SAN JUAN RIVER BASIN WATER QUALITY AND CONTAMINANTS REVIEW

VOLUME II - APPENDICES 4-25

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SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
NOV									
26...	1230	546	272	8.4	9.0	5.5	2.0	12.0	110
JAN									
08...	1630	570	258	8.7	6.0	6.0	5.0	11.3	110
FEB									
04...	1341	550	259	8.2	7.5	5.5	5.4	11.4	100
APR									
01...	1515	552	250	8.8	15.5	9.0	4.5	11.7	100
JUL									
08...	1400	595	263	8.7	25.0	12.0	2.0	9.4	110
SEP									
04...	1030	576	269	7.6	24.0	9.0	0.60	10.6	100

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV								
26...	15	33	6.3	15	0.6	1.9	93	10
JAN								
08...	20	32	6.1	16	0.7	1.9	95	4
FEB								
04...	19	32	6.0	15	0.6	2.0	98	3
APR								
01...	17	31	5.6	15	0.7	1.9	90	6
JUL								
08...	25	34	6.3	16	0.7	1.9	95	5
SEP								
04...	18	31	6.0	14	0.6	1.9	103	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV							
26...	92	51	3.5	0.30	10	185	177
JAN							
08...	84	50	1.4	<0.10	10	171	168
FEB							
04...	85	42	3.6	0.10	10	151	162
APR							
01...	84	48	4.0	0.20	9.5	158	165
JUL							
08...	86	53	4.0	0.20	9.6	168	177
SEP							
04...	84	53	3.0	0.20	9.5	157	169

Appendix 4a. USGS water resources data, New Mexico, 1991 (Borland et al. 1992)

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

PERIOD OF RECORD.--Water years 1943, 1945, 1958-59, 1969-73, 1975, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV 26...	1632	372	526	8.8	0.0	4.0	11.1	<10	220	71	11
FEB 04...	1642	242	590	8.8	3.5	4.0	11.8	14	260	82	13
MAY 06...	1230	747	385	8.7	19.5	9.0	10.3	14	180	56	8.7
SEP 04...	1400	447	545	8.3	22.5	20.5	9.0	12	230	74	12

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)
NOV 26...	20	0.6	2.9	129	120	18	0.40	6.6	328	0.090	0.010
FEB 04...	24	0.6	3.6	130	140	21	0.50	7.3	369	--	<0.010
MAY 06...	12	0.4	1.7	115	82	10	0.30	6.0	246	--	<0.010
SEP 04...	27	0.8	3.7	146	120	22	0.40	7.0	354	--	0.010

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN; TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 26...	<0.010	0.100	0.100	0.030	<0.010	0.17	0.30	0.020	<0.010	1.6
FEB 04...	<0.010	<0.100	<0.100	<0.010	<0.010	--	--	0.050	0.010	1.5
MAY 06...	<0.010	<0.050	<0.050	0.020	0.030	0.78	--	0.030	<0.010	2.4
SEP 04...	<0.010	<0.050	<0.050	0.020	0.010	--	--	0.030	<0.010	1.9

DATE	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO-GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS-PHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)
NOV 26...	60	<3	3.0	12	360	14	<10	4	10	40
FEB 04...	70	8	--	--	--	--	--	--	--	--
MAY 06...	30	6	--	--	--	--	--	--	--	--
SEP 04...	70	9	--	--	--	--	--	--	--	--

DATE	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 26...	15000	90	720	0.05	340	--	--	--	K2	K16
FEB 04...	--	--	--	--	--	55	36	88	K1	<1
MAY 06...	--	--	--	--	--	65	131	63	K12	100
SEP 04...	--	--	--	--	--	--	--	--	K13	24

