

UNITED NUCLEAR CORPORATION



P.O. Box 3077
Gallup, New Mexico 87305-3077

Telephone: (505) 722-6651
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CERTIFIED – RETURN RECEIPT REQUESTED

February 21, 2001

Branch Chief
U.S. Nuclear Regulatory Commission
Division of Waste Management (MST-7J9)
11555 Rockville Pike
Rockville, MD 20850

40-8907

Dear: Sir

In compliance with our Nuclear Regulatory Commission Radioactive Materials License No.SUA-1475, Condition 30, the enclosed Semi-Annual Ground Water Monitoring Report for the period of July 1, 2000 through December 31, 2000 is being submitted.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Bush".

Larry Bush
Manager

LB: r

Enclosure

cc: Division of Radiation Safety , Region IV
Greg Lyssy, USEPA
Suzie du Pont, Earth Tech
Steve Cline, GE
Roy Blickwedel, GE
Beiling Liu, NMED
George Padilla, NNEPA

IE17

**SEMI-ANNUAL GROUND WATER MONITORING REPORT
JULY 1, 2000 THROUGH DECEMBER 31, 2000**

**FIELD DATA SHEETS OF
THIRD AND FOURTH QUARTERS**

CONTROLS

ZONE 1

ZONE 3

SW ALLUVIUM

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

JULY - 3rd QUARTER, 2000

ZONE 1

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (μs/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. ($^{\circ}$c)</u>
515-A	7/11/00	98.5	7008.8	6910.3	7,350	5.45	14.4
604	7/11/00	97.2	7006.0	6908.8	6,450	4.57	16.2
614	7/11/00	97.6	7012.0	6914.4	7,880	6.53	14.2
TWQ-142	7/10/00	202.9	6983.4	6780.5	1,558	8.13	15.4
EPA-2	7/10/00	169.6	7019.5	6849.9	2,940	6.67	17.8
EPA-4	7/11/00	200.9	7069.8	6868.9	4,500	6.54	17.5
EPA-5	7/11/00	120.0	7011.5	6891.5	5,410	6.06	17.5
EPA-7	7/11/00	109.5	7011.7	6902.2	7,050	5.8	18.5
(QA/QC)	TWQ-142 Dup. 7-10	202.9	6983.4	6780.5	1,608	8.14	16.4
(QA/QC)	F. BLANK 7-11				160	7.48	31.2
TWQ-143	7/10/00	209.5	6989.6	6780.1			
EPA-8	7/20/00	213.0	7076.4	6863.4			
505-A	7/20/00	112.0	6963.1	6851.1			
502-A	7/20/00	193.2	7025.3	6832.1			
501-A	7/20/00	210.4	7048.0	6837.6			
504-A	7/20/00	203.5	7001.4	6797.9			
412	7/20/00	185.5	6979.4	6793.9			

COMMENTS: _____

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

JULY - 3RD QUARTER, 2000

ZONE 3

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (us/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. (°c)</u>
504-B	7/10/00	160.5	7001.8	6841.3	5,020	5.57	15.4
517	7/18/00	100.4	6971.75	6871.35	4,460	4.58	17.5
EPA-14	7/12/00	106.5	6965.8	6859.3	4,300	6.41	15.5
420	7/10/00	135.3	6982.6	6847.3	3,570	6.66	18.2
711	7/10/00	179.2	7042.75	6863.55	4,780	4.84	16.5
613	7/11/00	77.6	6961.3	6883.7	11,010	2.96	16.6
708			7012.0				
(QA/QC)	711-Dup. 7/10/00	179.2	7042.75	6863.55	4,750	4.90	18.0
(QA/QC)	F. Blank 7/17/00				160	7.52	33.2
EPA-9	7/20/00	168.8	7076.6	6907.8			
EPA-13	7/20/00	164.8	7032.9	6868.1			
702	7/20/00	80.0	6974.2	6894.2			
710	7/20/00	157.8	7016.5	6858.7			
712	7/20/00	169.8	7022.2	6852.4			
713	7/20/00	163.6	7024.5	6860.9			
714	7/20/00	93.8	6962.9	6869.1			
701	7/20/00	81.4	6961.3	6879.9			
706	7/20/00	110.2	6972.5	6862.3			
707	7/20/00	149.1	7005.2	6856.1			
717	7/20/00	118.6	6972.3	6853.7			
719	7/20/00	158.0	7002.0	6844.0			
402	7/20/00	111.8	6968.2	6856.4			
446	7/20/00	158.2	6998.3	6840.1			

COMMENTS: 717-Pumper and extraction well, but is presently shutdown due to collection line repair.

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

JULY - 3rd QUARTER, 2000

SOUTHWEST ALLIVIUM

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (µs/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. (°c)</u>
509-D	7/12/00	66.2	6949.5	6883.3	5,650	6.31	16.4
624	7/17/00	48.3	6898.7	6850.4	5,540	6.55	16.0
627	7/18/00	53.8	6892.4	6838.6	5,500	6.96	18.6
632	7/12/00	46.7	6903.6	6856.9	6,200	6.25	16.7
801	7/20/00	52.3	6904.3	6852.0			
802	7/12/00	65.5	6907.1	6841.6	7,290	6.55	16.6
803	7/12/00	87.1	6922.6	6835.5	7,200	6.71	16.3
808	7/20/00	50.2	6910.7	6860.5			
GW-1	7/17/00	60.3	6916.5	6856.2	4,520	6.63	14.9
GW-2	7/17/00	54.8	6912.9	6858.1	5,330	6.37	17.5
GW-3	7/17/00	52.2	6910.0	6857.8	5,040	6.48	18.2
EPA-23	7/17/00	47.7	6926.5	6878.8	4,460	6.55	17
EPA-25	7/18/00	51.0	6903.4	6852.4	4,400	6.88	14.6
EPA-28	7/17/00	61.5	6917.9	6856.4	4,920	6.66	18.2
(QA/QC) EPA-23 Dup. 7-17		47.7	6826.5	6878.8	4,420	6.56	17.2
(QA/QC)							
805	7/20/00	50.5	6915.6	6865.1			
807	7/20/00	54.6	6923.4	6868.8			

COMMENTS: 802, 803, and 808 - Pumper and extraction wells.

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

OCTOBER - 4TH QUARTER, 2000

ZONE 1

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (us/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. (°c)</u>
515-A	10/3/00	98.4	7008.8	6910.4	7,340	5.47	15.1
604	10/3/00	97.1	7006.0	6908.9	6,430	4.68	15.4
614	10/3/00	97.8	7012.0	6914.2	7,970	6.55	15.0
TWQ-142	10/2/00	202.8	6983.4	6780.6	1,603	8.08	16.2
EPA-2	10/2/00	169.5	7019.5	6850.0	2,960	6.7	17.2
EPA-4	10/3/00	200.9	7069.8	6868.9	4,580	6.61	16.6
EPA-5	10/3/00	119.9	7011.5	6891.6	5,370	6.14	16.8
EPA-7	10/3/00	109.4	7011.7	6902.3	7,170	5.88	15.5
(QA/QC) EPA-2 Dup. 10-9		169.5	7019.5	6850.0	2,980	6.69	16.0
(QA/QC) F. BLANK 10-3					470	6.21	16.6
TWQ-143	10/12/00	209.2	6989.6	6780.4			
EPA-8	10/4/00	213.0	7076.4	6863.4			
505-A	10/12/00	112.1	6963.1	6851			
502-A	10/12/00	193.1	7025.3	6832.2			
501-A	10/12/00	210.3	7048.0	6837.7			
504-A	10/12/00	203.2	7001.4	6798.2			
412	10/12/00	185.1	6979.4	6794.3			

COMMENTS:

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

OCTOBER - 4TH QUARTER, 2000

ZONE 3

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (μs/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. ($^{\circ}$C)</u>
504-B	10/2/00	160.4	7001.8	6841.4	5,130	5.48	15.6
517	10/2/00	100.2	6971.75	6871.55	4,460	4.47	16.9
EPA-14	10/9/00	104.8	6965.8	6861.0	4,350	6.42	14.8
420	10/2/00	134.4	6982.6	6848.2	3,400	6.81	17.1
711	10/2/00	179.1	7042.75	6863.65	4,760	4.72	16.7
613	10/2/00	76.3	6961.3	6885.0	11,000	2.97	18.1
708			7012.0				
(QA/QC)	711-Dup. 10-2	179.1	7042.75	6863.65	4,790	4.81	16.1
(QA/QC)							
EPA-9	10/4/00	168.8	7076.6	6907.8			
EPA-13	10/12/00	164.8	7032.9	6868.1			
702	10/4/00	80.1	6974.2	6894.1			
710	10/12/00	157.6	7016.5	6858.9			
712	10/12/00	169.4	7022.2	6852.8			
713	10/12/00	163.5	7024.5	6861.0			
714	10/12/00	94	6962.9	6868.9			
701	10/12/00	81.7	6961.3	6879.6			
706	10/12/00	110.1	6972.5	6862.4			
707	10/12/00	148.1	7005.2	6857.1			
717	10/12/00	117.5	6972.3	6854.8			
719	10/12/00	157.2	7002.0	6844.8			
402	10/12/00	111.2	6968.2	6857.0			
446	10/12/00	157.4	6998.3	6840.9			

