =	0.60874345601
KURTOSIS =	1.50555220116

P11PB

DESCRIPTIVE STATISTICS

N =	11
MEAN =	0.0927272727273
VARIANCE =	0.00194181818182
STD DEV =	0.0440660661033
DATA MIN =	0.02
DATA MAX =	0.16
DATA RANGE =	0.14
STANDARD ERR OF MEAN =	0.0132864188411
COEFFICIENT OF VARIATION =	47.5222281506
SKEWNESS =	-0.0368924985539
KURTOSIS =	2.01206970921

P11 FE

DESCRIPTIVE STATISTICS

N =	4
MEAN =	0.135
VARIANCE =	0.0049
STD DEV =	0.07
DATA MIN =	0.1
DATA MAX =	0.24
DATA RANGE =	0.14
STANDARD ERR OF MEAN =	0.035
COEFFICIENT OF VARIATION =	51.8518518519
SKEWNESS =	1.15470053838
KURTOSIS =	2.33333333334

P11 F

DESCRIPTIVE STATISTICS

N =	8
MEAN =	0.02625
VARIANCE =	3.125E-4
STD DEV =	0.0176776695297
DATA MIN =	0.01
DATA MAX =	0.05
DATA RANGE =	0.04
STANDARD ERR OF MEAN =	0.00625
COEFFICIENT OF VARIATION =	67.3435029701
SKEWNESS =	0.443190342066
KURTOSIS =	1.47843265306

P11 CU

DESCRIPTIVE STATISTICS

N =	6
MEAN =	1906.66666667
VARIANCE =	146.666666698
STD DEV =	12.1106014177
DATA MIN =	1890
DATA MAX =	1920
DATA RANGE =	30
STANDARD ERR OF MEAN =	4.94413232527
COEFFICIENT OF VARIATION =	0.635171403026
SKEWNESS =	-0.0548203515217
KURTOSIS =	1.61158760261

P11 COND

DESCRIPTIVE STATISTICS

N =	7
MEAN =	0.174285714286
VARIANCE =	0.0513619047619
STD DEV =	0.226631649956
DATA MIN =	0.01
DATA MAX =	0.5
DATA RANGE =	0.49
STANDARD ERR OF MEAN =	0.0856587121429
COEFFICIENT OF VARIATION =	130.034553254
SKEWNESS =	0.8386601574
KURTOSIS =	1.83310341379

P11 CR

DESCRIPTIVE STATISTICS

N =	10
MEAN =	12.01
VARIANCE =	32.8987777778
STD DEV =	5.73574561655
DATA MIN =	6.2
DATA MAX =	22.6
DATA RANGE =	16.4
STANDARD ERR OF MEAN =	1.81380202276
COEFFICIENT OF VARIATION =	47.7580817365
SKEWNESS =	1.26432073651
KURTOSIS =	2.98033972551

P11 CL

DESCRIPTIVE STATISTICS

N =	5
MEAN =	2
VARIANCE =	20
STD DEV =	4.472135955
DATA MIN =	0
DATA MAX =	10
DATA RANGE =	10
STANDARD ERR OF MEAN =	2
COEFFICIENT OF VARIATION =	223.60679775
SKEWNESS =	1.5
KURTOSIS =	3.25

P11 CARBONATE

DESCRIPTIVE STATISTICS

N =	11
MEAN =	103.818181818
VARIANCE =	406.363636364
STD DEV =	20.1584631449
DATA MIN =	75
DATA MAX =	130
DATA RANGE =	55
STANDARD ERR OF MEAN =	6.07800532744
COEFFICIENT OF VARIATION =	19.4170835896
SKEWNESS =	0.0299674897973
KURTOSIS =	1.46430865278

P11 CA

DESCRIPTIVE STATISTICS

N =	6
MEAN =	96.1666666667
VARIANCE =	139.366666667
STD DEV =	11.8053660116
DATA MIN =	80
DATA MAX =	113
DATA RANGE =	33
STANDARD ERR OF MEAN =	4.81952049252
COEFFICIENT OF VARIATION =	12.2759438595
SKEWNESS =	0.0815694872524
KURTOSIS =	1.92113609951

P11 HCO3

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.2
VARIANCE =	0.024
STD DEV =	0.154919333848
DATA MIN =	0.1
DATA MAX =	0.5
DATA RANGE =	0.4
STANDARD ERR OF MEAN =	0.0632455532034
COEFFICIENT OF VARIATION =	77.4596669241
SKEWNESS =	1.41421356237
KURTOSIS =	3.5

P11 BA

DESCRIPTIVE STATISTICS

N =	6
MEAN =	0.00683333333333
VARIANCE =	7.766666667E-6
STD DEV =	0.00278687399548
DATA MIN =	0.003
DATA MAX =	0.01
DATA RANGE =	0.007
STANDARD ERR OF MEAN =	0.00113773654439
COEFFICIENT OF VARIATION =	40.783521885
SKEWNESS =	-0.359895227925
KURTOSIS =	1.61065777598

P11 AS

DESCRIPTIVE STATISTICS

N =	5
MEAN =	0.172
VARIANCE =	0.01727
STD DEV =	0.131415372008
DATA MIN =	0.05
DATA MAX =	0.37
DATA RANGE =	0.32
STANDARD ERR OF MEAN =	0.0587707410197
COEFFICIENT OF VARIATION =	76.4042860512
SKEWNESS =	0.679142759253
KURTOSIS =	1.92120529256

P11 NH3

DESCRIPTIVE STATISTICS

N =	6
MEAN =	76.3333333333
VARIANCE =	142.666666667
STD DEV =	11.9443152448
DATA MIN =	60
DATA MAX =	93
DATA RANGE =	33
STANDARD ERR OF MEAN =	4.87624627944
COEFFICIENT OF VARIATION =	15.6475745565
SKEWNESS =	0.0597132376918
KURTOSIS =	1.85562931273

P11 ALK

DESCRIPTIVE STATISTICS

N =	7
MEAN =	0.238571428571
VARIANCE =	0.0347476190476
STD DEV =	0.186407132502
DATA MIN =	0.05
DATA MAX =	0.5
DATA RANGE =	0.45
STANDARD ERR OF MEAN =	0.0704552736013
COEFFICIENT OF VARIATION =	78.1347261984
SKEWNESS =	0.683332091732
KURTOSIS =	1.80004263778

P11 AL

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.025
VARIANCE =	4.5E-4
STD DEV =	0.0212132034356
DATA MIN =	0.01
DATA MAX =	0.04
DATA RANGE =	0.03
STANDARD ERR OF MEAN =	0.015
COEFFICIENT OF VARIATION =	84.8528137424
SKEWNESS =	0
KURTOSIS =	1

```
M16 ZN

     ↓ SYNTAX ERROR
M16 ZN
```

DESCRIPTIVE STATISTICS

N =	10
MEAN =	0.0325
VARIANCE =	6.671666667E-4
STD DEV =	0.0258295696183
DATA MIN =	0.005
DATA MAX =	0.06
DATA RANGE =	0.055
STANDARD ERR OF MEAN =	0.00816802709757
COEFFICIENT OF VARIATION =	79.4755988255
SKEWNESS =	0.0576002585885
KURTOSIS =	1.18078305706

M16 V

DESCRIPTIVE STATISTICS

N =	6
MEAN =	1413.33333333
VARIANCE =	3786.6666667
STD DEV =	61.5358973827
DATA MIN =	1340
DATA MAX =	1480
DATA RANGE =	140
STANDARD ERR OF MEAN =	25.1219249087
COEFFICIENT OF VARIATION =	4.3539550035
SKEWNESS =	0.0267443752936
KURTOSIS =	1.30985915026

M16 TDS

DESCRIPTIVE STATISTICS

N =	6
MEAN =	932.5
VARIANCE =	8573.9
STD DEV =	92.5953562551
DATA MIN =	802
DATA MAX =	1035
DATA RANGE =	233
STANDARD ERR OF MEAN =	37.801895896
COEFFICIENT OF VARIATION =	9.92979691743
SKEWNESS =	-0.192912333945
KURTOSIS =	1.68542693864

M16 S04

DESCRIPTIVE STATISTICS

N =	7
MEAN =	287.571428571
VARIANCE =	853.285714286
STD DEV =	29.2110546589
DATA MIN =	240
DATA MAX =	328
DATA RANGE =	88
STANDARD ERR OF MEAN =	11.0407408802
COEFFICIENT OF VARIATION =	10.1578431501
SKEWNESS =	-0.408179825039
KURTOSIS =	2.25708169152

M16 NA

DESCRIPTIVE STATISTICS

N =	8
MEAN =	9.9125
VARIANCE =	2.47267857143
STD DEV =	1.57247530074
DATA MIN =	7
DATA MAX =	11.7
DATA RANGE =	4.7
STANDARD ERR OF MEAN =	0.5559539742
COEFFICIENT OF VARIATION =	15.8635591499
SKEWNESS =	-0.966942962469
KURTOSIS =	2.5783308271

M16 SI02

DESCRIPTIVE STATISTICS

N =	2
MEAN =	0.0045
VARIANCE =	1.25E-5
STD DEV =	0.00353553390593
DATA MIN =	0.002
DATA MAX =	0.007
DATA RANGE =	0.005
STANDARD ERR OF MEAN =	0.0025
COEFFICIENT OF VARIATION =	78.5674201318
SKEWNESS =	-1.084202172E-13
KURTOSIS =	1

M16 SE

DESCRIPTIVE STATISTICS

N =	4
MEAN =	20.675
VARIANCE =	72.0225
STD DEV =	8.48660709589
DATA MIN =	11.7
DATA MAX =	32
DATA RANGE =	20.3
STANDARD ERR OF MEAN =	4.24330354794
COEFFICIENT OF VARIATION =	41.0476764009
SKEWNESS =	0.447380422189
KURTOSIS =	1.9697154654

M16 K

DESCRIPTIVE STATISTICS

N =	6
MEAN =	9.54166666667
VARIANCE =	0.235856666668
STD DEV =	0.485650766156
DATA MIN =	9.03
DATA MAX =	10.17
DATA RANGE =	1.14
STANDARD ERR OF MEAN =	0.198266095046
COEFFICIENT OF VARIATION =	5.08978968897
SKEWNESS =	0.175361840053
KURTOSIS =	1.30706264822