09364500 ANIMAS RIVER AT FARMINGTON, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to current year.
WATER TEMPERATURE: December 1950 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,980 microsiemens, Aug. 19, 1944; minimum daily, 89 microsiemens, June 15, 1985.
WATER TEMPERATURE: Maximum daily, 32.0°C, Aug. 26, 1966 and July 16, 1977; minimum daily, 0.0°C, on many days during winter months each year.
SEDIMENT CONCENTRATION: Maximum daily mean, 36,800 mg/L, July 23, 1954; minimum daily mean, 1 mg/L on several days during 1956, 1958, and 1974.
SEDIMENT LOAD: Maximum daily, 337,000 tons, July 23, 1954; minimum daily, less than 0.50 ton on many days during 1955-57, 1959-60, 1963, 1972, 1974, and 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 887 microsiemens, Sept. 11; minimum daily, 215 microsiemens, June 10.
WATER TEMPERATURE: Maximum daily, 28.0°C, Aug. 20-23, Aug. 25-30; minimum daily, 0.0°C, on many days during winter months.
SEDIMENT CONCENTRATION: Maximum daily mean, 39,100 mg/L, Sept. 11; minimum daily mean, 25 mg/L, July 4.
SEDIMENT LOAD: Maximum daily, 262,000 tons, Sept. 11; minimum daily, 15 tons, Aug. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT										
15...	1530	557	460	8.6	--	13.5	--	--	210	66
NOV										
28...	1306	430	647	8.7	5.5	1.5	5.0	12.9	270	86
DEC										
18...	1315	358	600	9.5	--	0.0	--	--	290	92
FEB										
04...	1400	242	650	8.8	--	3.5	--	--	310	97
06...	0935	243	720	8.4	-0.5	1.5	23	13.2	300	95
MAY										
07...	1000	638	470	8.5	20.0	12.0	22	9.4	210	68
SEP										
06...	0830	292	706	8.0	18.5	18.0	27	7.3	300	95

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT										
15...	9.6	22	0.7	2.1	--	--	--	117	110	15
NOV										
28...	13	31	0.8	3.0	160	12	151	--	160	21
DEC										
18...	14	34	0.9	3.0	--	--	--	143	170	26
FEB										
04...	15	36	0.9	3.3	--	--	--	141	210	23
06...	14	40	1	3.0	182	4	155	--	190	24
MAY										
07...	9.6	18	0.5	1.8	140	4	121	--	120	13
SEP										
06...	15	38	1	3.8	205	0	168	--	190	26

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	BROMIDE DISSOLVED (MG/L AS BR) (71870)	IODIDE, DISSOLVED (MG/L AS I) (71865)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT										
15...	0.50	0.030	0.002	6.5	300	303	--	--	--	--
NOV										
28...	0.40	--	--	6.4	391	413	0.020	0.010	<0.100	<0.100
DEC										
18...	0.40	0.050	0.001	6.5	436	434	--	--	--	--
FEB										
04...	0.40	0.050	0.002	5.7	432	476	--	--	--	--
06...	0.40	--	--	5.6	458	467	<0.010	<0.010	<0.100	<0.100
MAY										
07...	0.30	--	--	6.2	280	311	0.020	0.010	<0.050	<0.050
SEP										
06...	0.50	--	--	6.8	442	477	--	--	--	--

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT										
15...	--	--	--	--	--	--	--	50	4	16
NOV										
28...	0.020	0.030	--	0.030	<0.010	K2	<5	--	<3	75
DEC										
18...	--	--	--	--	--	--	--	80	190	130
FEB										
04...	--	--	--	--	--	--	--	80	<3	79
06...	<0.010	0.020	--	0.070	0.010	K24	K28	--	5	97
MAY										
07...	0.020	0.020	0.28	0.080	<0.010	130	200	--	6	12
SEP										
06...	--	--	--	--	--	33	>2500	--	7	12

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	LEAD, DISSOLVED (UG/L AS PB) (01049)
OCT										
15...	1530	30	--	66	--	--	--	--	--	--
NOV										
28...	1306	20	<1	70	<0.5	<1.0	<1	<3	2	<1
DEC										
18...	1315	190	--	76	--	--	--	--	--	--
FEB										
04...	1400	<10	--	75	--	--	--	--	--	--
06...	0935	<10	<1	71	<0.5	<1.0	<1	<3	2	<1
MAY										
07...	1000	30	<1	73	<0.5	<1.0	<1	<3	3	<1
SEP										
06...	0830	20	<1	86	<0.5	<1.0	<1	<3	2	<1