COMMENTS:

**GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE**

OCTOBER - 4TH QUARTER, 2000

SOUTHWEST ALLIVIUM

<u>WELL NO.</u>	<u>DEPT REC./ SAMPLE DATE</u>	<u>DEPTH TO WATER (FT.)</u>	<u>REF. ELEV.</u>	<u>TOP OF WATER ELEV.</u>	<u>FIELD COND. (us/cm)</u>	<u>FIELD pH (units)</u>	<u>FIELD TEMP. (°c)</u>
509-D	10/3/00	66.4	6949.5	6883.1	5,930	6.21	17.3
624	10/9/00	48.4	6898.7	6850.3	5,640	6.7	11.0
627	10/10/00	53.7	6892.4	6838.7	5,630	7.03	12.2
632	10/3/00	46.9	6903.6	6856.7	6,220	6.28	15.9
801	10/4/00	52.4	6904.3	6851.9			
802	10/4/00	65.1	6907.1	6842	7,560	6.37	15.6
803	10/4/00	88.1	6922.6	6834.5	7,240	6.65	16.8
808	10/4/00	48.1	6910.7	6862.6			
GW-1	10/9/00	60.6	6916.5	6855.9	4,640	6.88	10.6
GW-2	10/9/00	55.2	6912.9	6857.7	5,340	6.35	14.2
GW-3	10/10/00	52.4	6910.0	6857.6	5,060	6.56	14.2
EPA-23	10/9/00	47.9	6926.5	6878.6	4,460	6.54	13.7
EPA-25	10/10/00	51.1	6903.4	6852.3	4,390	6.89	12.2
EPA-28	10/9/00	61.7	6917.9	6856.2	5,110	6.90	12.7
(QA/QC) EPA-23 Dup. 10-9		47.9	6926.5	6878.6	4,460	6.55	13.9
(QA/QC) F. BLANK 10-10					293	6.17	15.4
805	10/4/00	53.2	6915.6	6862.4			
807	10/4/00	54.7	6923.4	6868.7			

COMMENTS:

QUARTERLY WATER LEVELS

3rd QUARTER 2000

ZONE - 3

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
420	7-10-00	1120	135.3'	6982.6	6847.3'
711	7-10-00	1310	179.2'	7042.75	6863.5'
504-B	7-10-00	1025	160.5'	7001.8	6841.3'
EPA-9	7-20-00	1055	168.8'	7076.6	6907.8'
EPA-13	7-20-00	0940	164.8'	7032.9	6868.1'
EPA-14	7-12-00	0820	106.5'	6965.8	6859.3'
702	7-20-00	1030	80.0'	6974.2	6894.2'
710	7-20-00	0951	157.8'	7016.5	6858.7'
712	7-20-00	0950	169.8'	7022.2	6852.4'
713	7-20-00	0930	163.6'	7024.5	6860.9'
714	7-20-00	1015	93.8'	6962.9	6869.1'
613	7-11-00	1450	77.6'	6961.3	6883.7'
701	7-20-00	1025	81.4'	6961.3	6879.9'
706	7-20-00	1010	110.2'	6972.5	6862.3'
707	7-20-00	1105	149.1'	7005.2	6856.1'
* 717	7-20-00	0925	118.6'	6972.3	6853.7'
719	7-20-00	0910	158.0'	7002.0	6844.0'
402	7-20-00	0920	111.8'	6968.2	6856.4'
** 424	7-20-00	0915	DRY	6973.1	
446	7-20-00	0900	158.2'	6998.3	6840.1'
517	7-18-00	1000	100.4'	6971.75	6871.3

* THIS WELL IS A PUMPER, BUT IS SHUT DOWN DUE TO WORK BEING DONE ON COLLECTION LINE

** DRY WELL, NO WATER

QUARTERLY WATER LEVELS

4th QUARTER 2000

ZONE - 3

<u>WELL NO.</u>	<u>DATE</u>	<u>TIME</u>	<u>DEPTH TO WATER</u>	<u>REFERENCE ELEVATION</u>	<u>TOP OF WATER ELEVATION</u>
420	10-2-00	1045	134.4'	6982.6	6848.2'
711	10-2-00	1255	179.1'	7042.75	6863.65'
504-B	10-2-00	1005	160.4'	7001.8	6841.4'
EPA-9	10-4-00	1137	168.8'	7076.6	6907.8'
EPA-13	10-12-00	0950	164.8	7032.9	6868.1'
EPA-14	10-9-00	1355	104.8'	6965.8	6861.0'
702	10-4-00	0930	80.1'	6974.2	6894.1'
710	10-12-00	1110	157.6'	7016.5	6858.9'
712	10-12-00	1000	169.4'	7022.2	6852.8'
713	10-12-00	1010	163.5'	7024.5	6861.0'
714	10-12-00	1040	94.0'	6962.9	6868.9'
613	10-2-00	1500	76.3'	6961.3	6885.0'
701	10-12-00	1115	81.7'	6961.3	6879.6'
706	10-12-00	1050	110.1'	6972.5	6862.4'
707	10-12-00	1105	148.15'	7005.2	6857.05'
717	10-12-00	1030	117.5'	6972.3	6854.8'
719	10-12-00	1005	157.2'	7002.0	6844.8'
402	10-12-00	1025	111.2'	6968.2	6857.0'
424	10-12-00	1020	DRY	6973.1	6877.0'
446	10-12-00	0940	157.45'	6998.3	6840.85'
517	10-2-00	1130	100.2'	6971.75	6871.55'

**SEMI-ANNUAL GROUND WATER MONITORING REPORT
JULY 1, 2000 THROUGH DECEMBER 31, 2000**

SW ALLUVIUM

*** 509-D**

624

627

*** 632**

802

803

*** GW-1**

*** GW-2**

GW-3

*** EPA-23**

EPA-25

*** EPA-28**

LEVELS ONLY

801

805

807

808

***Point of Compliance Wells**



ENERGY LABORATORIES, INC.

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

509D	509D	509-D	509-D
30143-1	32496-10	00-34352-1	00-36667-1
01-04-00 12:33	05-03-00 00:00	07-12-00 09:05	10-03-00 13:00
		07-14-00	10-06-00
February 18, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	798	859	866	893
Magnesium	EPA 200.7	mg/L	0.01	529	337	306	372
Sodium	EPA 200.7	mg/L	0.05	232	241	228	240
Potassium	EPA 200.7	mg/L	0.10	17.5	13.2	10.3	13.5
Bicarbonate	SM 2320-B	mg/L	0.10	1980	2010	2110	2050
Sulfate	EPA 200.7	mg/L	1.0	2520	1570	1380	1990
Chloride	EPA 200.7	mg/L	1.0	278	293	324	350
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	11.7	0.60	0.24	1.90
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	36.6	32.7	31.3	31.2

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6090	4990	4920	5090
pH	SM 4500-H-B	std. units	0.10	7.59	7.12	7.18	7.14

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	0.20	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	0.07
Manganese	EPA 200.7	mg/L	0.01	1.09	1.60	1.89	2.05
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.134	0.176	0.226	0.184
Radium 226	EPA 903.0	pCi/L	0.2	0.5	< 0.2	0.6	0.7
Radium Error Estimate ±				0.3		0.3	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.6	2.8	< 1.0
Radium Error Estimate ±				0.2		0.2	
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	1.9	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			95.40	76.25	74.71	87.15
Cation	meq			95.43	82.00	79.10	86.68
SM A/C Balance	%		-5 - +5	0.01	3.64	2.85	-0.27
Calc TDS	mg/L			5543	4465	4310	5026
TDS A/C Balance	dec. %		0.80 - 1.20	1.10	1.12	1.14	1.01

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

624	624	624	624
30143-3	00-32684-5	00-34507-2	00-36828-2
01-04-00 13:20	05-09-00 00:00	07-17-00 09:25	10-09-00 09:25
-	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 18, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	649	652	697	606
Magnesium	EPA 200.7	mg/L	0.01	429	438	456	412
Sodium	EPA 200.7	mg/L	0.05	170	207	194	185
Potassium	EPA 200.7	mg/L	0.10	6.9	6.3	6.5	7.6
Bicarbonate	SM 2320-B	mg/L	0.10	1160	1470	1480	1440
Sulfate	EPA 200.7	mg/L	1.0	2080	1970	1790	1530
Chloride	EPA 200.7	mg/L	1.0	155	177	184	147
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	< 0.05	< 0.05	0.10
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	49.2	93.6	85.1	98.5