M16 PH

DESCRIPTIVE STATISTICS

N =	3
MEAN =	0.056
VARIANCE =	0.002128
STD DEV =	0.046130250 3787
DATA MIN =	0.008
DATA MAX =	0.1
DATA RANGE =	0.092
STANDARD ERR OF MEAN =	0.0266333124739
COEFFICIENT F VARIATION =	82.3754471048
SKEWNESS =	-0.158100541839
KURTOSIS =	1.5

M16 MO

Colorado School of Mines Research Institute
P.O. BOX 112 • GOLDEN, COLORADO 80401
PHONE (303) 279-2581
CSMRI

RECEIVED
80 JUL 15 P12: 14
RMEC CASPER

Pat Spieles
Rocky Mountain Energy Co.
P.O. Box 3719
Casper, WY 82602

Date: July 10, 1980
CSMRI Project: A00661
Radiochem Series: 1029
Samples Received: 6/27/80

REPORT OF ANALYSIS

Analysis No.	Sample Designation	pCi/l Ra 226 ± Precision*	pCi/l Th 230 ± Precision*
1029-1	Evap. Pond-RC 6/18	420 ± 10	2070 ± 60
2	Barren Bleed-RC 6/18	390 ± 10	180 ± 20
3	NML-M54 6/23	270 ± 10	15 ± 6
4	M55 6/23	310 ± 10	11 ± 6
5	M56 6/23	27 ± 4	7.6 5.5
6	M57 6/23	19 ± 3	11 ± 6
7	OR 67 6/23	41 ± 4	0.0 ± 4.0
8	SM68 6/23	0.2 ± 0.4	2.2 ± 4.5
9	RC-M1 6/18	360 ± 10	7.6 ± 5.5
10	M2 6/19	20 ± 3	1.8 ± 4.5
11	M3 6/19	104 ± 7	8.5 ± 5.6
12	M4 6/19	32 ± 4	12 ± 6
13	USM-1 6/20	0.4 ± 0.5	0.0 ± 3.7
14	LSM-1 6/20	54 ± 5	4.0 ± 4.9
15	21 6/17	7.0 ± 1.7	0.0 ± 3.7
16	21 6/10	10 ± 2	4.0 ± 4.9
17	East WW 6/23	8.0 ± 1.7	0.4 ± 4.2
18	West WW 6/24	27 ± 3	0.4 ± 4.2
19	SW 8 6/23	0.2 ± 0.4	0.0 ± 3.8
20	SW 16 6/23	4.2 ± 1.4	0.0 ± 3.9

By: Jerry McJunkin
Jerry McJunkin
Senior Radiochemist

For
Jim Tecklenburg
Manager, Analytical Services

*Variability of the radioactive disintegration process(counting error) at the 95% confidence level.

CDM

environmental engineers, scientists,
planners, & management consultants

CAMP DRESSER & McKEE INC.

11455 West 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

June 27, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 700-10194-6
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-10194-6-1 RC-M16 5-30-80	700-10194-6-2 RC-M17 5-30-80	700-10194-6-3 RC-M18 5-30-80
Determination (mg/l)			
Alkalinity	50	60	40
Bicarbonate (as HCO3)	50	60	0
Calcium	109	106	104
Carbonate (as CO3)	<10	<10	10
Chloride	9	9	8
Conductivity (µmhos/cm)	1,710	1,790	1,830
Eh (MV)	+168	+178	-7
Hardness	366	299	244
Magnesium	22	24	19
Manganese	0.02	0.04	0.02
pH	8.6	8.5	10.8
Potassium	11.7	9.97	2.71

Pat Spieles
Page 2
June 27, 1980

RE: 700-10194-6

REPORT OF ANALYSIS

Lab Designation	700-10194-6-1	700-10194-6-2	700-10194-6-3
Sponsor Designation	RC-M16	RC-M17	RC-M18
	5-30-80	5-30-80	5-30-80
Determination (mg/l)			
Sodium	328	291	3.5
Sulfate (as SO_4)	952	902	884
T.D.S. (@180°C)	1,340	1,340	1,320
Vanadium	<0.005	<0.005	0.009
Silica (as SiO_2)	7	7	4
Iron	0.05	0.24	0.05

CAMP DRESSER & McKEE INC.

Pat Spieles
Page 3
June 27, 1980

RE: 700-10194-6

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-10194-6-4 RC-M19 6-2-80	700-10194-6-5 P11 6-2-80	700-10194-6-6 RC-LSM2 / 6-2-80
Determination (mg/l)			
Alkalinity	50	70	500
Bicarbonate (as HCO_3)	60	90	0
Calcium	102	101	81
Carbonate (as CO_3)	<10	0	20
Chloride	9	9	177
Conductivity (µmhos/cm)	1,800	1,720	2,920
Eh (MV)	+155	+171	-84
Hardness	348	331	265
Magnesium	23	21	<0.02
Manganese	0.03	<0.02	0.08
pH	8.5	8.0	12.0
Potasssium	9.55	6.86	34
Sodium	306	296	297
Sulfate (as SO_4)	958	873	356
T.D.S. (@180°C)	1,380	1,330	1,240
Vanadium	<0.005	0.011	0.006
Silica (as SiO_2)	8	7	6
Iron	<0.02	0.13	0.16

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

DAL/rjf

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 25, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1537	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Total Dissolved Solids *		1420				
	Sodium (Na)		314				
	Potassium (K)		15				
	Calcium (Ca)		92				
	Magnesium (Mg)		15				
	Sulfate (SO_4)		900				
	Chloride (Cl)		112				
	Carbonate (CO_3)		0				
	Bicarbonate (HCO_3)		61				
	Hydroxide (OH)		0				
	pH, Units		7.91				
	Conductivity, Micromhos/cm @ 25°C		1757				
	Total Milliequiv, Major Cations		19.86				
	Total Milliequiv, Major Anions		20.06				
	Absolute Value, Charged Bal.		-0.50				
	Ammonia (NH_4 as N)		0.24				
	Nitrate (NO_3 as N)		ND				0.05
	Nitrite (NO_2 as N)		ND				0.001
	Fluoride (F)		0.24				0.1
	Total Alkalinity as $CaCO_3$		291				
	Total Hardness as $CaCO_3$		50				
	Boron (B)		ND				0.01

REMARKS: *Determined by evaporation @ 180° C

1. RC P11 4/14/80

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 25, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1537	Water						Detect
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Total Dissolved Solids *		1420				
	Sodium (Na)		314				
	Potassium (K)		15				
	Calcium (Ca)		92				
	Magnesium (Mg)		15				
	Sulfate (SO_4)		900				
	Chloride (Cl)		112				
	Carbonate (CO_3)		0				
	Bicarbonate (HCO_3)		61				
	Hydroxide (OH)		0				
	pH, Units		7.91				
	Conductivity, Micromhos/cm @ 25°C		1757				
	Total Milliequiv. Major Cations		19.86				
	Total Milliequiv. Major Anions		20.06				
	Absolute Value, Charged Bal.		-0.50				
	Ammonia (NH_4 as N)		0.24				
	Nitrate (NO_3 as N)		ND				0.05
	Nitrite (NO_2 as N)		ND				0.001
	Fluoride (F)		0.24				0.1
	Total Alkalinity as $CaCO_3$		291				
	Total Hardness as $CaCO_3$		50				
	Boron (B)		ND				0.01

REMARKS: *Determined by evaporation @ 180° C

1. RC P11 4/14/80

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 25, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1537	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Aluminum (Al)		0.05				0.05
	Arsenic (As)		0.003				0.005
	Barium (Ba)		ND				0.03
	Cadmium (Cd)		0.003				0.002
	Chromium (Cr)		ND				0.01
	Copper (Cu)		0.01				0.01
	Iron (Fe)		0.15				0.01
	Lead (Pb)		ND				0.01
	Manangese (Mn)		0.01				0.01
	Mercury (Hg)		ND				0.0005
	Nickel (Ni)		ND				0.02
	Selenium (Se)		ND				0.005
	Zinc (Zn)		0.007				0.005
	Silica		7.7				
	Molybdenum (Mo)		ND				0.05
	Uranium (U_3O_8) PPB		82				1 PPB
	Vanadium (V_2O_5)		0.21				0.05
	Radium (Ra-226) PiC/L ± Prec.		127 ±	5			0.5 PiC
	Polonium -210		1.1 ±	2.0			
	Lead -210		8 ±	6			
	Thorium-230		1.2 ±	0.9			

REMARKS: Analyses performed according EPA Manual, 1976 and/or Standard Methods for Examination of Water and Wastewater, 14th Edition.

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 25, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1537	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Aluminum (Al)		0.05				0.05
	Arsenic (As)		0.003				0.005
	Barium (Ba)		ND				0.03
	Cadmium (Cd)		0.003				0.002
	Chromium (Cr)		ND				0.01
	Copper (Cu)		0.01				0.01
	Iron (Fe)		0.15				0.01
	Lead (Pb)		ND				0.01
	Manangese (Mn)		0.01				0.01
	Mercury (Hg)		ND				0.0005
	Nickel (Ni)		ND				0.02
	Selenium (Se)		ND				0.005
	Zinc (Zn)		0.007				0.005
	Silica		7.7				
	Molybdenum (Mo)		ND				0.05
	Uranium (U_3O_8) PPB		82				1 PPB
	Vanadium (V_2O_5)		0.21				0.05
	Radium (Ra-226) PiC/L ± Prec.		127 ±	5			0.5 PiC.
	Polonium -210		1.1 ±	2.0			
	Lead -210		8 ±	6			
	Thorium-230		1.2 ±	0.9			

REMARKS: Analyses performed according EPA Manual, 1976 and/or Standard Methods for Examination of Water and Wastewater, 14th Edition.