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	S-34 S-32 STABLE ISOTOPE RATIO PER MIL (82086)
OCT										
15...	35	--	--	--	<1	--	790	--	6	5.40
NOV										
28...	50	<0.1	<10	1	<2	<1.0	1000	<6	9	--
DEC										
18...	49	--	--	--	<1	--	1100	--	19	5.00
FEB										
04...	57	--	--	--	<1	--	1200	--	7	5.50
06...	54	<0.1	<10	<1	<1	<1.0	1100	<6	18	--
MAY										
07...	28	<0.1	<10	<1	<1	<1.0	730	<6	9	--
SEP										
06...	54	<0.1	<10	1	<1	<1.0	1300	<6	14	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV							
28...	1306	430	647	1.5	27	31	79
06...	0935	243	720	1.5	62	41	70
MAY							
07...	1000	638	470	12.0	160	276	50

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
NOV									
27...	0910	10	1.30	26	642	8.7	2.0	12.3	73
27...	0911	22	1.75	32	652	8.6	2.0	12.4	85
27...	0912	32	1.80	35	652	8.7	1.5	12.7	84
27...	0913	42	1.63	35	647	8.6	1.5	12.8	83
27...	0914	52	1.50	31	654	8.6	1.0	12.8	70
27...	0915	62	1.52	32	631	8.6	1.0	12.9	26
27...	0916	72	1.13	23	653	8.7	1.0	13.0	62
27...	0917	82	1.21	27	654	8.7	1.0	13.0	62
27...	0918	92	1.20	25	650	8.6	1.0	13.1	72
27...	0919	102	.92	21	634	8.6	1.0	13.1	89
27...	0920	112	1.20	31	640	8.7	1.0	13.1	89
27...	0921	122	1.99	48	658	8.6	1.0	13.2	61
27...	0922	132	1.88	39	658	8.7	1.0	13.2	69

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
FEB									
06...	0936	18	1.22	11	726	8.4	0.0	12.8	97
06...	0937	28	1.40	14	724	8.4	0.0	13.0	108
06...	0938	38	1.68	20	724	8.4	0.0	13.0	98
06...	0939	48	1.50	21	723	8.4	0.0	13.0	106
06...	0940	56	1.55	21	721	8.5	0.0	13.0	79
06...	0941	64	1.45	20	720	8.5	0.0	13.1	104
06...	0942	72	1.55	23	719	8.5	0.0	13.2	88
06...	0943	80	1.72	21	720	8.5	0.0	13.3	114
06...	0944	88	1.65	21	720	8.5	0.0	13.3	88
06...	0945	96	1.92	21	722	8.5	0.0	13.6	97
06...	0946	104	1.80	20	721	8.5	0.0	13.4	89
06...	0947	112	1.48	16	721	8.5	0.0	13.4	107
06...	0948	120	1.80	13	720	8.4	0.0	13.2	108

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAY									
07...	1001	37	1.72	29	471	8.4	10.5	9.5	94
07...	1002	47	2.00	38	470	8.4	11.0	9.4	152
07...	1003	56	2.25	55	469	8.4	11.0	9.4	135
07...	1004	64	2.25	58	468	8.4	11.0	9.4	130
07...	1005	72	2.18	52	469	8.4	11.0	9.4	118
07...	1006	80	2.20	54	468	8.4	11.0	9.3	115
07...	1007	88	2.42	57	469	8.4	11.0	9.3	122
07...	1008	96	2.38	61	469	8.4	11.0	9.3	138
07...	1009	104	2.20	55	469	8.4	11.0	9.3	115
07...	1010	112	2.52	56	472	8.5	11.0	9.4	119
07...	1011	120	2.30	52	474	8.5	11.0	9.4	90
07...	1012	129	2.05	46	474	8.4	11.0	9.4	85
07...	1013	139	2.38	31	475	8.5	11.0	9.4	79