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4840	5130	5170	5090
pH	SM 4500-H-B	std. units	0.10	7.76	7.67	7.62	7.59

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ce	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.7	mg/L	0.01	0.05	0.02	0.02	0.01
Manganese	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Molybdenum	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.044	0.035	0.032	0.031
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.0	1.5	< 1.0
Radium Error Estimate ±					0.2	0.1	
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	6.4	< 1.0	< 1.0
Lead Error Estimate ±					2.3		
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			70.23	76.82	72.81	66.66
Cation	meq			75.79	78.28	81.46	72.88
SM A/C Balance	%		-5 - +5	3.80	0.94	5.60	4.45
Calc TDS	mg/L			4288	4600	4444	4044
TDS A/C Balance	dec. %		0.80 - 1.20	1.13	1.12	1.16	1.26

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

627	627	627	627
30143-8	00-32684-9	00-34507-9	00-36828-9
01-04-00 14:45	05-10-00 00:00	07-18-00 09:30	10-10-00 10:30
	05-12-00	07-20-00	10-13-00
February 22, 2000	June 21, 2000	August 21, 2000	November 20, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	530	535	567	496
Magnesium	EPA 200.7	mg/L	0.01	283	278	292	261
Sodium	EPA 200.7	mg/L	0.05	425	501	502	512
Potassium	EPA 200.7	mg/L	0.10	7.3	4.1	4.3	5.4
Bicarbonate	SM 2320-B	mg/L	0.10	597	588	590	580
Sulfate	EPA 200.7	mg/L	1.0	2430	2370	2390	2160
Chloride	EPA 200.7	mg/L	1.0	57.2	55.3	53.3	44.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.14	< 0.05	< 0.05	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	144	144	149	150

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5150	5200	5320	5100
pH	SM 4500-H-B	std. units	0.10	8.10	7.65	7.91	7.78

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.06	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.7	mg/L	0.01	0.86	0.10	0.11	0.08
Manganese	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Molybdenum	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	EPA 200.7	mg/L	0.001	0.003	< 0.001	< 0.001	< 0.001
Selenium IV	SM 3114-C	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.023	0.026	< 0.0003	0.024
Radium 226	EPA 903.0	pCi/L	0.2	4.1	0.4	0.6	0.5
Radium Error Estimate ±				0.3	0.2	0.2	0.2
Radium 228	EPA 904.0	pCi/L	1.0	2.0	6.3	2.5	< 1.0
Radium Error Estimate ±				0.2	0.2	0.1	
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	5.7	< 1.0	< 1.0
Lead Error Estimate ±					2.2		
Gross Alpha	EPA 900.0	pCi/L	1.0	5.5	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				0.7			

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		72.31	70.86	71.61	66.48
Cation		meq		68.82	71.82	74.63	68.96
SM A/C Balance		%	-5 - +5	-2.47	0.68	2.07	1.83
Calc TDS		mg/L		4670	4675	4764	4434
TDS A/C Balance		dec. %	0.80 - 1.20	1.10	1.11	1.12	1.15

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COMPLETE ANALYTICAL SERVICES



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

632	632	632	632
30143-6	00-32684-2	00-34352-2	00-36667-2
01-04-00 13:55	05-08-00 00:00	07-12-00 09:50	10-03-00 14:20
	05-12-00	07-14-00	10-06-00
February 22, 2000	June 21, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	581	579	595	622
Magnesium	EPA 200.7	mg/L	0.01	555	560	580	610
Sodium	EPA 200.7	mg/L	0.05	283	366	366	240
Potassium	EPA 200.7	mg/L	0.10	10.8	8.3	8.1	9.7
Bicarbonate	SM 2320-B	mg/L	0.10	1790	1800	1810	1780
Sulfate	EPA 200.7	mg/L	1.0	2610	2640	2510	2820
Chloride	EPA 200.7	mg/L	1.0	217	238	239	230
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.24	0.05	0.08	0.07
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	4.44	2.44	2.92	3.17

Non-Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6210	6020	6070	6020	
pH	SM 4500-H-B	std. units	0.10	7.93	7.60	6.98	7.18	

Trace Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	0.06	
Manganese	EPA 200.7	mg/L	0.01	0.87	1.04	0.79	0.73	
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	

Radiometrics		Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0704	0.0774	0.0739	0.0180	
Radium 226	EPA 903.0	pCi/L	0.2	1.3	0.5	0.9	0.8	
Radium Error Estimate ±				0.2	0.2	0.2	0.2	
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	2.1	< 1.0	
Radium Error Estimate ±						0.1		
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Thorium Error Estimate ±								
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Lead Error Estimate ±								
Gross Alpha	EPA 900.1	pCi/L	1.0	2.1	< 1.0	< 1.0	< 1.0	
G. Alpha Error Estimate ±				0.5				

Trace Organics		Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	2.0	2.8	2.0	2.5	

Quality Assurance Data		Method	Units	Target Range	Results	Results	Results	Results
Anion		meq			90.15	91.39	88.91	94.65
Cation		meq			87.96	91.81	94.25	92.66
SM A/C Balance		%	-5 - +5		-1.23	0.23	2.92	-1.06
Calc TDS		mg/L			5173	5303	5217	5437
TDS A/C Balance		dec. %	0.80 - 1.20		1.20	1.14	1.16	1.11

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

802	802	802	802
30268-1	32499-1	00-34352-3	00-36667-4
01-11-00 08:40	05-02-00 00:00	07-12-00 10:30	10-04-00 08:50
		07-14-00	10-06-00
February 18, 2000	May 28, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	732	651	699	732
Magnesium	EPA 200.7	mg/L	0.01	734	643	700	758
Sodium	EPA 200.7	mg/L	0.05	298	290	297	327
Potassium	EPA 200.7	mg/L	0.10	9.5	9.1	12.1	9.0
Bicarbonate	SM 2320-B	mg/L	0.10	2100	2047	2020	2050
Sulfate	EPA 200.7	mg/L	1.0	3120	2920	2870	3170
Chloride	EPA 200.7	mg/L	1.0	195	174	174	201
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.06	1.24	0.91	1.06
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	119	81.2	42.0	79.7

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7350	7170	7030	7250
pH	SM 4500-H-B	std. units	0.10	7.73	7.55	7.33	7.01

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.12	0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	1.83	2.27	1.52	1.97
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.180	0.193	0.0980	0.168
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.1	< 1.0	< 1.0
Radium Error Estimate ±					0.1		
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	1.6	1.5	< 1.0	2.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		113.42	105.09	100.81	111.00
Cation		meq		111.16	99.20	106.65	114.40
SM A/C Balance		%	-5 - +5	-1.01	-2.88	2.82	1.51
Calc TDS		mg/L		6669	6074	5951	6578
TDS A/C Balance		dec. %	0.80 - 1.20	1.10	1.18	1.18	1.10

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

803	803	803	803
30268-2	32499-2	00-34352-4	00-36667-3
01-11-00 08:45	05-02-00 00:00	07-12-00 10:40	10-04-00 08:45
		07-14-00	10-06-00
February 18, 2000	May 28, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	750	670	712	742
Magnesium	EPA 200.7	mg/L	0.01	693	637	737	750
Sodium	EPA 200.7	mg/L	0.05	262	256	328	296
Potassium	EPA 200.7	mg/L	0.10	14.4	13.5	6.8	14.1
Bicarbonate	SM 2320-B	mg/L	0.10	2000	2000	2050	2010
Sulfate	EPA 200.7	mg/L	1.0	3180	3030	2890	3260
Chloride	EPA 200.7	mg/L	1.0	176	161	184	175
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.80	0.86	1.24	0.85
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	35.7	42.8	77.5	45.6

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7020	7050	7250	7060
pH	SM 4500-H-B	std. units	0.10	7.66	7.58	7.40	7.31

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.12	0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	0.02
Ce	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.7	mg/L	0.01	1.69	2.27	1.95	1.76
Manganese	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Molybdenum	EPA 200.7	mg/L	0.05	0.05	< 0.05	< 0.05	< 0.05
Nickel	EPA 200.7	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0891	0.193	0.197	0.0841
Radium 226	EPA 903.0	pCi/L	0.2	0.6	0.6	0.4	0.5
Radium Error Estimate ±				0.3	0.2	0.2	0.3
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.5	< 1.0	1.3
Radium Error Estimate ±					0.1		0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	1.7	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		106.54	103.50	104.53	109.07
Cation		meq		107.17	98.26	111.65	112.99
SM A/C Balance		%	-5 - +5	0.29	-2.60	3.29	1.77
Calc TDS		mg/L		6236	5960	6229	6447
TDS A/C Balance		dec. %	0.80 - 1.20	1.13	1.18	1.16	1.10