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 24, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1353	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Total Dissolved Solids *		1416				
	Sodium (Na)		300				
	Potassium (K)		10				
	Calcium (Ca)		116				
	Magnesium (Mg)		22				
	Sulfate (SO_4)		890				
	Chloride (Cl)		18				
	Carbonate (CO_3)		5				
	Bicarbonate (HCO_3)		102				
	Hydroxide (OH)		0				
	pH, Units		8.22				
	Conductivity, Micromhos/cm @ 25°C		1805				
	Total Milliequiv, Major Cations		20.91				
	Total Milliequiv, Major Anions		20.86				
	Absolute Value, Charged Bal.		0.12				
	Ammonia (NH_4 as N)		ND				
	Nitrate (NO_3 as N)		0.04				0.05
	Nitrite (NO_2 as N)		ND				0.001
	Fluoride (F)		ND				0.1
	Total Alkalinity as $CaCO_3$		92				
	Total Hardness as $CaCO_3$		380				
	Boron (B)		ND				0.01

REMARKS: *Determined by evaporation @ 180° C

1. RC - I 14, 1-19-80

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 24, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1353	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Total Dissolved Solids *		1416				
	Sodium (Na)		300				
	Potassium (K)		10				
	Calcium (Ca)		116				
	Magnesium (Mg)		22				
	Sulfate (SO_4)		890				
	Chloride (Cl)		18				
	Carbonate (CO_3)		5				
	Bicarbonate (HCO_3)		102				
	Hydroxide (OH)		0				
	pH, Units		8.22				
	Conductivity, Micromhos/cm @ 25° C		1805				
	Total Milliequiv. Major Cations		20.91				
	Total Milliequiv. Major Anions		20.86				
	Absolute Value, Charged Bal.		0.12				
	Ammonia (NH_4 as N)		ND				
	Nitrate (NO_3 as N)		0.04				0.05
	Nitrite (NO_2 as N)		ND				0.001
	Fluoride (F)		ND				0.1
	Total Alkalinity as $CaCO_3$		92				
	Total Hardness as $CaCO_3$		380				
	Boron (B)		ND				0.01

REMARKS: *Determined by evaporation @ 180° C
1. RC - I 14, 1-19-80

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 24th, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1353	Water						Detectio
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Aluminum (Al)		ND				0.05
	Arsenic (As)		ND				0.005
	Barium (Ba)		ND				0.03
	Cadmium (Cd)		ND				0.002
	Chromium (Cr)		ND				0.01
	Copper (Cu)		0.004				0.01
	Iron (Fe)		0.04				0.01
	Lead (Pb)		ND				0.01
	Manangese (Mn)		0.07				0.01
	Mercury (Hg)		ND				0.0005
	Nickel (Ni)		ND				0.02
	Selenium (Se)		ND				0.005
	Zinc (Zn)		ND				0.005
	Silver		ND				
	Molybdenum (Mo)		ND				0.05
	Uranium (U_3O_8) PPB		54				1 PPB
	Vanadium (V_2O_5)		ND				0.05
	Radium (Ra-226) PiC/L ± Prec.		236 ±	3.8			0.5 PiC
	Silica		2.3				
	eH		277				
	Lead -210		3.6 ±	4.0			
	Polonium -210		0.5 ±	1.0			
	Thorium 230		2.1 ±	1.2			

REMARKS: Analyses performed according EPA Manual, 1976 and/or Standard Methods for Examination of Water and Wastewater, 14th Edition.

WAMCO LAB

P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: June 24, 1980

WAMCO NO.	SAMPLE DESCRIPTION		1				Mg/L
1353	Water						Detecti
	Analyses reported in Milligrams Per Liter except where noted:						Limit
	Aluminum (Al)		ND				0.05
	Arsenic (As)		ND				0.005
	Barium (Ba)		ND				0.03
	Cadmium (Cd)		ND				0.002
	Chromium (Cr)		ND				0.01
	Copper (Cu)		0.004				0.01
	Iron (Fe)		0.04				0.01
	Lead (Pb)		ND				0.01
	Manangese (Mn)		0.07				0.01
	Mercury (Hg)		ND				0.0005
	Nickel (Ni)		ND				0.02
	Selenium (Se)		ND				0.005
	Zinc (Zn)		ND				0.005
	Silver		ND				
	Molybdenum (Mo)		ND				0.05
	Uranium (U_3O_8) PPB		54				1 PPB
	Vanadium (V_2O_5)		ND				0.05
	Radium (Ra-226) PIC/L ± Prec.		236 ±	3.8			0.5 PIC
	Silica		2.3				
	eH		277				
	Lead -210		3.6 ±	4.0			
	Polonium -210		0.5 ±	1.0			
	Thorium 230		2.1 ±	1.2			

REMARKS: Analyses performed according EPA Manual, 1976 and/or Standard Methods for Examination of Water and Wastewater, 14th Edition.

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environmental engineers, scientists,
planners, & management consultants

CAMP DRESSER & McKEE INC.
11455 West 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

June 20, 1980

Pat Spieles
Rocky Mountain Energy Co.
P.O. Box 3719
Casper, WY 82602

RE: 700-9987-1
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-9987-1-1
Sponsor Designation	RC-P11

Determination (pCi/l)	U_3O_8 .078
Uranium (as U) (mg/l)	0.066
Lead-210 ± Counting Error*	92 ± 7
Polonium-210 ± Counting Error*	5.4 ± 1.7
Radium-226 ± Counting Error*	340 ± 26
Thorium-230 ± Counting Error*	1.0 ± 0.6

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M. Ebbesen

Nancy M. Ebbesen
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June 20, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 700-10156-4
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-10156-4-1	700-10156-4-2	700-10156-4-3	700-10156-4-4
Sponsor Designation	RC-P11	RC-2LSM	NM-P62	NM-P62
	5-19-80	5-16-80	5-23-80	5-27-80
Determination (mg/l)				
Alkalinity (as $CaCO_3$)	80	800	210	210
Ammonia (as N)	0.37	0.39	0.29	0.31
Arsenic	0.008	0.006	0.010	0.008
Bicarbonate (as HCO_3)	100	0	260	260
Boron	<0.1	<0.1	0.3	0.2
Calcium	86.5	190	57.6	56.5
Carbonate (as CO_3)	0	20	0	0
Chloride	10	188	33	32
Hardness	364	779	392	404
Iron	0.10	0.33	0.30	0.23
Magnesium	14.2	0.36	42.9	42.9

CAMP DRESSER & McKEE INC.

RE: 700-10156-4

REPORT OF ANALYSIS

Lab Designation	700-10156-4-1	700-10156-4-2	700-10156-4-3	700-10156-4-4
Sponsor Designation	RC-P11	RC-2LSM	NM-P62	NM-162
	5-19-80	5-16-80	5-23-80	5-27-80
Determination (mg/l)				
Manganese	0.01	0.01	0.13	0.13
Potassium	7.5	28	6.4	6.5
Selenium	0.004	0.004	0.052	0.045
Silica (as SiO_2)	7	2	5	6
Sodium	313	286	462	473
Sulfate (as SO_4)	880	450	1260	1250
T.D.S. (@180°C)	1350	1720	2060	2040
Vanadium	0.024	0.015	0.130	0.130

BY David A. LeMaster

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June 26, 1980

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Casper, WY 82602

RE: 700-10053-1
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-10053-1-1
Sponsor Designation	RC-P11 5-8-80

U_3O_8 .054

Determination (pCi/l)	
Uranium (as U), (mg/l)	0.071
Lead-210 ± Counting Error*	42 ± 5
Polonium-210 ± Counting Error*	2.6 ± 1.2
Radium-226 ± Counting Error*	300 ± 30
Thorium-230 ± Counting Error*	0.7 ± 0.4

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M. Ebben

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June 20, 1980

Pat Spieles
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RE: 700-10156-4
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	Sponsor Designation	Uranium (as U)	
Determination (mg/l)			U_3O_8
700-10156-4-1	RC-P11 5-19-80	0.069	.081
-2	RC-2LSM 5-16-80	0.002	.0023
-3	NM-P62 5-23-80	0.12	.142
-4	NM-P62 5-27-80	0.096	.113

BY Nancy M. Ebbesen

Nancy M. Ebbesen
Radiochemistry
Assistant Supervisor

NME/rjf

Reno Creek Pattern 2

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	Mo (~~ALK~~) mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	SiO_2 (~~CO_3~~) mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	Zn (~~SO_4~~) mg/l	Ni (~~NH_3~~)	Cu (~~B~~)	Cr (~~NO_2~~)	Cd (~~NO_3~~)	Ba	Al
[illegible]	RC - P11	[illegible]		-70	[illegible]	0.11		10.7	155	130	144	281	12.1	<0.1	1079	9.8	0.2	1220	0.02	ND		.109	0.02	0.01	0.02	0.13	ND	ND	0.04
[illegible]	M16	[illegible]		+105	1820				77							9.7	<0.06					0.024							
[illegible]	M17	[illegible]		+60	1820				87							6.2	<0.06					0.052							
[illegible]	M18	[illegible]		-60	2200				163							12.4	<0.06					0.048							
4-25	M19	[illegible]		+105	1900				103							13.3	<0.06					0.034							

✓ P. 1 OF 2

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	Alk mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	Si ~~OH~~ Mg/l	NH_3	S	NO_2	NO_3
[illegible]	[illegible]-M16	[illegible]		[illegible]	[illegible]				71	117	8.4	301	18	0.08	1035	8.7	0.04	1360	0.03				11.7				
[illegible]	M17	[illegible]		[illegible]	[illegible]				[illegible]	105	24	281	21	0.04	1017	12.4	0.12	1480	0.03				13.6				
[illegible]	M18	[illegible]		[illegible]	[illegible]				[illegible]	114	18	306	40	0.04	960	7.5	0.14	1460	0.02				10.6				
[illegible]	M19	[illegible]		[illegible]	[illegible]				[illegible]	106	20	301	18	0.02	1007	6.2	0.12	1400	0.03				13.4				
[illegible]	F11	[illegible]		+20	[illegible]				[illegible]	112	4.8	301	13	0.02	1035	6.2	0.04	1500	0.02	ND		0.078	11.8				

R.C.