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	491	537	508	576	589	599	535	465	264	345	582	---
2	409	552	524	643	640	---	---	457	264	376	555	---
3	403	536	520	586	581	620	---	467	326	394	558	610
4	405	523	522	658	580	603	511	444	324	403	559	595
5	399	533	---	---	---	---	505	429	333	396	563	605
6	461	---	601	694	720	626	331	428	313	422	531	593
7	448	505	541	687	---	618	326	---	268	451	525	564
8	446	522	587	616	634	594	324	---	251	456	497	383
9	450	---	512	550	649	586	368	359	219	508	550	372
10	451	524	524	---	655	554	377	307	215	485	---	---
11	473	505	538	568	655	557	371	290	236	499	549	887
12	486	521	563	569	643	552	438	297	238	497	551	---
13	482	---	540	597	653	569	---	282	231	---	575	448
14	490	498	553	559	---	565	458	280	248	471	567	429
15	491	494	522	580	---	567	447	298	237	468	565	466
16	516	533	518	573	---	572	451	250	249	495	584	454
17	516	531	546	567	624	565	452	242	245	498	541	457
18	540	534	537	566	633	561	456	242	242	---	536	442
19	---	503	547	554	660	563	411	241	---	---	588	---
20	---	531	555	572	650	568	398	284	---	---	501	492
21	546	521	535	554	659	551	384	---	---	532	538	521
22	540	524	601	565	650	538	350	---	---	537	543	542
23	535	524	625	---	619	545	363	291	---	514	579	521
24	543	536	594	558	593	---	364	304	---	508	---	466
25	509	555	581	553	560	---	409	282	---	505	525	495
26	515	534	596	555	570	539	410	290	322	---	567	536
27	517	527	---	566	585	548	431	276	342	559	579	565
28	536	540	578	527	566	537	---	248	362	571	553	525
29	523	521	585	558	---	503	451	246	343	580	566	527
30	501	536	581	556	---	530	447	240	341	581	567	521
31	499	---	582	591	---	517	---	240	---	576	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.0	3.5	.0	.0	6.0	12.0	---	13.0	23.0	26.0	---
2	18.0	13.0	3.0	.0	3.0	5.0	---	---	13.0	24.0	22.0	---
3	18.0	---	3.0	.0	4.0	9.0	---	---	15.0	25.0	20.0	26.0
4	20.0	10.0	3.0	.0	5.0	10.0	15.0	---	15.0	25.0	27.0	25.0
5	13.0	10.0	---	---	---	---	16.0	---	16.0	25.0	28.0	19.0
6	17.0	---	3.0	2.0	.0	7.0	16.0	---	16.0	25.0	27.0	20.0
7	18.0	8.0	3.0	2.0	---	8.0	12.0	---	13.0	26.0	27.0	18.0
8	18.0	8.0	3.0	3.0	4.0	4.0	12.0	---	14.0	24.0	26.0	16.0
9	14.0	---	3.0	4.0	5.0	5.0	---	---	13.0	25.0	26.0	16.0
10	14.0	10.0	3.0	---	3.0	6.0	---	---	13.0	25.0	---	---
11	15.0	10.0	3.5	4.0	5.0	8.0	---	---	14.0	26.0	27.0	16.0
12	15.0	11.0	6.0	4.0	6.0	10.0	---	---	14.0	26.0	27.0	---
13	15.0	11.0	7.0	4.0	7.0	12.0	---	---	12.0	---	27.0	18.0
14	15.0	11.0	6.0	4.0	---	8.0	---	---	14.0	27.0	27.0	12.0
15	15.0	11.0	4.0	4.0	---	8.0	---	15.0	13.0	27.5	27.0	19.0
16	15.0	11.0	4.0	3.5	---	12.0	---	15.0	14.0	26.0	27.0	19.0
17	15.0	11.0	3.0	2.0	7.0	12.0	---	15.0	16.0	26.0	26.0	20.0
18	15.0	10.0	1.5	3.0	7.0	12.0	---	16.0	18.0	---	26.0	19.0
19	---	10.0	1.0	3.0	7.0	10.0	---	12.0	---	---	24.0	---
20	---	8.0	.0	3.0	7.0	10.0	---	15.0	---	---	28.0	19.0
21	12.0	7.0	.0	3.0	7.0	9.0	---	---	---	26.0	28.0	15.0
22	12.0	7.0	.0	3.0	8.0	10.0	---	---	---	26.0	28.0	20.0
23	13.0	7.0	.0	---	7.0	12.0	---	18.0	---	26.0	28.0	20.0
24	13.0	7.0	.0	3.0	7.0	---	---	19.0	---	25.0	---	20.0
25	14.5	7.0	.0	3.0	7.0	---	---	15.0	---	25.0	28.0	20.0
26	15.0	10.0	.0	2.5	7.5	8.0	---	12.0	19.0	---	28.0	21.0
27	15.0	6.0	---	2.5	8.0	8.0	---	17.0	19.0	25.0	28.0	21.0
28	15.0	5.0	.0	2.5	7.0	8.0	---	17.0	23.0	26.0	28.0	21.0
29	14.5	5.0	.0	1.0	---	8.0	---	18.0	24.0	26.0	28.0	21.0
30	14.5	4.0	.0	1.0	---	10.0	---	17.0	23.0	26.0	28.0	18.0
31	13.0	---	.0	2.0	---	10.0	---	16.0	---	26.0	---	---