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

GW-1	GW-1	GW-1	GW-1
30143-2	00-32684-3	00-34507-1	00-36828-1
01-04-00 12:45	05-09-00 00:00	07-17-00 08:35	10-09-00 08:45
	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 18, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	589	585	609	517
Magnesium	EPA 200.7	mg/L	0.01	278	309	312	274
Sodium	EPA 200.7	mg/L	0.05	176	226	210	200
Potassium	EPA 200.7	mg/L	0.10	6.0	5.1	4.9	5.8
Bicarbonate	SM 2320-B	mg/L	0.10	742	919	915	905
Sulfate	EPA 200.7	mg/L	1.0	1790	1870	1720	1520
Chloride	EPA 200.7	mg/L	1.0	114	122	125	95.1
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.28	0.84	0.77	0.88
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	94.2	87.0	77.5	75.7

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4160	4410	4370	4260
pH	SM 4500-H-B	std. units	0.10	7.72	7.69	7.58	7.53

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.03	0.04	0.04	0.03
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.051	0.061	0.057	0.060
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±							
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		59.40	63.68	59.88	54.59
Cation		meq		60.46	65.03	65.76	57.59
SM A/C Balance		%	-5 - +5	0.88	1.05	4.68	2.68
Calc TDS		mg/L		3742	3963	3782	3401
TDS A/C Balance		dec. %	0.80 - 1.20	1.11	1.11	1.16	1.25

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

GW-2	GW-2	GW-2	GW-2
30143-4	00-32684-1	00-34507-4	00-36828-6
01-04-00 13:35	05-08-00 00:00	07-17-00 10:55	10-09-00 13:15
	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 20, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	587	540	571	476
Magnesium	EPA 200.7	mg/L	0.01	549	528	536	449
Sodium	EPA 200.7	mg/L	0.05	185	234	213	194
Potassium	EPA 200.7	mg/L	0.10	11.0	9.5	9.6	10.5
Bicarbonate	SM 2320-B	mg/L	0.10	1430	1410	1400	1370
Sulfate	EPA 200.7	mg/L	1.0	2610	2590	2400	1930
Chloride	EPA 200.7	mg/L	1.0	143	155	158	130
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	< 0.05	< 0.05	0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	4.05	2.74	2.95	4.09

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5440	5410	5440	5310
pH	SM 4500-H-B	std. units	0.10	7.76	7.64	7.65	7.54

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.44	0.46	0.44	0.34
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.068	0.069	0.060	0.064
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±							
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	5.9	< 1.0	< 1.0
Lead Error Estimate ±					2.3		
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		82.14	81.63	77.61	66.61
Cation		meq		83.46	81.46	82.75	69.94
SM A/C Balance		%	-5 - +5	0.80	-0.11	3.21	2.44
Calc TDS		mg/L		4818	4774	4601	3893
TDS A/C Balance		dec. %	0.80 - 1.20	1.13	1.13	1.18	1.36

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**UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS**

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

GW-3	GW-3	GW-3	GW-3
30143-7	00-32838-1	00-34507-7	00-36828-7
01-04-00 14:25	05-15-00 00:00	07-17-00 14:15	10-10-00 08:50
	05-18-00	07-20-00	10-13-00
February 22, 2000	June 20, 2000	August 21, 2000	November 20, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-5-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	760	755	809	644
Magnesium	EPA 200.7	mg/L	0.01	239	241	258	210
Sodium	EPA 200.7	mg/L	0.05	169	211	207	179
Potassium	EPA 200.7	mg/L	0.10	9.2	8.0	9.1	9.0
Bicarbonate	SM 2320-B	mg/L	0.10	1170	1174	1190	1170
Sulfate	EPA 200.7	mg/L	1.0	1760	1830	1710	1320
Chloride	EPA 200.7	mg/L	1.0	106	127	125	96.4
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	0.15	< 0.05	0.10
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	113	119	117	118

Non-Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids		SM 2540-C	mg/L	1.0	4680	4780	4800	4680
pH		SM 4500-H-B	std. units	0.10	7.83	7.71	7.51	7.60

Trace Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum		EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III		SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium		EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium		EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt		EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper		EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese		EPA 200.7	mg/L	0.01	1.78	1.87	1.78	1.57
Molybdenum		EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel		EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV		SM 3114-C	mg/L	0.001	0.001	0.001	< 0.001	< 0.001
Vanadium		EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics		Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium		EPA 200.8	mg/L	0.0003	0.051	0.057	0.056	0.058
Radium 226		EPA 903.0	pCi/L	0.2	0.5	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±					0.3			
Radium 228		EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	1.1
Radium Error Estimate ±								0.1
Thorium 230		EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±								
Lead 210		NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±								
Polonium 210		RMO-3008	pCi/L	1.0	< 1.0	< 1.0	N/R	< 1.0
Polonium Error Estimate ±								
Gross Alpha		EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±								

Trace Organics		Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform		EPA 601	µg/L	1.0	2.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Method	Units	Target Range	Results	Results	Results	Results
Anion			meq		66.90	69.45	67.00	57.82
Cation			meq		65.61	67.34	71.28	57.81
SM A/C Balance			%	-5 - +5	-0.97	-1.54	3.10	-0.02
Calc TDS			mg/L		4131	4288	4233	3568
TDS A/C Balance			dec. %	0.80 - 1.20	1.13	1.11	1.13	1.31

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COMPLETE ANALYTICAL SERVICES

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA 23	EPA-23(DUP.)	EPA-23	EPA-23
30268-4	00-32684-8	00-34507-5	00-36828-4
01-11-00 10:50	05-09-00 08:00	07-17-00 13:00	10-09-00 11:00
	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 20, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	624	600	630	531
Magnesium	EPA 200.7	mg/L	0.01	379	365	376	325
Sodium	EPA 200.7	mg/L	0.05	144	125	117	112
Potassium	EPA 200.7	mg/L	0.10	11.2	9.6	9.7	10.6
Bicarbonate	SM 2320-B	mg/L	0.10	1190	1050	1060	1060
Sulfate	EPA 200.7	mg/L	1.0	1840	2150	1980	1770
Chloride	EPA 200.7	mg/L	1.0	92.6	70.0	71.1	57.4
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	3.11	0.99	1.02	0.96
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	60.5	1.38	1.51	1.03

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4730	4430	4450	4390
pH	SM 4500-H-B	std. units	0.10	7.73	7.81	7.66	7.45

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	3.17	6.96	4.76	4.03
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.039	0.025	0.023	0.025
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	1.6	< 1.0	< 1.0
Radium Error Estimate ±					0.2		
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	5.0	< 1.0	< 1.0
Lead Error Estimate ±					2.2		
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			64.77	64.08	60.74	55.94
Cation	meq			69.74	66.56	68.50	59.06
SM A/C Balance	%		-5 - +5	3.69	1.90	6.01	2.71
Calc TDS	mg/L			3961	3859	3727	3346
TDS A/C Balance	dec. %		0.80 - 1.20	1.19	1.15	1.19	1.31

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COMPLETE ANALYTICAL SERVICES

36828R00005



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA-25	EPA-25	EPA-25	EPA-25
30268-5	00-32684-6	00-34507-8	00-36828-8
01-11-00 12:50	05-09-00 00:00	07-18-00 08:30	10-10-00 09:25
-	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 20, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	752	691	682	557
Magnesium	EPA 200.7	mg/L	0.01	206	214	219	184
Sodium	EPA 200.7	mg/L	0.05	139	160	157	132
Potassium	EPA 200.7	mg/L	0.10	9.2	8.2	7.5	7.6
Bicarbonate	SM 2320-B	mg/L	0.10	934	813	778	761
Sulfate	EPA 200.7	mg/L	1.0	1500	1670	1600	1240
Chloride	EPA 200.7	mg/L	1.0	79.6	75.3	67.7	53.0
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	< 0.05	< 0.05	0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	90.8	105	112	121

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4060	4030	4120	3990
pH	SM 4500-H-B	std. units	0.10	7.97	7.77	7.70	7.75

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.30	0.96	0.96	1.11
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.093	0.094	0.087	0.095
Radium 226	EPA 903.0	pCi/L	0.2	0.5	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				0.2			
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.9	2.0	1.3
Radium Error Estimate ±					0.2	0.1	0.1
Thorium 230	EPA 907.0	pCi/L	0.2	0.7	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				0.4			
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±							

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		55.29	57.74	55.99	48.44
Cation		meq		61.08	59.62	59.42	49.18
SM A/C Balance		%	-5 - +5	4.97	1.60	2.97	0.75
Calc TDS		mg/L		3555	3691	3619	3091
TDS A/C Balance		dec. %	0.80 - 1.20	1.14	1.09	1.14	1.29