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF mV	EH mV	Cond µmhos	AlK mg/l as CaCo3	Hard mg/l as CaCo3	Ba mg/l	Cd mg/l	Al mg/l	Cr mg/l	Cu mg/l	Mo mg/l	Ni mg/l	[illegible] mg/l	C mg/l	Y mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	OH	NH_3	S	NO_2	NO_3	
	M-16							0.26		0.16	0.08	0.02	0.10	0.04													
	M-17							0.10		0.09	0.07	0.03	0.05	0.03													
	M-18							0.57		0.12	0.04	0.03	0.03	0.04													
	M-19							0.31		0.07	0.07	0.03	0.01	0.05													
	P-11							0.20		0.12	0.06	0.04	0.01	0.05													

MIKE DOES ← ↕ → LEANNE & MISS JULIE → DO

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmho	AlK mg/l as CaCO3	Hard mg/l as CaCO3	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	SiO_2 OH mg/l	Br NH_3	Cl S	Cu NO_2	Pb NO_3	Mo	101
5/16	RC - 2 LSM									445	2.4	275	24.7	<0.1	578	217.4	ND	1680	0.02			.035	5.6	<0.1	ND	ND	0.10	0.14	0.22
	M 16	9.03	+170		1950											20.9	ND					.005							
	M 17	8.68	+180		1980											20.9	ND					.036							
	M 18	1083	+140		2000											21.7	ND												
	M 19															21.7	ND												
	P 11									118	13.6	281	3.6	<0.1	916	22.6	ND	1460				.080	10.3						
5/20	NM M54	6.40	+200		7500				259	325	144	1561	12.6	2.10	4603	99.1	0.05	7060	0.8			.103	18.6						
	M 55	6.89	+120		2600				324	109	48	520	6.6	0.20	1268	38.3	ND	2160				.392	9.9						
	M 56	6.88	+240		2600				281	88	48	474	7.2	0.29	1206	39.1	0.1	1980				.118	9.9						
	M 57	6.79	+200		2500				304	95	48	485	7.2	0.65	1237	39.1	ND	2020				.135	14.5						
5/20	RC POND									379	180	439	43.1	180	3397	197	4.2	11120	0.2			9.043							
	RC BAR BLEED									932	72	265	396	6.6	1686	43.5	0.2	2920				2.88							
	PROCESS H_2O									105	24	219	6.5	0.17	578	22.6	ND	1120											

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF	Eh	Cond	Zn	Hard	CO_3	HCO_3	Ca	Mg	Na	K	Fe	SO_4	Cl	V	TDS	Mn	As	Se	U_3O_8	Al	SiO_2	NH_3	Br	NO_3	Mo	Ni
			MV	MV	µmhos	mg/l	mg/l as CaCO	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
6-7-79	RC-M 19	7.39	160	0.03	1325	ND				113	18.2	326	10.9	<0.1	917	296	ND	1380	0.05				0.03	10.4	0.01	ND	ND	ND	ND
	RC-P 11	7.55	172	0.04	910	ND				117	16.9	31	8.3	<0.1	916	32.9	ND	1400	0.01			0.029	ND	9.8	0.01	ND	ND	0.01	ND
	RC-LSM 21	11.45	185	0.03	3250	ND				177	1.2	326	33.4	<0.1	490	287	ND	1260	0.01				0.28	2.6	0.01	ND	ND	0.07	ND

MIKE DOES ← ↕ → LAKE & MISS JULIE DOES OO

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF mV	Eh mV	Cond µmhos	ALK mg/l as CaCO3	Hard mg/l as CaCO3	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	OH	NH_3	S	NO_2	NO_3	
5/16	RC - 2 LSM	11.45	+15		4100	165		963	59							—	—					—					
	M 16	9.03	+170		850	60			73							—	—					—					
	M 17	8.68	+180		1980	85			104							—	—					—					
	M 18	10.83	+140		2000	128		45	64							—	—					—					
	M 19	8.30	+50		1980	75			91							—	—					—					
	P 11	8.98	+75		1920	93			113							—	—					—					
5/20	NM M54	7.40	+200		7500	212	—		259	—	—	—	—	—	—	—	—	—	—	—		—					
	M55	6.89	+120		2600	266			324	—				—		—	—					—					
	M56	6.88	+270		2600	230			281	—				—		—	—					—					
	M57	6.79	+200		2500	249			304	—				—		—	—					—					
5/20	RC POND	1.54	+435		>20,000	0			0						—			—		—	—	—					
	RC BAR BLEED	2.64	+250		3500	193			235						—			—		—	—	—					
	PROCESS H_2O	2.10	+260		1600	223			272	—	—	—	—	—	—	—	—	—	—	—	—	—					
		2.28				253			309																		
	SM1					43			53																		
	SM2					315			384																		
	SM3					173			211																		

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environmental engineers, scientists,
planners, & management consultants

CAMP DRESSER & McKEE INC.
11455 West 48th Avenue
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May 28, 1980

Pat Spieles
Rocky Mountain Energy
Box 3719
Casper, WY 82602

RE: 700-10060-4
Per P. Spieles

REPORT OF ANALYSIS

Lab Designation	Sponsor Designation	Uranium (as U)
Determination (mg/l)		
700-10060-4-1	RC-M16 5-7-80	0.011
-2	RC-M17 5-7-80	0.018
-3	RC-M18 5-8-80	0.006
-4	RC-M19 5-8-80	0.019

BY Nancy M. Ebbesen

Nancy M. Ebbesen
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Assistant Supervisor

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May 30, 1980

Pat Spieles
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Casper, WY 82602

RE: 700-10060-4
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-10060-4-1	700-10060-4-2	700-10060-4-3	700-10060-4-4
Sponsor Designation	RC-M16 5-7-80	RC-M17 5-7-80	RC-M18 5-8-80	RC-M19 5-8-80
Determination (mg/l)				
pH	8.9	8.5	11.1	8.7
Chloride	10	10	9	8
Bicarbonate (as HCO_3)	30	70	0	60
Conductivity (µmhos/cm)	2,040	1,960	2,160	2,100
Vanadium	<0.005	0.012	0.020	0.048

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

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May 28, 1980

Pat Spieles
Rocky Mountain Energy
Box 3719
Casper, WY 82602

RE: 700-9988-8
Per P. Spieles

4-11-80

REPORT OF ANALYSIS

Lab Designation	Sponsor Designation	Uranium (as U)
Determination (mg/l)		
700-9988-8-1	RC-M16	0.011
-2	RC-M17	0.018
-3	RC-M18	0.010
-4	RC-M19	0.018
-5	NM-M54	0.19
-6	NM-M55	0.26
-7	NM-M56	0.071
-8	NM-M57	0.14

BY Nancy M. Ebbesen

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April 24, 1980

Pat Spieles
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Casper, WY 82602

RE: 700-9685-2
P.O. #120-1194

2/28/80

REPORT OF ANALYSIS

Lab Designation	700-9685-2-1
Sponsor Designation	RC-M19

Determination (pCi/l)	
Uranium (as U), dissolved (mg/l)	0.019 .022 ± .08
Lead-210, dissolved ± Counting Error*	13 ± 4
Polonium-210, dissolved ± Counting Error*	1.4 ± 0.8
Radium-226, dissolved ± Counting Error*	13 ± 6
Thorium-230, dissolved ± Counting Error*	20 ± 2

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M. Ebbesen

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WAMCO LAB
P.O. BOX 3632 • CASPER, WYOMING 82602

ANALYSIS REPORT

COMPANY: ROCKY MOUNTAIN ENERGY COMPANY DATE: May 23, 1980

WAMCO NO.	SAMPLE DESCRIPTION	pH	V_2O_5	Cl	HcO_3	CO_3	U_3O_8
1585	Water	Units	Mg/L	Mg/L	Mg/L	Mg/L	P.P.B.
1	RC M 16 4/25/80	8.13	0.03	13	45	0	0
2	RC M 17 4/28/80	7.73	0.02	10	49	0	0
3	RC M 18 4/28/80	9.93	0.03	13	16	16	0
4	RC M 19 4/25/80	7.85	0.04	10	57	0	26
5	NM M 54 4/28/80	2.73*	0.06	60	*	*	63
6	NM M 55 4/29/80	3.06*	0.18	40	*	*	58
7	NM M 56 4/29/80	8.36	0.19	30	260	12	41
8	NM M 57 4/30/80	8.52	0.24	33	293	16	69
		Conductivity					
1		1795					
2		1795					
3		1835					
4		1835					
5		9185					
6		4455					
7		2470					
8		2935					

REMARKS: Unable to analyze for pH, Bicarbonate & Carbonate because both samples were acidified .

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CAMP DRESSER & McKEE INC.

11455 West 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

May 16, 1980

Pat Spieles
Rocky Mountain Energy
Box 3719
Casper, WY 82602

RE: 700-9988-8
P.O. #120-1194

4/24/80 4-14-80

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9988-8-1 RC-M16	700-9988-8-2 RC-M17	700-9988-8-3 RC-M18	700-9988-8-4 RC-M19
Determination (mg/l)				
pH	8.3	8.3	10.5	7.9
Chloride	9	9	9	8
Bicarbonate (as HCO_3)	60	50	10	50
Conductivity (μmhos/cm)	1,660	1,700	1,840	1,800
Vanadium	0.006	0.027	0.027	0.021

MIKE DOES ← ↕ → LOCATE MISS JULIE

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	ALK mg/l as CaCO3	Hard mg/l as CaCO3	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	SiO_2 QH mg/l	NH_3	S	NO_2	NO_3	
5/16	RC-2 LSM															212.4	ND					.035					
↓	M16	9.03	+170		1950											20.9	ND					.006					
	M17	8.68	+180		1980											20.9	ND					.036					
	M18	8.83	+140		2000											21.7	ND										
	M19															21.7	ND										
↓	P11															22.6	ND					.080					
5/20	NM M54	6.40	+200		7500				259	325	144	1561	12.6	2.10	4603	99.1	0.05	7060	0.8			.103	18.6				
↓	M55	6.89	+120		2600				324	109	48	520	6.6	0.20	1268	38.3	ND	2160				.392	9.9				
	M56	6.88	+240		2600				281	88	48	474	7.2	0.29	1206	39.1	0.1	1980				.118	9.9				
↓	M57	6.79	+200		2500				304	95	48	485	7.2	0.65	1237	39.1	ND	2020				.135	14.5				
5/20	RC POND									379	180	439	43.1	180	2397	19.7	4.2	11120	0.2								
↓	RC BIR BLEED									932	72	265	396	6.6	1686	43.5	0.2	2720									
↓	PROCESS H_2O									105	24	219	6.5	0.17	578	22.6	ND	1120									

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	Alk mg/l as CaCO3	Hard mg/l as CaCO3	Cr CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	Mo	Cu	Ni	Pb	Zn	Al	Be
5-2-80	RC-M16	8.15		440	1920				78								<0.1					ND							
	M17	8.80		435	1960				120								<0.1					.035							
	M18	11.02		465	2020				129								<0.1					.030							
	M19	8.20		470	2020				117								<0.1					.034							
	P11	8.16		430	1920			ND	148	130	12.0	275	10.0	<0.01	923	225	<0.1		.001			.111	ND	0.01	0.01	0.04	ND	[illegible]	[illegible]

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF	Eh	Cond	MO Alk mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	SiO_2	HCO_3	Ca	Mg	Na	K	Fe	SO_4	Cl	V	TDS	Mn	As	Se	U_3O_8	Zn	Ni	Cu	Cr	Cd	Ba
			MV	MV	µmhos			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ppm					
4-22-80	RC - P11	3.27		-70	1920	0.11		10.2	155	130	144	281	12.1	<0.1	1079	9.8	0.2	1220	0.02				.02	0.01	0.02	013	ND	NP
4-25	M16	3.27		+105	1220				77							9.7	<0.06											
4-23	M17	3.13		+60	1320				87							6.2	<0.06											
4-22	M18	11.2		-60	2,200				163							12.4	<0.06											
4-25	M17	3.14		+105	1300				103							13.3	<0.06											

P. 1 of 2

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	Alk mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	Si mg/l	NH_3	S	NO_2	NO_3		
4-11-[illegible]	[illegible]-M 16	[illegible]		+100	[illegible]				71	117	8.4	301	18	0.08	1035	8.7	0.04	1360	0.03				11.7						
[illegible]	M 17	7.85		+110	1870				[illegible]	105	24	281	21	0.04	1017	12.4	0.12	1480	0.03				13.8						
4-11	M 18	[illegible]		+100	[illegible]				[illegible]	114	18	306	40	0.04	960	7.5	0.14	1460	0.02				10.6						
4-11	M 19	[illegible]		+105	1780				104	106	20	301	13	0.02	1007	6.2	0.12	1400	0.03				13.4						
4-11	F 11	[illegible]		+120	[illegible]				104	122	4.8	301	13	0.02	1035	6.2	0.04	1500	0.02				11.8						

R.C.