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	287	821	545	801	49	56	87	91	57	41	631	645
2	219	607	193	321	36	47	81	87	51	35	1640	1640
3	276	873	144	252	66	81	169	173	75	51	1570	1800
4	179	573	201	322	56	65	139	157	148	97	834	824
5	159	431	190	268	39	42	123	157	172	114	703	704
6	242	592	157	216	64	73	201	218	166	115	1240	1730
7	161	365	127	185	95	99	143	141	194	141	1230	1280
8	166	359	95	141	86	87	75	67	262	198	212	190
9	205	516	89	119	68	71	67	55	193	142	234	193
10	104	231	100	130	81	81	65	60	89	65	151	122
11	84	170	80	107	84	84	54	49	176	128	146	120
12	148	293	54	69	82	83	61	53	122	89	147	121
13	95	182	54	73	115	121	98	81	111	83	161	135
14	81	152	69	92	109	114	121	100	200	154	145	123
15	69	120	53	71	104	106	106	88	201	156	136	120
16	79	129	63	80	100	98	97	79	185	146	186	171
17	127	193	62	81	94	91	101	83	208	198	173	153
18	429	628	85	108	78	72	90	76	188	206	113	95
19	426	620	84	106	99	97	98	77	245	219	146	122
20	277	484	46	56	112	119	75	61	89	69	208	183
21	191	318	62	76	186	187	68	59	33	24	172	156
22	196	294	56	68	144	133	117	98	46	38	131	120
23	189	281	77	90	150	120	111	88	128	104	107	100
24	144	215	106	120	205	157	65	49	168	134	112	102
25	94	133	92	109	194	156	70	47	145	116	172	157
26	94	135	114	128	121	98	126	90	120	92	305	287
27	121	172	80	96	77	73	115	89	114	82	202	210
28	163	238	53	59	83	80	87	68	101	75	192	203
29	132	188	51	55	85	92	96	71	---	---	186	182
30	467	696	62	67	109	132	99	77	---	---	153	144
31	853	1250	---	---	110	121	63	46	---	---	148	137
TOTAL	---	12259	---	4466	---	3036	---	2735	---	3112	---	12269