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA-28	EPA-28	EPA-28	EPA-28
30268-3	00-32684-4	00-34507-3	00-36828-3
01-11-00 10:35	05-09-00 00:00	07-17-00 10:05	10-09-00 10:00
	05-12-00	07-20-00	10-13-00
February 18, 2000	June 21, 2000	August 21, 2000	November 18, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-4-5-2000	TE-7-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	498	503	534	460
Magnesium	EPA 200.7	mg/L	0.01	514	477	499	446
Sodium	EPA 200.7	mg/L	0.05	192	201	195	210
Potassium	EPA 200.7	mg/L	0.10	12.8	11.3	11.4	13.4
Bicarbonate	SM 2320-B	mg/L	0.10	534	635	636	637
Sulfate	EPA 200.7	mg/L	1.0	2820	2600	2570	2500
Chloride	EPA 200.7	mg/L	1.0	99.6	115	119	110
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.05	< 0.05	< 0.05	0.16
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	39.1	49.5	46.1	52.3

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5280	5080	5190	5110
pH	SM 4500-H-B	std. units	0.10	8.07	7.77	7.70	7.70

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.31	0.50	0.39	0.37
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.026	0.045	0.038	0.042
Radium 226	EPA 903.0	pCi/L	0.2	1.8	0.5	< 0.2	< 0.2
Radium Error Estimate ±				0.2	0.2		
Radium 228	EPA 904.0	pCi/L	1.0	3.4	2.0	1.8	1.3
Radium Error Estimate ±				0.2	0.2	0.1	0.1
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	14.2	< 1.0	< 1.0
Lead Error Estimate ±					2.5		
Gross Alpha	EPA 900.0	pCi/L	1.0	3.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				1.1			

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		73.10	71.35	70.60	69.35
Cation		meq		76.44	73.97	77.08	69.67
SM A/C Balance		%	-5 - +5	2.23	1.81	4.39	0.23
Calc TDS		mg/L		4577	4444	4451	4290
TDS A/C Balance		dec. %	0.80 - 1.20	1.15	1.14	1.17	1.19

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SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY 1, 2000 THROUGH DECEMBER 31, 2000

ZONE 1

515-A

*** 604**

*** 614**

TWQ-142

EPA-2

*** EPA-4**

EPA-5

*** EPA-7**

Levels Only

TWQ-143

EPA-8

505-A

502-A

501-A

504-A

412

*** POINT OF COMPLIANCE WELLS**



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

515-A	515-A	515-A	515-A
30147-5	00-32687-3	00-34353-8	00-36665-7
01-04-00 10:50	05-10-00 00:00	07-11-00 09:25	10-03-00 09:00
	05-12-00	07-14-00	10-06-00
February 22, 2000	June 21, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-4-5-2000	TE-6-7-2000	TE-8-10

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	414	437	458	456
Magnesium	EPA 200.7	mg/L	0.01	810	871	866	906
Sodium	EPA 200.7	mg/L	0.05	338	437	428	432
Potassium	EPA 200.7	mg/L	0.10	13.7	13.6	13.4	16.2
Bicarbonate	SM 2320-B	mg/L	0.10	222	356	242	228
Sulfate	EPA 200.7	mg/L	1.0	4150	4440	4460	5060
Chloride	EPA 200.7	mg/L	1.0	221	261	239	236
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	3.59	9.79	4.19	2.56
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	65.1	62.8	86.5	70.1

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7720	8080	7740	7550
pH	SM 4500-H-B	std. units	0.10	7.14	7.01	6.50	6.70

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	1.22	2.44	2.11	2.08
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	0.006	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.08	0.06	0.09	0.07
Lead	EPA 200.7	mg/L	0.05	0.05	0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	14.0	11.8	14.6	11.6
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.22	0.18	0.19	0.15
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0025	0.0036	0.0021	0.0019
Radium 226	EPA 903.0	pCi/L	0.2	3.2	4.1	2.0	2.8
Radium Error Estimate ±				0.3	0.4	0.3	0.3
Radium 228	EPA 904.0	pCi/L	1.0	4.2	2.1	3.6	5.9
Radium Error Estimate ±				0.2	0.2	0.2	0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	3.7	12.0	4.6	5.1
G. Alpha Error Estimate ±				0.6	1.9	1.5	1.0

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	171	198	154	181

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			100.97	110.17	109.78	120.80
Cation	meq			104.40	115.39	115.11	118.31
SM A/C Balance	%		-5 - +5	1.67	2.31	2.37	-1.04
Calc TDS	mg/L			6365	6940	6988	7545
TDS A/C Balance	dec. %		0.80 - 1.20	1.21	1.16	1.11	1.00

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

604	604	604	604
30147-6	32496-8	00-34353-9	00-36665-8
01-04-00 11:02	05-03-00 00:00	07-11-00 10:15	10-03-00 09:45
		07-14-00	10-06-00
February 22, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	397	416	460	455
Magnesium	EPA 200.7	mg/L	0.01	883	808	837	830
Sodium	EPA 200.7	mg/L	0.05	231	264	258	247
Potassium	EPA 200.7	mg/L	0.10	12.8	14.2	11.9	13.0
Bicarbonate	SM 2320-B	mg/L	0.10	4.0	6.0	5.0	6.0
Sulfate	EPA 200.7	mg/L	1.0	4500	4300	4470	4250
Chloride	EPA 200.7	mg/L	1.0	41.9	56.5	53.7	48.3
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.24	0.13	0.33	0.23
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	67.9	84.6	90.2	84.9

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	8180	7500	7380	7220
pH	SM 4500-H-B	std. units	0.10	4.64	4.75	4.67	4.69

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	20.0	6.50	14.5	10.5
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	0.01	< 0.01	0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	0.010	0.022	0.011	0.005
Cobalt	EPA 200.7	mg/L	0.01	0.38	0.23	0.31	0.26
Ce	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.7	mg/L	0.01	11.2	8.81	10.1	8.17
Manganese	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.23
Molybdenum	EPA 200.7	mg/L	0.05	0.46	0.26	0.31	0.25
Nickel	EPA 200.7	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium IV	SM 3114-C	mg/L	0.01	< 0.10	< 0.10	< 0.10	< 0.10
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0032	0.0027	0.0022	0.0020
Radium 226	EPA 903.0	pCi/L	0.2	2.3	4.3	2.5	1.9
Radium Error Estimate ±				0.3	0.4	0.3	0.2
Radium 228	EPA 904.0	pCi/L	1.0	6.0	6.6	6.0	7.5
Radium Error Estimate ±				0.6	0.5	0.2	0.7
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	4.7	4.8	4.2	4.3
G. Alpha Error Estimate ±				0.6	1.1	1.4	1.0

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	1.4	2.4	4.2

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		99.85	97.32	101.16	96.07
Cation		meq		106.66	101.19	104.85	103.45
SM A/C Balance		%	-5 - +5	3.30	1.95	1.79	3.70
Calc TDS		mg/L		6380	6245	6503	6231
TDS A/C Balance		dec. %	0.80 - 1.20	1.28	1.20	1.13	1.16

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

614	614	614	614
30147-4	32496-5	00-34353-7	00-36665-6
01-04-00 @ 10:40	05-02-00 00:00	07-11-00 08:30	10-03-00 08:25
		07-14-00	10-06-00
February 22, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	510	514	560	548
Magnesium	EPA 200.7	mg/L	0.01	770	784	830	849
Sodium	EPA 200.7	mg/L	0.05	358	405	426	421
Potassium	EPA 200.7	mg/L	0.10	11.5	15.7	13.8	17.9
Bicarbonate	SM 2320-B	mg/L	0.10	1470	1450	1430	1420
Sulfate	EPA 200.7	mg/L	1.0	3430	3620	3760	4250
Chloride	EPA 200.7	mg/L	1.0	217	236	229	241
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	65.1	87.0	93.1	98.4
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	97.4	114	109	104

Non-Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids		SM 2540-C	mg/L	1.0	7650	7600	7600	7420
pH		SM 4500-H-B	std. units	0.10	8.07	7.56	7.53	7.04

Trace Metals		Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum		EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III		SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Beryllium		EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium		EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt		EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium		EPA 200.7	mg/L	0.05	0.05	0.05	< 0.05	< 0.05
Manganese		EPA 200.7	mg/L	0.01	0.24	0.34	0.22	0.20
Molybdenum		EPA 200.7	mg/L	0.10	< 0.1	< 0.1	< 0.10	< 0.10
Nickel		EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV		SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium		EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics		Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium		EPA 200.8	mg/L	0.0003	0.058	0.068	0.054	0.053
Radium 226		EPA 903.0	pCi/L	0.2	3.8	1.1	0.6	0.7
Radium Error Estimate ±					0.3	0.2	0.3	0.2
Radium 228		EPA 904.0	pCi/L	1.0	1.1	5.7	3.5	3.7
Radium Error Estimate ±					0.2	0.5	0.2	0.2
Thorium 230		EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±								
Lead 210		NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±								
Gross Alpha		EPA 900.0	pCi/L	1.0	4.3	7.0	< 1.0	< 1.0
G. Alpha Error Estimate ±					0.6	1.0		