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF	EH	Cond	ALK	Hard	Ba	Cd	Al	Cr	Cu	Mo	Ni				V	TDS	Mn	As	Se	U_3O_8	OH	NH_3	S	NO_3	NO_2		
			MV	MV	umhos	mg/l as $CaCO_3$	mg/l as $CaCO_3$	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l							
	M-16							0.26		0.16	0.08	0.02	0.10	0.04																
	M-17							0.10		0.09	0.07	0.03	0.05	0.03																
	M-18							0.57		0.12	0.04	0.03	0.03	0.04																
	M-19							0.31		0.07	0.07	0.03	0.01	0.05																
	P-11							0.20		0.12	0.06	0.04	0.01	0.05																

RENO CREEK

SAMPLE DATE	SAMPLE DESCRIPTION	pH	EMF MV	Eh MV	Cond µmhos	ALK mg/l as CaCO3	Hard mg/l as CaCO3	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	MN mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mg mg/l	As mg/l	Se mg/l	U_3O_8 mg/l	OH	NH_3 ppm	S	NO2	NO3	SiO2	Zn
21-26	RC-M16	10.17	-21		1975		133		61	98	<0.1	302	20.6	ND	857	3.5	<0.1	1480	12.0					.09				10.4	0.04
	M17	12.16	-30		1725		129		74	84	ND	298	27.1	<0.1	781	4.4	<0.1	1460	12.0					.14				10.3	0.01
	M18	11.59	-47		2,000		113		123	106	ND	315	35.9	<0.1	777	5.3	<0.1	1440	6.0					.12				6.3	0.02
26	M1	7.76			1677		140		169	107	<0.1	260	5.7	<0.1	710	4.4	<0.1	1280	12.0					.09				12.6	0.02
	M2	7.71			1723		145		130	109	<0.1	271	6.3	<0.1	679	5.3	<0.1	1360	12.0					.06				11.7	0.02
	M3	7.45			1770		143		118	108	<0.1	288	6.8	<0.1	741	6.2	<0.1	1320	18.0					.09				9.9	0.02
27	I14						183			132	ND	305	9.7	<0.1	781	8.0	<0.1	1580	12.0									11.2	0.02
27	Blend									260	2.4	305	16.2	108	1786	42.0	2.7	3260	60.1					1.59				-	0.24
27	Pond									191	1.5	174	9.0	62	1210	18.4	1.7	2080	36.1					4.90				-	0.18
26	RCSM1	7.21			565				345	150	ND	109	7.9	<0.1	9.5	15.1	<0.1	760	ND					<0				9.5	0.02
26	RCSM1	11.67			2402				715	161	ND	118	8.3	<0.1	10.1	9.8	<0.1	720	ND					4.22				5.6	0.03
28	17-19									138	0.4	270	184	12	914	4.4	0.1	1600	18									11.2	0.02
	RCM1-N. Pond																							329					
	RCM1-S. Pond																							277					

RENO CREEK

P. 2 of 2

SAMPLE DATE	SAMPLE DESCRIPTION	Pb mg/l	Ba mg/l	Cr mg/l	Cu mg/l	Ni mg/l	Mo mg/l	Al mg/l																			
2-21-80	RC-MW6	0.1	0.2	0.04	0.01	0.02	0.06	0.1																			
"	MW7	<0.1	0.2	0.03	0.03	0.02	0.04	<0.1																			
"	MW8	<0.1	0.1	0.04	0.01	0.02	0.03	<0.1																			
2-26	MW1	<0.1	0.1	0.02	0.01	0.02	ND	<0.1																			
"	MW2	<0.1	0.1	0.06	0.01	0.02	0.02	<0.1																			
"	MW3	<0.1	0.1	0.06	0.02	0.02	0.01	<0.1																			
1-19	MW14	<0.1	0.2	ND	0.02	0.03	0.01	0.1																			
2-27	BLEED	0.1	0.1	0.5	0.03	0.15	0.07	28.9																			
2-27	POND	<0.1	0.1	0.20	0.04	0.11	0.04	18.9																			
2-26	USM1	<0.1	0.3	ND	0.02	0.03	0.01	0.8																			
2-26	" LSM1	<0.1	0.1	ND	0.03	0.03	0.02	0.8																			

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11455 West 48th Avenue
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303 422-0469

March 21, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Caspe:c, WY 82602

RE: 700-9685-1
Per Pat Spieles

REPORT OF ANALYSIS

Lab Designation	700-9685-1-1
Sponsor Designation	RC-M19 2-28-80

Determination (mg/l)

Aluminum	<0.5
Alkalinity	40
Ammonia (as NH_4)	0.05
Arsenic	0.005
Barium	<0.1
Bicarbonate (as HCO_3)	50
Boron	<0.1
Cadmium	<0.02
Carbonate (as CO_3)	0
Chloride	9
Chromium, hexavalent	<0.01
Conductivity (µmhos/cm)	2060
Copper	0.04
Eh	+159
Fluoride	<0.1
Hardness (as $CaCO_3$)	375
Iron	0.10
Lead	<0.005
Magnesium	19
Manganese	0.06
Mercury	<0.00002
Molybdenum	<0.005
Nickel	<0.05
Nitrate (as N)	<0.05
Nitrite (as N)	<0.05

Pat Spieles
Page 2
March 21, 1980

RE: 700-9685-1

REPORT OF ANALYSIS

Lab Designation	700-9685-1-1
Sponsor Designation	RC-M19 2-28-80
Determination (mg/l)	
pH	8.5
Potassium	23
Selenium	0.008
Silica (as SiO_2)	7
Silver	<0.03
Sodium	335
Sulfate	907
T.D.S. (@180°C)	1,430
Vanadium	0.047
Zinc	<0.02
Calcium	93
Calculated Anion-Cation Balance (%)	106

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

DAL/rjf

Reno Creek Pattern #2 Baseline

Sample Date	Sample Description	pH	EMF (mV)	Mo (mg/l)	Cond (umhos)	SiO_2 (mg/l)	Hard (mg/l as $CaCO_3$)	CO_3 (mg/l)	HCO_3 (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Fe (mg/l)	SO_4 (mg/l)	Cl (mg/l)	V (mg/l)	TDS (mg/l)	Mn (mg/l)	As (mg/l)	Se (mg/l)	U_3O_8 (mg/l)	Cr (mg/l)	Ba (mg/l)	Cu (mg/l)	Pb (mg/l)	Ni (mg/l)	Zn (mg/l)	Al (mg/l)
3-14	RC-I 12	9.10	-210	0.13	1970	11.9			106	54	8.5	206	10.7	0.01	455	61.0	0.4	1480	0.01				0.02	0.02	0.02	0.06	0.04	0.01	0.10
3-14	RC-I 13	9.04	-189	0.17	1840	12.3			153	54	13.3	218	13.2	0.01	921	63.2	0.2	1380	0.02				0.03	0.03	0.01	0.04	0.01	0.01	0.12
3-17	RC-I 15	9.03	-170	0.18	1883	12.1			143	48	13.3	244	9.4	0.02	947	654	0.2	1440	0.03				0.02	ND	0.01	0.04	0.01	0.01	0.13

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March 17, 1980

Pat Spieles
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P.O. Box 3719
Casper, WY 82602

RE: 700-9649-3
Per Pat Spieles

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9649-3-1 RC-M16 2/21/80	700-9649-3-2 RC-M17 2/21/80	700-9649-3-3 RC-M18 2/21/80
Determination (mg/l)			
Aluminum	<0.5	<0.5	<0.5
Alkalinity	30	90	100
Ammonia (as NH_4)	0.06	0.06	0.06
Arsenic	0.009	0.009	0.006
Barium	<0.1	<0.1	<0.1
Bicarbonate (as HCO_3)	30	60	30
Boron	0.1	0.2	<0.1
Cadmium	0.01	0.01	0.01
Carbonate (as CO_3)	0	20	40
Chloride	5	6	<5
Chromium, hexavalent	<0.01	<0.01	<0.01
Conductivity (µmhos/cm)	2040	1970	2150
Copper	<0.02	<0.02	0.03
Eh	+90	+88	-56
Fluoride	<0.1	0.1	<0.1
Hardness	364	376	328
Iron	0.1	0.05	0.05
Lead	<0.005	<0.005	<0.005
Magnesium	14	21	13
Manganese	0.02	0.04	0.02
Mercury	0.00013	0.00017	0.00018
Molybdenum	0.008	<0.005	0.005
Nickel	<0.05	<0.05	<0.05
Nitrate (as N)	<0.05	<0.05	<0.05
Nitrite (as N)	<0.05	<0.05	<0.05
pH	9.2	10.2	10.7
Potassium	32	42	56
Selenium	0.007	<0.005	<0.005

t Spieles
age 2
March 17, 1980

RE: 700-9649-3

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9649-3-1 RC-M16	700-9649-3-2 RC-M17	700-9649-3-3 RC-M18
Determination (mg/l)			
Silica (as SiO_2)	8	7	6
Silver	<0.03	<0.03	<0.03
Sodium	240	252	252
Sulfate (as SO_4)	802	858	849
T.D.S. (@180°C)	1,380	1,330	1,310
Vanadium	0.009	0.027	0.020
Zinc	<0.01	<0.01	<0.01
Calcium	80	90	88
Anion-Cation Balance	95	93	91