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	177	165	123	171	108	675	40	119	67	55	42	19
2	272	275	178	222	77	420	40	110	86	72	39	18
3	399	503	174	251	82	399	28	69	261	236	37	16
4	485	704	176	243	124	511	25	55	183	172	36	17
5	597	983	153	209	135	488	38	79	95	118	37	22
6	802	2000	114	145	184	822	37	72	93	112	882	1290
7	959	3320	168	272	193	1050	37	67	58	64	3540	11300
8	879	3320	244	522	255	1590	53	87	62	76	4790	22200
9	554	1880	653	2450	414	3330	48	85	74	64	3870	15300
10	203	582	877	4030	523	3850	44	99	121	95	1220	3720
11	132	371	468	2180	226	1560	75	144	120	94	39100	262000
12	191	478	180	838	499	3610	85	143	89	69	23300	103000
13	262	555	183	819	439	3240	62	101	77	77	1010	3860
14	223	395	166	826	145	1050	47	72	75	70	916	3120
15	213	341	163	906	158	1130	42	61	66	54	595	1850
16	180	271	219	1050	110	677	63	91	64	46	370	987
17	175	250	232	945	127	788	43	62	65	42	347	824
18	183	306	258	1220	153	1030	40	61	56	31	301	617
19	166	365	492	3310	148	931	95	140	73	40	234	442
20	170	393	215	1510	127	722	144	195	72	44	197	329
21	195	487	131	991	131	734	134	174	63	44	190	306
22	363	1050	162	1210	133	711	142	199	66	41	132	194
23	227	667	93	612	109	538	94	138	50	31	105	144
24	143	378	39	237	91	410	90	142	52	29	119	164
25	98	217	66	359	74	298	96	145	55	32	107	136
26	82	174	238	1300	51	180	77	109	40	21	83	98
27	81	169	233	1440	46	137	70	98	30	16	77	75
28	83	149	197	1410	48	128	84	102	27	15	78	73
29	78	123	216	1630	43	127	100	105	39	20	70	63
30	82	118	192	1420	42	128	69	66	59	30	63	55
31	---	---	130	937	---	---	62	52	51	23	---	---
TOTAL	---	20989	---	33665	---	31264	---	3242	---	1933	---	432239

TOTAL LOAD FOR YEAR: 561209 TONS.

09365000 SAN JUAN RIVER AT FARMINGTON, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-82, 1990 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)
OCT 15...	1700	1120	450	8.5	12.5	170	55	8.5	29	1
DEC 18...	1630	747	450	9.0	1.0	190	59	9.7	35	1
FEB 04...	1600	826	500	8.6	5.0	200	62	10	37	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	IODIDE, DIS-SOLVED (MG/L AS I) (71865)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT 15...	2.2	108	130	9.7	0.30	0.020	0.003	8.2	294	309
DEC 18...	2.3	115	140	10	0.30	0.020	0.004	9.2	325	336
FEB 04...	8.6	117	150	10	0.30.	0.030	0.003	8.4	331	357

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	S-34/ S-32 STABLE ISOTOPE RATIO PER MIL (82086)
OCT 15...	<10	64	40	6	27	6	<1	680	7	3.40
DEC 18...	30	63	360	5	20	21	<1	710	<3	3.90
FEB 04...	<10	66	50	6	31	21	<1	780	4	3.50

SAN JUAN RIVER BASIN

09367500 LA PLATA RIVER NEAR FARMINGTON, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-73, 1978-81, 1990 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 18...	0900	2.2	3710	8.4	4.0	1300	320	120	430	5	4.5
DEC 20...	1230	17	2130	8.3	0.0	1000	240	100	200	3	2.9
FEB 07...	1600	74	780	8.3	2.0	220	55	19	100	3	2.1

DATE	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	IODIDE, DIS-SOLVED (MG/L AS I) (71865)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
OCT 18...	250	1700	180	1.5	0.76	0.010	12	2980	2920	10	<100
DEC 20...	268	990	75	0.30	0.47	0.007	11	1920	1780	20	<100
FEB 07...	124	300	18	0.30	0.080	0.002	5.8	558	576	50	26

DATE	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	S-34/ S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 18...	160	<10	40	680	<1	5100	<10	-7.30	--	--	--
DEC 20...	110	<10	30	160	2	2900	<10	-9.10	--	--	--
FEB 07...	50	42	11	33	<1	770	<3	-7.00	284	56	90

09367540 SAN JUAN RIVER NEAR FRUITLAND, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 36°44'25", long 108°24'09", in NW¼SE¼ sec.10, T.29 N., R.15 W., San Juan County, Hydrologic Unit 14080105, on right bank 300 ft downstream from Four Corners Power Plant highway bridge, 0.4 mi west of Fruitland, 10 mi downstream from La Plata River, 14.0 mi upstream from Chaco River, and at mile 239.

DRAINAGE AREA.--8,010 mi², approximately.