Trace Organics		Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform		EPA 601	µg/L	1.0	226	383	215	174

Quality Assurance Data		Method	Units	Reporting Limit	Results	Results	Results	Results
Anion			meq		108.63	113.98	116.01	126.02
Cation			meq		110.20	115.29	122.70	123.95
SM A/C Balance			%	-5 - +5	0.72	0.57	2.81	-0.83
Calc TDS			mg/L		6547	6917	7137	7624
TDS A/C Balance			dec. %	0.80 - 1.20	1.17	1.10	1.06	0.97

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

TWQ-142	TWQ-142	TWQ-142	TWQ-142
99-33596-001	30147-2	00-34353-1	00-36665-1
10-05-99 @ 08:33	01-04-00 @ 09:10	07-10-00 09:00	10-02-00 08:30
		07-14-00	10-06-00
November 30, 1999	February 22, 2000	August 21, 2000	November 9, 2000
Fourth '99	First 2000	Third 2000	Fourth 2000
TE-7-10-99	TE-1-1-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	29.6	82.2	25.8	52.7
Magnesium	EPA 200.7	mg/L	0.01	14.6	41.7	11.8	46.8
Sodium	EPA 200.7	mg/L	0.05	308	319	318	314
Potassium	EPA 200.7	mg/L	0.10	3.7	7.8	3.1	4.9
Bicarbonate	SM 2320-B	mg/L	0.10	251	309	242	220
Sulfate	EPA 200.7	mg/L	1.0	557	797	543	676
Chloride	EPA 200.7	mg/L	1.0	21.4	26.6	19.9	17.7
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.26	1.51	0.28	0.30
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	0.13	0.11	< 0.10	< 0.10

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	1130	1500	1060	1310
pH	SM 4500-H-B	std. units	0.10	8.11	8.36	7.99	7.84

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	0.75	0.18
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.003
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.03	0.10	0.07	0.39
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	0.14	< 0.10	0.76
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0008	0.0077	0.0011	0.0019
Radium 226	EPA 903.0	pCi/L	0.2	0.7	2.4	0.9	0.9
Radium Error Estimate ±				0.2	0.3	0.2	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	1.5	< 1.0	< 1.0
Radium Error Estimate ±					0.2		
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	2.5	1.4	< 1.0
G. Alpha Error Estimate ±					0.5	1.0	

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		16.33	22.43	15.85	18.19
Cation		meq		16.22	21.78	16.20	20.36
SM A/C Balance		%	-5 - +5	-0.36	-1.47	1.10	5.61
Calc TDS		mg/L		1061	1431	1043	1223
TDS A/C Balance		dec. %	0.80 - 1.20	1.07	1.05	1.02	1.07

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE I MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA 2	EPA 2	EPA-2	EPA-2
30274-4	32496-3	00-34353-5	00-36665-4
01-11-00 10:15	05-02-00 00:00	07-10-00 14:25	10-02-00 14:30
		07-14-00	10-06-00
February 23, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	384	349	369	359
Magnesium	EPA 200.7	mg/L	0.01	187	162	166	172
Sodium	EPA 200.7	mg/L	0.05	179	183	192	195
Potassium	EPA 200.7	mg/L	0.10	7.4	5.9	5.9	7.8
Bicarbonate	SM 2320-B	mg/L	0.10	310	296	334	330
Sulfate	EPA 200.7	mg/L	1.0	1700	1490	1540	1740
Chloride	EPA 200.7	mg/L	1.0	28.9	20.2	20.4	21.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.57	0.48	0.47	0.42
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3090	2800	2740	2670
pH	SM 4500-H-B	std. units	0.10	7.63	7.72	7.42	7.49

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.12	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.004
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	1.58	1.29	1.27	1.07
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0015	0.0016	0.0011	0.0011
Radium 226	EPA 903.0	pCi/L	0.2	0.8	1.7	1.5	1.8
Radium Error Estimate ±				0.3	0.3	0.2	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	3.9	< 1.0
Radium Error Estimate ±						0.2	
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	2.2	1.4	2.6
G. Alpha Error Estimate ±					1.0	1.0	0.9

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		41.32	36.47	38.14	42.27
Cation		meq		42.90	39.17	40.89	41.05
SM A/C Balance		%	-5 - +5	1.87	3.57	3.47	-1.46
Calc TDS		mg/L		2644	2360	2463	2662
TDS A/C Balance		dec. %	0.80 - 1.20	1.17	1.19	1.11	1.00

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA-4	EPA-4	EPA-4	EPA-4
30274-2	00-32840-1	00-34353-12	00-36665-11
01-11-00 09:40	05-15-00 00:00	07-11-00 13:50	10-03-00 11:45
	05-18-00	07-14-00	10-06-00
February 23, 2000	June 20, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-5-5-2000	TE-6-7-2000	TE-8-10

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	557	542	574	541
Magnesium	EPA 200.7	mg/L	0.01	332	366	386	372
Sodium	EPA 200.7	mg/L	0.05	187	194	199	193
Potassium	EPA 200.7	mg/L	0.10	8.8	9.1	8.4	9.2
Bicarbonate	SM 2320-B	mg/L	0.10	204	173	171	175
Sulfate	EPA 200.7	mg/L	1.0	2730	3000	2910	2770
Chloride	EPA 200.7	mg/L	1.0	36.2	37.5	38.8	36.5
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.82	1.03	0.97	0.74
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4680	4810	4790	4740
pH	SM 4500-H-B	std. units	0.10	7.51	7.42	7.07	7.21

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	0.007	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	3.10	4.15	3.37	2.66
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.06	< 0.05	< 0.05	< 0.05
Selenium IV		mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0021	0.0006	0.0006	0.0005
Radium 226	EPA 903.0	pCi/L	0.2	1.0	1.9	< 0.2	1.3
Radium Error Estimate ±				0.2	0.2		0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	3.8	2.4	3.5
Radium Error Estimate ±				0.2	0.2	0.2	0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	1.3	1.8	1.4
G. Alpha Error Estimate ±					1.0	1.0	0.7

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		61.25	66.40	64.53	61.61
Cation		meq		64.11	66.58	69.99	66.88
SM A/C Balance		%	-5 - +5	2.29	0.13	4.06	4.10
Calc TDS		mg/L		3958	4241	4207	4013
TDS A/C Balance		dec. %	0.80 - 1.20	1.18	1.13	1.14	1.18

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA 5	EPA 5	EPA 5	EPA 5
30274-3	32496-6	00-34353-11	00-36665-10
01-11-00 09:55	05-03-00 00:00	07-11-00 13:00	10-03-00 11:00
		07-14-00	10-06-00
February 23, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	493	461	496	466
Magnesium	EPA 200.7	mg/L	0.01	860	595	630	594
Sodium	EPA 200.7	mg/L	0.05	286	181	188	171
Potassium	EPA 200.7	mg/L	0.10	13.7	14.7	13.5	14.4
Bicarbonate	SM 2320-B	mg/L	0.10	1050	458	415	354
Sulfate	EPA 200.7	mg/L	1.0	3980	3160	3310	3060
Chloride	EPA 200.7	mg/L	1.0	166	94.0	92.7	85.4
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	14.4	22.3	23.0	20.0
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	53.2	42.3	42.5	37.5

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7920	5780	5720	5500
pH	SM 4500-H-B	std. units	0.10	7.78	7.56	7.09	6.99

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.06	0.08	0.08	0.08
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.51	1.23	1.16	1.09
Molybdenum	EPA 200.7	mg/L	0.10	0.37	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.07	0.10	< 0.05	0.08
Selenium IV	SM 3114-C	mg/L	0.001	< 0.005	< 0.003	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.111	0.037	0.022	0.015
Radium 226	EPA 903.0	pCi/L	0.2	0.9	0.7	0.7	0.8
Radium Error Estimate ±				0.2	0.2	0.2	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	2.0	2.3	2.7
Radium Error Estimate ±					0.1	0.2	0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	1.4
G. Alpha Error Estimate ±							0.7

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		108.61	79.01	81.41	74.64
Cation		meq		110.17	82.55	87.53	82.09
SM A/C Balance		%	-5 - +5	0.72	2.19	3.62	4.76
Calc TDS		mg/L		6578	4952	5157	4761
TDS A/C Balance		dec. %	0.80 - 1.20	1.20	1.17	1.11	1.16