BY David LeMaster

David LeMaster
Water Laboratory Supervisor

DL/rjf

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June 6, 1980

Pat Spieles
Rocky Mountain Energy Co.
Box 3719
Casper, WY 82602

RE: 700-10053-1
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-10053-1-1
Sponsor Designation	RC-P11 5-8-80

Determination (mg/l)

Aluminum	<0.5
Alkalinity	70
Ammonia (as N)	<0.05
Arsenic	0.004
Barium	<0.2
Bicarbonate (as HCO_3)	90
Boron	<0.1
Cadmium	<0.01
Calcium	75
Carbonate (as CO_3)	0
Chloride	10
Chromium, hexavalent	<0.5
Copper	<0.05
Fluoride	0.1
Hardness	337
Iron	0.05
Lead	<0.002
Magnesium	11
Manganese	0.04
Mercury	0.0001
Molybdenum	0.008
Nickel	<0.05
Nitrate (as N)	<0.05
Nitrite (as N)	<0.05
Potassium	8.2
Selenium	0.009

RE: 700-10053-1

REPORT OF ANALYSIS

Lab Designation	700-10053-1-1
Sponsor Designation	RC-P11 5-8-80
Determination (mg/l)	
Silica (as SiO_2)	6
Silver	<0.01
Sodium	245
Sulfate (as SO_4)	810
T.D.S. (@180°C)	1,390
Vanadium	0.030
Zinc	<0.01
Calculated Anion-Cation Balance	90

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

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June 5, 1980

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RE: 700-9889-1
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-9889-1-1
Sponsor Designation	RC-P11 4-14-80

Determination (pCi/l)

Uranium (as U), dissolved (mg/l)	0.069
Lead-210, dissolved ± Counting Error*	3.0 ± 2.8
Polonium-210, dissolved ± Counting Error*	2.2 ± 0.9
Radium-226, dissolved ± Counting Error*	300 ± 20
Thorium-230, dissolved ± Counting Error*	0.2 ± 0.6

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M. Ebbesen

Nancy M. Ebbesen
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May 23, 1980

Pat Spieles
Rocky Mountain Energy Co.
Box 3719
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RE: 700-9987-1
P.O. #120-1194

REPORT OF ANALYSIS

4/29/80

Lab Designation	700-9987-1-1
Sponsor Designation	RC-P11

Determination (mg/l)

Aluminum	<0.2
Alkalinity	60
Ammonia (as NH_4)	<0.1
Arsenic	0.007
Barium	<0.5
Bicarbonate (as HCO_3)	80
Boron	<0.1
Cadmium	<0.01
Carbonate (as CO_3)	0
Chloride	9
Chromium, hexavalent	<0.5
Conductivity (μmhos/cm)	1,710
Copper	0.05
Eh	+261
Fluoride	<0.1
Hardness	371
Iron	0.05
Lead	<0.005
Magnesium	11.0
Manganese	<0.02
Mercury	<0.0001
Molybdenum	0.036
Nickel	<0.05
Nitrate (as N)	<0.05
Nitrite (as N)	<0.05
pH	8.3
Potassium	10.3
Selenium	<0.005
Silica (as SiO_2)	6.2
Silver	<0.01

Pat Spieles
Page 2
May 23, 1980

RE: 700-9987-1

REPORT OF ANALYSIS

Lab Designation	700-9987-1-1
Sponsor Designation	RC-P11
Determination (mg/l)	
Sodium	240
Sulfate (as SO_4)	692
T.D.S. (@180°C)	1,360
Vanadium	0.046
Zinc	0.02
Calcium	82.0
Calculated Anion-Cation Balance	98

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

DAL/rjf

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May 21, 1980

Ms. Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 700-9889-1
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-9889-1-1
Sponsor Designation	RC-P11 4-14-80
Determination (mg/l)	
Aluminum, total	<0.5
Alkalinity	20
Ammonia (as NH_4)	<0.1
Arsenic, total	0.010
Barium, total	<0.1
Bicarbonate (as HCO_3)	20
Boron	<0.1
Cadmium, total	<0.01
Carbonate (as CO_3)	10
Chloride	9
Chromium, hexavalent	<0.01
Conductivity (µmhos/cm)	1,900
Copper, total	<0.02
Eh	149
Fluoride	<0.1
Hardness (as $CaCO_3$)	325
Iron, total	0.16
Lead, total	<0.01
Magnesium, total	5.5
Manganese, total	<0.02
Mercury, total	<0.0001
Molybdenum, total	0.009
Nickel, total	<0.05
Nitrate (as N)	<0.05
Nitrite (as N)	<0.05

Pat Spieles
Page 2
May 21, 1980

RE: 700-9889-1

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9889-1-1 RC-P11 4-14-80
Determination (mg/l)	
pH	9.2
Potassium, total	13
Selenium, total	<0.005
Silica	6
Silver, total	<0.02
Sodium, total	420
Sulfate (as SO_4)	868
T.D.S. (@180°C)	1,360
Vanadium, total	0.11
Zinc, total	<0.01
Calcium, total	88
Calculated Cation-Anion Balance	121

BY David A LeMaster

David A. LeMaster
Water Laboratory Supervisor

DAL/rjf

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February 14, 1980

Pat Spieles
Rocky Mountain Energy Co.
P.O. Box 3719
Casper, WY 82602

RE: 700-9486-1
Per letter of 1-29-80

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9486-1-1 RC-I-14 1-19-80
Determination (mg/l)	
Aluminum	<0.5
Alkalinity	90
Ammonia (as NH_4)	<0.05
Arsenic	0.003
Barium	0.8
Bicarbonate (as HCO_3)	100
Boron	<0.1
Cadmium	<0.005
Carbonate (as CO_3)	0
Chloride	12
Chromium, hexavalent	<0.01
Conductivity (µmhos/cm)	1,760
Copper	<0.05
Eh	186
Fluoride	0.2
Hardness (as $CaCO_3$)	399
Iron	0.15
Lead	<0.005
Magnesium	20
Manganese	0.02
Mercury	<0.0001
Molybdenum	0.010
Nickel	<0.05
Nitrate (as N)	<0.05
Nitrite (as N)	<0.05

RE: 700-9486-1

REPORT OF ANALYSIS

Lab Designation	700-9486-1-1
Sponsor Designation	RC-I-14 1-19-80

Determination (mg/l)

pH	8.3
Potassium	7.9
Selenium	<0.005
Silica (as SiO_2)	10
Silver	<0.02
Sodium	340
Sulfate (as SO_4)	850
T.D.S. (@180°C)	1,410
Vanadium	0.041
Zinc	<0.02
Calcium	110
Calculated Anion-Cation Balance (%)	111

BY David LeMaster

David LeMaster
Water Laboratory Supervisor

DL/rjf

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environmental engineers, scientists,
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CAMP DRESSER & McKEE INC.
11455 Wes. 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

May 23, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 700-9759-3
P.O. #120-1194

REPORT OF ANALYSIS

Lab Designation	700-9759-3-1	700-9759-3-2	700-9759-3-3
Sponsor Designation	RC-I12	RC-I13	RC-I15
Determination (pCi/l)			
Uranium (as U) (mg/l)	0.085	0.072	0.065
Lead-210, dissolved ± Counting Error*	130 ± 7	122 ± 7	91 ± 6
Polonium-210, dissolved ± Counting Error*	13.3 ± 1.9	6.4 ± 1.4	6.2 ± 1.3
Radium-226, dissolved ± Counting Error*	320 ± 20	270 ± 20	300 ± 20
Thorium-230, dissolved ± Counting Error*	0.0 ± 0.6	9.5 ± 1.6	0.0 ± 0.5

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M Ebbes

Nancy M. Ebbesen
Radiochemistry
Assistant Supervisor

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11455 West 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

March 18, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 261-9486-1
Per Pat Spieles

REPORT OF ANALYSIS

Lab Designation	261-9486-1-1
Sponsor Designation	RC-I-14
	1-19-80

Determination (pCi/l)

Uranium (as U) (mg/l)	0.068
Lead-210 ± Counting Error*	113 ± 8
Polonium-210 ± Counting Error*	7.0 ± 1.4
Radium-226 ± Counting Error*	7.5 ± 3.8
Thorium-230 ± Counting Error*	0.7 ± 0.6

*Variability of the radioactive disintegration process (counting error) at the 95% confidence level, 1.96σ.

BY Nancy M. Ebbesen

Nancy M. Ebbesen
Radiochemistry
Assistant Supervisor

NME/rjf

CDM
environmental engineers, scientists
planners, & management consultants

CAMP DRESSER & McKEE INC.
11455 West 48th Avenue
Wheat Ridge, Colorado 80033
303 422-0469

April 9, 1980

Pat Spieles
Rocky Mountain Energy
P.O. Box 3719
Casper, WY 82602

RE: 700-9759-3
Per Pat Spieles

REPORT OF ANALYSIS

Lab Designation	700-9759-3-1	700-9759-3-2	700-9759-3-3
Sponsor Designation	RC-I12	RC-I13	RC-I15
Determination (mg/l)			
Aluminum	<0.5	<0.5	<0.5
Alkalinity	50	90	80
Ammonia (as NH4)	0.10	<0.05	0.10
Arsenic	0.006	0.004	0.005
Barium	<0.1	<0.1	<0.1
Bicarbonate (as HCO_3)	60	90	90
Boron	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01
Carbonate (as CO_3)	0	0	10
Chloride	12	12	12
Chromium, hexavalent	<0.01	<0.01	<0.01
Conductivity (µmhos/cm)	1,790	1,680	1,790
Copper	<0.01	<0.01	<0.01
Eh	+237	+218	+212
Fluoride	0.1	0.2	0.2
Hardness	376	378	374
Iron	0.32	<0.05	<0.05
Lead	<0.005	<0.005	<0.005
Magnesium	13	16	17