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA-7	EPA-7	EPA-7	EPA-7
30274-6	32496-7	00-34353-10	00-36665-9
01-11-00 14:20	05-03-00 00:00	07-11-00 11:00	10-03-00 10:15
		07-14-00	10-06-00
February 23, 2000	June 04, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	439	430	488	474
Magnesium	EPA 200.7	mg/L	0.01	846	827	897	889
Sodium	EPA 200.7	mg/L	0.05	284	306	321	309
Potassium	EPA 200.7	mg/L	0.10	8.9	10.6	7.5	8.7
Bicarbonate	SM 2320-B	mg/L	0.10	367	362	399	444
Sulfate	EPA 200.7	mg/L	1.0	4000	3870	4160	3970
Chloride	EPA 200.7	mg/L	1.0	171	168	167	169
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.90	0.99	0.75	0.55
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	122	138	150	135

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7890	7750	7630	7540
pH	SM 4500-H-B	std. units	0.10	7.73	7.28	7.28	6.66

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.29	2.90	3.57	4.37
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.08	0.08	0.07	0.06
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	9.94	11.4	9.69	8.27
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.13	0.10	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0021	0.0032	0.0026	0.0024
Radium 226	EPA 903.0	pCi/L	0.2	1.2	1.5	1.4	0.8
Radium Error Estimate ±				0.2	0.2	0.3	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	1.6	3.4	1.8
Radium Error Estimate ±					0.6	0.2	0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	2.3	2.6	2.8	1.9
G. Alpha Error Estimate ±				1.0	1.0	1.2	0.8

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	1.3	1.2	1.9	1.1

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		102.88	101.15	108.63	104.38
Cation		meq		105.67	105.01	113.88	111.93
SM A/C Balance		%	-5 - +5	1.34	1.87	2.36	3.49
Calc TDS		mg/L		6484	6417	6915	6648
TDS A/C Balance		dec. %	0.80 - 1.20	1.22	1.21	1.10	1.13

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COMPLETE ANALYTICAL SERVICES

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY 1, 2000 THROUGH DECEMBER 31, 2000

ZONE 3

504-B

*** 517**

EPA-14

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Levels Only

EPA-9

EPA-13

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*** POINT OF COMPLIANCE WELL**



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

504-B	504-B	504-B	504-B
30151-3	32500-3	00-34356-1	00-36668-1
01-04-00 @ 15:00	05-01-00	07/10/00 10:25	10-02-00 10:05
		07/14/2000	10-06-00
February 22, 2000	May 28, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	497	474	506	510
Magnesium	EPA 200.7	mg/L	0.01	543	526	570	620
Sodium	EPA 200.7	mg/L	0.05	135	134	150	147
Potassium	EPA 200.7	mg/L	0.10	12.7	12.3	12.3	13.8
Bicarbonate	SM 2320-B	mg/L	0.10	31.0	51.0	48.0	44.0
Sulfate	EPA 200.7	mg/L	1.0	3380	3480	3440	3740
Chloride	EPA 200.7	mg/L	1.0	30.2	34.0	28.4	33.0
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.64	0.75	0.68	0.53
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	0.50	< 0.10	< 0.10	< 0.10

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5220	5500	5510	5650
pH	SM 4500-H-B	std. units	0.10	7.11	6.69	6.20	6.28

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	0.30	0.21	0.20
Arsenic III	SM 3114-C	mg/L	0.001	0.021	0.033	0.025	0.033
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	0.025	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.32	0.34	0.30	0.35
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	6.02	6.67	6.18	6.23
Molybdenum	EPA 200.7	mg/L	0.10	14.5	15.7	13.4	14.3
Nickel	EPA 200.7	mg/L	0.05	0.48	0.51	0.41	0.36
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0454	0.0388	0.0498	0.0226
Radium 226	EPA 903.0	pCi/L	0.2	12.8	21.3	13.4	15.0
Radium Error Estimate ±				0.8	1.5	1.1	1.1
Radium 228	EPA 904.0	pCi/L	1.0	15.7	16.3	20.8	15.8
Radium Error Estimate ±				1.1	1.4	1.5	1.4
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.1	pCi/L	1.0	12.3	22.6	21.0	25.0
G. Alpha Error Estimate ±				1.7	1.3	1.8	2.0

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		71.81	74.30	73.26	79.57
Cation		meq		76.68	74.13	80.02	84.29
SM A/C Balance		%	-5 - +5	3.28	-0.12	4.41	2.88
Calc TDS		mg/L		4622	4694	4738	5093
TDS A/C Balance		dec. %	0.80 - 1.20	1.13	1.17	1.16	1.11

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

517	517	517	517
30151-2	32500-1	00-34508-1	00-36668-3
01-04-00 @ 10:25	05-01-00	07/18/00 10:00	10-02-00 11:30
		07/20/2000	10-06-00
February 22, 2000	May 28, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-7-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	476	436	461	467
Magnesium	EPA 200.7	mg/L	0.01	476	415	435	451
Sodium	EPA 200.7	mg/L	0.05	146	146	149	154
Potassium	EPA 200.7	mg/L	0.10	9.7	9.5	8.56	9.69
Bicarbonate	SM 2320-B	mg/L	0.10	3.0	5.0	7.00	6.00
Sulfate	EPA 200.7	mg/L	1.0	3150	3000	2850	2990
Chloride	EPA 200.7	mg/L	1.0	50.2	54.6	50.6	48.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	12.5	13.0	12.5	11.5
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	5.16	3.77	3.95	3.05

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4830	4750	4800	4720
pH	SM 4500-H-B	std. units	0.10	4.67	4.67	4.70	4.78

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	8.59	11.6	10.2	9.80
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	0.056	0.008	0.006
Cobalt	EPA 200.7	mg/L	0.01	0.63	0.57	0.55	0.51
Ce	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ce	EPA 200.7	mg/L	0.01	8.36	7.71	7.14	6.73
Manganese	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Molybdenum	EPA 200.7	mg/L	0.05	0.54	0.51	0.37	0.40
Nickel	EPA 200.7	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0657	0.0695	0.0661	0.0606
Radium 226	EPA 903.0	pCi/L	0.2	8.6	19.0	9.6	9.8
Radium Error Estimate ±				0.6	1.4	0.6	0.9
Radium 228	EPA 904.0	pCi/L	1.0	12.1	11.0	13.1	9.4
Radium Error Estimate ±				1.0	1.2	1.0	0.7
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	3.2	1.7	< 0.2
Thorium Error Estimate ±					0.9	0.7	
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	4.2	< 1.0	< 1.0
Lead Error Estimate ±					1.9		
Gross Alpha	EPA 900.1	pCi/L	1.0	7.2	20.8	26.7	26.4
G. Alpha Error Estimate ±				1.3	1.2	3.7	2.0

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	4.5	5.4	5.1	3.7

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		67.46	64.39	61.20	63.98
Cation		meq		72.37	65.61	67.28	69.07
SM A/C Balance		%	-5 - +5	3.51	0.94	4.74	3.83
Calc TDS		mg/L		4357	4105	3998	4158
TDS A/C Balance		dec. %	0.80 - 1.20	1.11	1.16	1.20	1.14

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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

EPA 14	EPA 14	EPA-14	EPA-14
30271-3	32500-4	00-34356-3	00-36833-1
01-11-00 11:22	05-02-00 00:00	07-12-00 08:20	10-09-00 13:55
		07-14-00	10-13-00
February 18, 2000	May 28, 2000	August 23, 2000	November 10, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-2-1-2000	TE-3-5-2000	TE-6-7-2000	TE-9-10-2000

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	599	590	563	543
Magnesium	EPA 200.7	mg/L	0.01	211	200	368	423
Sodium	EPA 200.7	mg/L	0.05	121	126	161	163
Potassium	EPA 200.7	mg/L	0.10	8.6	8.6	8.7	9.5
Bicarbonate	SM 2320-B	mg/L	0.10	650	627	239	153
Sulfate	EPA 200.7	mg/L	1.0	1820	1880	2560	3210
Chloride	EPA 200.7	mg/L	1.0	60.9	60.5	53.1	44.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.85	1.83	0.56	0.35
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	32.4	34.4	23.0	19.3

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3790	3800	4410	4440
pH	SM 4500-H-B	std. units	0.10	7.73	7.56	7.11	7.26

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	0.17	8.30	11.6	8.13
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	0.002	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	0.014	< 0.005	0.008
Cobalt	EPA 200.7	mg/L	0.01	0.04	0.05	0.18	0.18
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	2.96	3.24	4.36	3.96
Molybdenum	EPA 200.7	mg/L	0.10	0.18	0.20	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.08	< 0.05	0.15	0.15
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.104	0.120	0.0530	0.0435
Radium 226	EPA 903.0	pCi/L	0.2	5.1	8.0	3.8	3.9
Radium Error Estimate ±				0.4	0.5	0.3	0.3
Radium 228	EPA 904.0	pCi/L	1.0	7.8	11.1	5.9	6.9
Radium Error Estimate ±				0.6	1.2	0.6	0.6
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	2.0	< 0.2	< 0.2
Thorium Error Estimate ±					0.8		
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	7.6	6.5	5.4	10.3
G. Alpha Error Estimate ±				1.3	1.3	1.9	1.3