Pat Spieles
Page 2
April 9, 1980

RE: 700-9759-3

REPORT OF ANALYSIS

Lab Designation Sponsor Designation	700-9759-3-1 RC-I12	700-9759-3-2 RC-I13	700-9759-3-3 RC-I15
Determination (mg/l)			
Manganese	<0.01	0.01	0.01
Mercury	0.00007	0.00006	0.00007
Molybdenum	0.023	0.009	<0.005
Nickel	<0.05	<0.05	<0.05
Nitrate (as N)	<0.05	<0.05	<0.05
Nitrite (as N)	<0.05	<0.05	<0.05
pH	8.2	8.3	8.7
Potassium	8.92	11.0	7.82
Selenium	<0.005	<0.005	0.005
Silica (as SiO_2)	7	8	7
Silver	<0.01	0.02	<0.01
Sodium	290	220	235
Sulfate (as SO_4)	917	809	829
T.D.S. (@180°C)	1,430	1,340	1,410
Vanadium	0.183	0.080	0.036
Zinc	0.02	0.01	<0.01
Calcium	98	90	94
Calculated Anion-Cation Balance	92	84	85

BY David A. LeMaster

David A. LeMaster
Water Laboratory Supervisor

DAL/rjf

RC - P11

	Al	Alk	NH_3	As	Ba	HCO_3	B	Cd	Ca	CO_3
1-14-80 NML	0.12	(85)	–	.009	.20	104	–	–	122	
1-14-80 [illegible]	<.5	(20)	<.1	.010	<.1	(20)	<.1	<.01	88	10
W	.05	(291)	.24	.003	(<.03)	(61)	(<.01)	(.003)	92	0
1/29 NML	–	(127)	–	–	<.1	(155)	–	<.01	130	–
CDM	<.2	60	<.1	.007	<.5	80	<.1	<.01	82	0
[illegible] NML	<.1	(120)	–	.	<.1	(146)	–	–	130	–
CDM	.5	70	.05	.004	.2	90	<.1	<.01	75	0
[illegible] UML		93				113			118	
CDM		80	.37	.008		100	<.1		97	0
/2 NML	ND				(ND .02)				117	
CDM		70				90			101	0

EFFICIENCY LINE No. 2030

GMF

EFFICIENCY LINE No. 2630

	1 Cl	2 Cr	Cond	4 Cu	5 ~~Ch~~	6 F	7 Hard	8 Fe	9 Pb	Mg
ML 4-14 1	6.2	.06	1890	.04	+20 +266	-	-	.02	-	4.8
ML 4-16 2	9	<.01	1900	<.02	+149	<.1	325	.16	<.01	5.5
W 3	12	<.01	(1757)	.01		.24	50	.15	<.01	15
4										
ML 4/29	9.8	.13	1920	.02	+176	-	-	<.1	-	14.4
CDM	9.0	<.5	(1710)	.05	+261	<.1	371	.05	<.005	11.0
7										
8										
ML 5/8 9	22.5	-	1900	.01	+276	-	-	.06	.04	12.0
CDM 10	10	.5		.05		.1	337	.05	.002	11
11										
12										
5/14 NM 13	22.6		1920		+70			<0.1		13.6
14	10						364	.10		14.2
15										
16										
6/2 NM 17	(33.9)	ND	1910 (1720)	.01	+70		331	<.1 .13	.04	16.9
CDM 18	9		~~1720~~				~~349~~	~~.13~~		~~21~~
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

EFFICIENCY LINE No. 2636

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
NL 4-14 1	.02		.01	.05			9.93	13		11.8
NL 4-14 2	<.02	<.0001	.009	<.05	<.05	<.05	9.2	13	<.005	6.0
W 3	.01	<.0005	<.05	<.02	<.05	<.001	7.91	15	<.005	7.7
4										
NL 4/29 5	.02		.01	.01	-	-	9.29	12.1		10.2
COM 6	<.02	<.0001	.036	<.05	<.05	<.05	8.3	10.3	<.005	6.2
7										
8										
5/8 9	.01		.01	.01	-	-	9.16	10.0	-	
COM 10	.04	.0001	.008	<.05	<.05	<.05	8	8.2	.009	6
11										
12										
5/16 NM 13							8.48	8.6		10.3
COM	.01						~~7~~	7.5	.004	7.0
EA									.002	
16										
5/2 NM	.01		.01	ND .01			9.55	8.3 ~~8~~ 6.9		9.8
COM	<.02									7
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

	1 Ag	2 Na	3 SO_4	4 TDS	5 V	6 Zn	7 U_3O_8	8	9	
NML 4-14 1	–	301	1035	1500	.04		.078			
4-14 2	<.02	420	868	1360	.11	<.01	.069			
W3		314	900	1420	.12	.007	.082			
4										
NML 4/23	–	281	1079	1220	.2	.01	.109			
CDM	<.01	240	692	1360	.046	.02	.078			
7										
8										
9										
5/11 NML 10		275	923		<.1	<.01	.111			
CDM 11	<.01	245	810	1390	.030	<.01	.084			
12										
13										
14					[illegible]		[illegible]			
5/16 NML 15		281	916	1460	.06		.080			
CDM			880	1350	.024		.081			
17										
18										
5/2 NML 19		311	916	1400	ND	ND	.029			
CDM		246	873	1330	.011					
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

EFFICIENCY LINE No. 2636

	1 Pb-210	2	3 Po-210	4	5 Ra-226	6	7 Th-230	8	9	
1/4 cpm 1	3.0 ± 2.8		2.2 ±	0.9	300 ±	20	0.2 ±	0.6		
W 2	8 ± 6		1.1 ±	2.0	127 ±	5	1.2 ±	0.9		
3										
1/2 cpm 4	92 ± 7		5.4 ±	1.7	340	± 26	1.0	± 0.6		
5										
6										
7										
5/8 cpm 8	42 ± 5		2.6 ±	1.2	300 ±	30	0.7 ±	0.4		
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

EFFICIENCY LINE 2036

RC-M17

EFFICIENCY LINE No. 2636

	1 Al	2 Alk	3 NH_3	4 As	5 Ba	6 HCO_3	7 B	8 Cl	9 Ca	CO_3
1/21 NML 1	0.1	—	.14	—	.2	—			84	
LDL 2	L.5	90	.06	.009	L.1	60	.2	.01	90	20
3										
4										
1/11 NML 5	.09								105	
CDM 6						50				
7										
8										
9										
1/26 NML 10										
~~CDM~~										
W. 11						49				
12										
13										
14										
2/7 NML 15									112	
CDM						70				
17										
18										
19										
2/16 NML 20		85				(104)			129	
21										
22										
23										
24										
3/30 NML		70				74			107	5.9
CDM		60				60			106	<10
27										
28										
29										
30										
31										

RC-M17

EMF

	Cl	Cr	Cond	Cu	Eh	F	Hard	Fe	Pb	Mg
-/21 NML	4.4	.03	1925	.03	-30			<.0[illegible]	<.02	12
CDM	6	<.01	1970	<.02		0.1	376	.05	<.005	21
-/1 NML	12.4		1870		+100			.04		24
CDM	9.0		1700							
-/25 NML	6.2		1920		+60					
W	10		1775							
-/7 NML			1980		+135			03		
CDM	10		1960							
5/16 NML	20.9		1980		+170			04		
-/30 NML			1910		+160			02		
CDM	9		1790				299	.24		24

PC-MW7

EFFICIENCY LINE No. 2636

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
1 MW1	<.1		.04	.02			10.66	27.1		10.3
2 CDM2	.04	.00017	<.005	<.05	<.05	<.05	(10.2)	10.2	<.005	7.0
3										
4										
5 MW5	.03						9.85	21		13.8
6 CDM1							(9.3)			
7										
8										
9 MW6							9.13			
10							(7.73)			
11										
12										
13 MW13							8.86			11.1
14										
15										
16										
17 MW17							8.68			10.7
18 CDMA							(8.5)			
19 EA									.002	
20										
21										
22 MW12							8.97			10.9
23 CDMA	.04							10.0		7
24										
25										
26										
27										
28										
29										
30										
31										

RC-M17

	1 Ag	2 Na	3 SO_4	4 TDS	5 V	6 Zn	7 U_3O_8	8	9	
5/1 NMW 1		298	781		<.1	.01				
COM 2	<.03	252	858	1330	.027	<.01	.028			
3										
4										
NMW 5		281	1017	1480	.12		.052			
COM 6					.027		.021			
7										
8										
5/9 NMW 9					<.1					
W 10					.01		ND			
11										
12										
5/1 NMW 13		275	938	1440	<.1		.035			
COM					.012		.028 .021			
15										
16										
5/10 NMW 17		260	979	1380	ND		.036			
18										
19										
20										
21										
5/30 NMW 22		260	987	1420						
COM		291	902	1340	<.005					
24										
25										
26										
27										
28										
29										
30										
31										

EFFICIENCY LINE No. 2636

Pb-217

EFFICIENCY LINE No. 2036

	1 Pb-210	2	3 Po-210	4	5 Ra-226	6	7 Th-230	8	9	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

RC - 118

EFFICIENCY LINE No. 2635

	1 Al	2 Alk	3 NH_3	4 As	5 Ba	6 HCO_3	7 B	8 Cl	9 Ca	CO_3
1						—				
2 NML	<0.1	—	.12			(123)		.	106	
COM	<.5	100	.06	.006	<.1	30	<.1	.01	~~88~~	40
4										
5										
6 NML						(167)			,11	
COM						,0				
8										
9										
10 NML	.					(163)			.	
COM						16.				
12										
13										
14										
15 NML						(129)			100	
COM						0				
17										
18										
19										
16 NML		128 ~~dup~~				~~dup~~ 64			~~dup~~ 97	45
21										
22										
23										
24										
25										
26 NML									104	
COM		40				0			104	10
28										
29										
30										
31										

Mi8

EDF.

EFFICIENCY LINE No. 2G3G

	1 Cl	2 Cr	Cond	4 Cu	5 [illegible]	6 F	7 Hard	8 Fe	9 Pb	Mg
1										
2 NML	5.3	.04	2000	.01	-40	[illegible]	[illegible]	< 0.1	.02 [illegible]	[illegible]
3 COM	5	5.01	2150	.03		< .1	328	.05	.005	13
4										
5										
6 NML	7.5	.	2100		+100			.04		18
7 COM	9		1840							
8										
9										
10 NML	12.4		2200		+60					
11 W COM	13									
12										
13										
14										
5/7 15 NML			2000		+65			01		
16 COM	9		2160							
17										
18										
5/16 19 NML	21.7		2000					01		
20										
21										
22										
23										
24										
5/30 25 NML	[illegible]		[illegible]				[illegible]	02		
COM	8		1830				244	.05		
27										
28										
29										
30										
31										

M18

EFFICIENCY LINE No. 2636

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
1										
2 NML	(1.1)		.03	.02			11.59	35.9		6.3
3 COM	.02	.00018	.005	<.05	<.05	<.05	(10.7)	56	<.005	6.0
4										
5										
6 NML	.02						11.36	40		10.6
7 COM							(10.5)			
8										
9										
10 NML							11.16			
11 W							(9.93)			
12										
13										
14										
15							11.02			8.3
16 COM							(11.1)			
17										
18										
19										
20 NML							10.83			6.3
21 CA									.002	
22										
23										
24										
25										
26 NML										10.0
COM	.02							(2.7)		4
28										
29										
30										
31										

M18

	1 Ag	2 Na	3 SO4	4 TDS	5 V	6 Zn	7 U3O8	8	9	
1										
2 NML		315	777	1440	.06	.02				
3 COM	<.03	252	849	1310	.02	<.01				
4										
5										
6										
7 NML		306	960	1460	.14		.048			
8 COM					.027		.012			
9										
10										
11 NML					.06					
12					.02		ND			
13										
14										
15 NML		286	921	1380	.06		.03			
16 COM					.02		.007			
17										
18										
19										
20 NML		270	921	1400	.06		ND			
21										
22										
23										
24										
25										
26 NML		265	1020	1380			.013			
COM		315	884	1320	.009					
28										
29										
30										
31										

EFFICIENCY LINE No. 2636

M18

EFFICIENCY, LINE No. 2636

	1 Pb-210	2	3 Po-210	4	5 Ra-226	6	7 Th-230	8	9	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

RC - M19

	1 Al	2 Alk	3 NH_3	4 As	5 Ba	6 HCO_3	7 B	8 Cl	9 Ca	CO_3
1										
28 NML 2	1								138	
COM 3	<5	40	.05	.005	<.1	50	<.1	<.02	93	0
4										
5										
11 NML						104			106	
COM						50				
8										
9										
10										
15 NML						103				
W 12						57				
13										
14										
17 NML						47			117	
COM						60				
17										
18										
5/16 NML 19		75				91			120	0
20										
21										
22										
2 NML	<5				ND				125	
	403								117	
COM		50				60			102	<10
25										
25										
27										
28										
29										
30										
31										

EFFICIENCY LINE No. 2630

M19

EMLF

	1 Cl	2 Cr	Cond	4 Cu	5 Zn	6 F	7 Hard	8 Fe	9 Pb	Mg
1										
4/28 NML 2	4.4							.121		18
COM 3	9.0	<.01	2060	.04		<.1	375	0.10	<.005	19
4										
5										
6										
5/11 NML 7	6.2		1890		+105			.02		20
COM 8	8.0		1880							
9										
10										
4/25 NML	13.3		1900		+105					
W12	10.0		1835							
13										
14										
15										
5/1 NML			2000		+90			<.01		
COM	8		2100							
18										
19										
20										
5/16 NML	21.7		1980		+50			02		
22										
23										
24										
25										
5/2 NML 26	30		1980		+60			.01 <.01	.03	18
COM 27	9		1800				348	<.02		23
28										
29										
30										
31										

EFFICIENCY LINE No. 2630

EFFICIENCY LINE No. 2636

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
1										
3 NML	.4							18.4		11.2
COM	.01	<.00002	<.005	<.05	<.05	<.05	8.5	23	.008	7.0
4										
5										
11 NML	.03						9.9	18		13.4
COM							7.9			
8										
9										
10										
25 NML							9.68			
W 12							7.85			
13										
14										
15										
18										
7 NML							9.0			10.4
COM							8.7			
19										
20										
21										
16 NML 22										10.8
23										
24										
25										
6/2/80 NML	.05		ND	ND			9.30	10.9		10.1 10.4
COM	.03							9.6		8
28										
29										
30										
31										

M19

EFFICIENCY LINE No. 2636

	1 Ag	2 Na	3 SO_4	4 TDS	5 V	6 Zn	7 U_3O_8	8	9	
1										
7/27 NML		270	914	1600	0.1					
COM	<.03	335	907	1430	0.047	<.02	.022			
4										
5										
6										
7/11 NML		301	1007	1400	.04					
COM					.021		.021			
9										
10										
11										
7/25 NML 12					.06		.034			
W 13					.02		.026			
14										
15										
16										
8/1 NML 17		275	929	1500	0.1		.039			
COM 18					.048		.022			
19										
20										
21										
8/10 NML 22		286	970	1520	.06					
23										
24										
25										
26										
8/22 NML 27		275 326	917 979	1480 1380	ND	ND	0.015			
COM 28		306	958	1380	<.005					
29										
30										
31										

M19

EFFICIENCY, LINE No. 2638

	1 Pb-210	2	3 Po-210	4	5 Ra-226	6	7 Th-230	8	9	
1										
2 dpm/cm²	13 ±	4	1.4 ±	0.8	13 ±	6	20 ±	2		
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

RC - LSM 21

	1 Al	2 Alk	3 NH_3	4 As	5 Ba	6 HCO_3	7 B	8 Cl	9 Ca	CO_3
1										
2 NML	.28				ND				177	
EDM		500				0			81	20
4										
5										
6										
b NML	.070 .086				<.01				445	
COM		800	.39	.006			<.1			20
9										
10										
11										
6/17 12						82				318 310
13										
14										
15										
6/21 16	.39				<.02				68	
17										167
18										
19										
20										
21										
22										
23										
24										
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28										
29										
30										
31										

EFFICIENCY, LINE No. 26

LSM 21

EMF

EFFICIENCY, LINE No. 26

	1 Cl	2 Cr	Cond	4 Cu	5 ~~Cl~~	6 F	7 Hard	8 Fe	9 Pb	Mg
1										
6/2 NML 2	287	ND	3250	.01	+25			<.1	.03	1.2
COM 3	177		2950				265	.16		<.02
4										
5										
6										
6/16 NML 2	217	ND		ND				<.1	.10	2.4
3	188						779	.33		.36
9										
10										
11										
6/17 12	147		1840		-071					
13										
14										
15										
6/21 NML 16		<.003		<.002				0.20	<.02	12
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

LSM 21

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
1										
2 NMW	.01		.07	ND			11.45	33.4		7.6
CDMW	.08						12.0	34		6
4										
5										
6										
16 NMW	.02		.14	.22				24.7		5.6
CDMW	.01							28	.004	2
EA									.002	
10										
17							11.9			10.8
12										
13										
14										
15										
16										
21 17	.01		<.01	<.008				17.6		
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

LOGICAL LINE No. 2636

LSM 21

	1 Ag	2 Na	3 SO4	4 TDS	5 V	6 Zn	7 U3O8	8	9	
6/2 NML		326	490	1260	ND	ND				
CDM		~~297~~	356	1240	.006					
6/16 NML		275	578	1680	ND					
CDM		286	450	1720	.015		.0023			
6/17			133	560			.0057			
6/21			235		<.02	.02				

EFFICIENCY LINE No. 20

LSM2!

	1 Pb-210	2	Po-210	4	Ra-226	6	Th-230	8	9	
1/10 csm 1					7.0 ± 1.7		4.0 ± 4.9			
2										
3										
4										
1/11 csm 5					10 ± 2		0.0 ± 3.7			
6										
7										
8										
9										
10										
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EFFICIENCY, LIND No. 2636

RC - m16

		1 Al	2 Alk	3 NH_3	4 As	5 Ba	6 HCO_3	7 B	8 Cl	9 Ca	CO_3
1/21	NM 1	0.1	–	.09	–	0.2				98	
	CBM 2	<.5	30	.06	.009	<.1	30	0.1	.01	80	0
	3										
	4										
1/11	NM 5	.16				.26				117	
	CBM 6						60				
	7										
	8										
5/5	NM 9										
	W 10						45				0
	11										
	12										
5/7	NM 13						30			104	
	14										
	15										
	16										
5/16	NM 17		60				73			106	Tr
	18										
	19										
	20										
	21										
5/30	NM 22		41				38			100	5.7
	CBM		50				50			109	
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										

EFFICIENCY LINE No. 2636

RC-M16

EMF

	1 Cl	2 Cr	Cond	4 Cu	5 ~~Fe~~	6 F	7 Hard	8 Fe	9 Pb	Mg
NM 1	3.5	.04	1975	.01	-24		133?	ND	0.1	12
CDM 2	5	<.01	2040	<.02		<.1	364	0.1	<.005	14
3										
4										
NM 5	8.7	.08	1950	.02	+100			.08		8.4
CDM 6	9.0		1060							
7										
NM 8	9.7		1820		+105					
W 9	13.0		1775							
10										
11										
NM 12			1970		+140			04		
CDM 13	10		2040							
14										
15										
NM 16	20.9		1950		+170			04		
17										
18										
19										
NM			1940		+160			03		
CDM	9		1710				340	.05		22
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

EFFICIENCY LINE No. 2636

RC-M16

EFFICIENCY LINE No. 2630

	1 Mn	2 Hg	3 Mo	4 Ni	5 NO_3	6 NO_2	7 pH	8 K	9 Se	SiO_2
21 NML 1	<.1		.06	.02			10.17	21		10.4
COM 2	.02	.00013	.068	<.05	<.05	<.05	9.2	32	.007	8
3										
4										
5 NML	.03		.10	.04			9.76	18		11.7
COM 6							9.3			
7										
8										
NML							9.97			
W 10							8.13			
11										
12										
7 NML							9.15			10.6
COM							8.9			
15										
16										
9/10 NML 17							9.03			10.
EA									.002	
19										
20										
9/20 NML 21							9.17			10.8
COM 22	.02							11.7		7
23										
24										
25										
26										
27										
28										
29										
30										
31										

PC-M 16

		1 Ag	2 Na	3 SO4	4 TDS	5 V	6 Zn	7 U3O8	8	9	
5/1	NML		302	857	1480	<.04	.04				
	CDH	<.03	240	802	1380	.009	<.01				
3											
4											
5/11	NML		301	1035	1360	.04		.024			
	CDH					.006		.011			
7											
8											
5/5	NML					<.06		ND .005			
	WO					.02		ND .005			
11											
12											
5/9	NML		296			<.06		ND .005			
	CDH					<.005		.011			
15											
16											
5/15	NML		260	921	1440	ND .06		.006			
18											
19											
20											
5/30	NML		286	1028	1480						
	CDH2		328	952	1340	<.005					
23											
24											
25											
26											
27											
28											
29											
30											
31											

EFFICIENCY LINE No. 2636

RC-M16

EFFICIENCY LINE No. 2636

	1 Pb-210	2	Po-210	4	Ra-226	6	Th-230	8	9	
1										
2										
3										
4										
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