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		52.60	53.61	60.39	72.01
Cation		meq		53.33	53.10	66.32	69.97
SM A/C Balance		%	-5 - +5	0.68	-0.48	4.68	-1.43
Calc TDS		mg/L		3294	3337	3940	4559
TDS A/C Balance		dec. %	0.80 - 1.20	1.15	1.14	1.12	0.97

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COMPLETE ANALYTICAL SERVICES



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

420	420	420	420
30151-1	32500-2	00-34356-2	00-36668-2
01-04-00 @ 10:05	05-01-00	07/10/00 11:20	10-02-00 10:45
		07/14/2000	10-06-00
February 22, 2000	May 28, 2000	August 21, 2000	November 9, 2000
First 2000	Second 2000	Third 2000	Fourth 2000
TE-1-1-2000	TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	676	616	664	661
Magnesium	EPA 200.7	mg/L	0.01	157	139	151	147
Sodium	EPA 200.7	mg/L	0.05	126	127	141	138
Potassium	EPA 200.7	mg/L	0.10	7.0	6.5	5.86	6.97
Bicarbonate	SM 2320-B	mg/L	0.10	414	452	456	467
Sulfate	EPA 200.7	mg/L	1.0	1870	1840	1740	1750
Chloride	EPA 200.7	mg/L	1.0	34.6	33.5	35.0	38.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	0.19	< 0.05	0.07
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	50.7	31.3	33.2	18.7

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3550	3500	3500	3350
pH	SM 4500-H-B	std. units	0.10	7.97	7.69	7.47	7.24

Trace Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.7	mg/L	0.10	< 0.10	0.20	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	0.008	< 0.001	0.007
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	0.051	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	2.01	2.14	2.03	2.25
Molybdenum	EPA 200.7	mg/L	0.10	0.36	0.20	0.21	0.15
Nickel	EPA 200.7	mg/L	0.05	< 0.05	0.08	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.0003	0.0511	0.0500	0.0436	0.0392
Radium 226	EPA 903.0	pCi/L	0.2	2.4	3.2	2.8	2.9
Radium Error Estimate ±				0.4	0.3	0.3	0.3
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	4.8	4.2	2.2
Radium Error Estimate ±					0.5	0.2	0.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	1.0	< 0.2	< 0.2
Thorium Error Estimate ±					0.5		
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	6.8	< 1.0	< 1.0
Lead Error Estimate ±					2.0		
Gross Alpha	EPA 900.1	pCi/L	1.0	3.1	3.3	2.8	3.6
G. Alpha Error Estimate ±				1.0	1.0	1.5	1.0

Trace Organics	Method	Units	Reporting Limit	Results	Results	Results	Results
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		50.34	48.92	47.08	46.54
Cation		meq		52.67	48.22	52.18	51.61
SM A/C Balance		%	-5 - +5	2.26	-0.72	5.14	5.17
Calc TDS		mg/L		3304	3129	3114	3060
TDS A/C Balance		dec. %	0.80 - 1.20	1.07	1.12	1.12	1.09

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COMPLETE ANALYTICAL SERVICES



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

711	711	711
32496-1	00-34353-3	00-36665-2
05-01-00 00:00	07-10-00 13:10	10-02-00 12:55
	07-14-00	10-06-00
June 04, 2000	August 21, 2000	November 9, 2000
Second 2000	Third 2000	Fourth 2000
TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	489	518	503
Magnesium	EPA 200.7	mg/L	0.01	522	542	556
Sodium	EPA 200.7	mg/L	0.05	100	101	100
Potassium	EPA 200.7	mg/L	0.10	11.1	10.9	12.6
Bicarbonate	SM 2320-B	mg/L	0.10	10.0	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	3380	3490	3990
Chloride	EPA 200.7	mg/L	1.0	14.2	20.0	17.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.57	0.58	0.45
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10

Non-Metals						
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5410	5400	5310
pH	SM 4500-H-B	std. units	0.10	5.61	3.98	4.13

Trace Metals						
Aluminum	EPA 200.7	mg/L	0.10	1.40	1.51	1.33
Arsenic III	SM 3114-C	mg/L	0.001	0.039	< 0.001	0.041
Beryllium	EPA 200.7	mg/L	0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	0.020	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.41	0.42	0.34
Lead	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	8.42	8.39	7.44
Molybdenum	EPA 200.7	mg/L	0.10	0.15	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.38	0.35	0.32
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10

Radiometrics						
Uranium	EPA 200.8	mg/L	0.0003	0.0645	0.0613	0.0530
Radium 226	EPA 903.0	pCi/L	0.2	13.7	9.6	9.6
Radium Error Estimate ±				1.2	0.5	0.9
Radium 228	EPA 904.0	pCi/L	1.0	12.9	18.6	20.9
Radium Error Estimate ±				1.2	0.2	1.8
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±						
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±						
Gross Alpha	EPA 900.0	pCi/L	1.0	15.9	14.2	19.3
G. Alpha Error Estimate ±				1.1	1.3	1.8

Trace Organics						
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq			70.99	73.28	83.64
Cation	meq			73.24	76.24	76.59
SM A/C Balance	%	-5 - +5		1.56	1.98	-4.40
Calc TDS	mg/L			4531	4692	5188
TDS A/C Balance	dec. %	0.80 - 1.20		1.19	1.15	1.02

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COMPLETE ANALYTICAL SERVICES

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**UNC MINING AND MILLING: CHURCHROCK OPERATIONS
 GROUNDWATER MONITORING PROGRAM: ZONE 4 MONITOR WELLS
 3**

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 QUARTER REPRESENTED:
 UNC SUBMITTAL #:

613	613	613
32496-4	00-34353-13	00-36665-5
05-02-00 00:00	07-11-00 14:50	10-02-00 15:00
	07-14-00	10-06-00
June 04, 2000	August 21, 2000	November 9, 2000
Second 2000	Third 2000	Fourth 2000
TE-3-5-2000	TE-6-7-2000	TE-8-10-00

Major Ions	Method	Units	Reporting Limit	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	415	426	451
Magnesium	EPA 200.7	mg/L	0.01	646	656	709
Sodium	EPA 200.7	mg/L	0.05	323	328	350
Potassium	EPA 200.7	mg/L	0.10	2.0	< 0.10	1.5
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	9150	8770	8870
Chloride	EPA 200.7	mg/L	1.0	177	166	175
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	474	445	400
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	22.8	16.8	18.0

Non-Metals						
Total Dissolved Solids	SM 2540-C	mg/L	1.0	13900	13700	13800
pH	SM 4500-H-B	std. units	0.10	3.11	3.16	3.08

Trace Metals						
Aluminum	EPA 200.8	mg/L	0.10	666	662	694
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	0.001
Beryllium	EPA 200.7	mg/L	0.01	0.21	0.22	0.21
Cadmium	EPA 200.8	mg/L	0.005	0.714	0.028	0.030
Cobalt	EPA 200.7	mg/L	0.01	1.80	1.64	1.56
Lead	EPA 200.7	mg/L	0.05	< 0.05	0.23	0.28
Manganese	EPA 200.7	mg/L	0.01	62.6	63.3	60.1
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	1.69	1.88	1.52
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	6.00	5.80	5.08

Radiometrics						
Uranium	EPA 200.8	mg/L	0.0003	1.93	1.98	1.82
Radium 226	EPA 903.0	pCi/L	0.2	10.0	11.9	13.5
Radium Error Estimate ±				1.1	0.8	1.1
Radium 228	EPA 904.0	pCi/L	1.0	3.0	< 1.0	< 1.0
Radium Error Estimate ±				0.1		
Thorium 230	EPA 907.0	pCi/L	0.2	339	317	249
Thorium Error Estimate ±				9.1	9.5	12.0
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±						
Gross Alpha	EPA 900.0	pCi/L	1.0	19.7	46.6	67.9
G. Alpha Error Estimate ±				1.2	4.3	6.0

Trace Organics						
Chloroform	EPA 601	µg/L	1.0	91.2	68.6	49.0

Quality Assurance Data		Target Range				
Anion	meq			197.24	188.57	191.01
Cation	meq			199.96	199.03	205.86
SM A/C Balance	%	-5 - +5		0.68	2.70	3.74
Calc TDS	mg/L			11488	11057	11212
TDS A/C Balance	dec. %	0.80 - 1.20		1.21	1.24	1.23

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