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Discharge record estimated from station 09365000 San Juan River at Farmington, which is approximately 11 mi upstream.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)
NOV 28...	0855	E1100	564	8.3	-2.0	0.5	45	12.2
JAN 09...	1530	E1100	690	8.3	7.0	3.5	96	10.9
FEB 06...	1606	E850	623	8.5	8.5	5.0	40	12.8
APR 02...	1300	E952	540	8.5	18.0	11.5	100	9.8
JUL 09...	1415	E850	495	8.7	27.5	23.0	15	7.0
SEP 05...	1900	E815	691	8.0	21.0	19.5	1400	7.6

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV 28...	210	86	66	11	38	1	2.2	151	0
JAN 09...	230	98	72	12	65	2	2.8	150	5
FEB 06...	220	92	68	12	48	1	2.7	141	7
APR 02...	210	85	63	12	37	1	2.4	138	5
JUL 09...	190	74	62	8.2	31	1	2.4	128	6
SEP 05...	190	69	63	8.4	69	2	3.6	150	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 28...	124	130	11	0.40	8.6	361	341
JAN 09...	131	220	13	0.20	9.4	481	473
FEB 06...	127	170	14	0.30	8.7	397	400
APR 02...	121	150	11	0.30	8.4	377	357
JUL 09...	115	130	11	0.20	5.8	301	320
SEP 05...	123	220	17	0.40	8.8	455	464

09368000 SAN JUAN RIVER AT SHIPROCK, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1941-45, 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1941 to September 1945, July 1957 to September 1986, October 1989 to current year.
WATER TEMPERATURE: December 1950 to September 1986, October 1989 to current year.

INSTRUMENTATION.--Water-temperature and specific-conductance monitor.

REMARKS.--Interruptions in record were due to probes silted, probes out of water, or malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: (water years, 1957-86, 1990-91) Maximum, 4,360 microsiemens July 31, 1959; minimum, 138 microsiemens, Nov. 1, 1981.
WATER TEMPERATURE: Maximum 34.0 °C, July 20, 1968; minimum, 0.0 °C on many days during winter months each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,770 microsiemens, Sept. 13; minimum daily, 258 microsiemens, June 10.
WATER TEMPERATURE: Maximum daily, 27.6 °C, July 14; minimum daily, 0.0 °C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV												
27...	0903	1100	620	8.3	2.5	4.0	55	11.3	230	89	70	12
FEB												
05...	1003	850	632	8.4	9.0	2.5	33	11.7	230	99	69	13
06...	0930	892	590	8.4	--	3.5	--	--	240	--	72	14
MAY												
08...	1600	3620	360	8.4	30.0	13.5	120	8.9	140	34	43	7.1
SEP												
05...	1230	338	977	8.1	19.5	20.5	1900	7.4	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	IODIDE, DIS-SOLVED (MG/L AS I) (71865)
NOV												
27...	43	1	2.4	158	4	136	--	180	16	0.30	--	--
FEB												
05...	46	1	2.4	156	0	128	--	170	17	0.30	--	--
06...	49	1	2.5	--	--	--	127	210	14	0.30	0.040	0.003
MAY												
08...	20	0.7	2.1	118	4	103	--	85	5.0	0.20	--	--
SEP												
05...	--	--	--	166	0	136	--	390	26	0.50	--	--

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV												
27...	8.2	412	416	0.280	--	0.020	<0.010	0.300	0.300	0.040	0.030	0.36
FEB												
05...	8.4	395	405	0.390	0.290	0.010	0.010	0.400	0.300	0.030	0.030	--
06...	8.3	417	447	--	--	--	--	--	--	--	--	--
MAY												
08...	10	213	236	0.110	--	0.040	<0.010	0.150	0.110	0.040	0.030	0.36
SEP												
05...	--	678	--	0.150	--	0.020	<0.010	0.170	0.170	0.020	0.020	1.3

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)
NOV												
27...	0.70	0.150	0.030	<10	<1	65	<0.5	60	1.0	<1	<3	12
FEB												
05...	--	0.060	0.040	<10	<1	58	<0.5	60	<1.0	<1	<3	2
06...	--	--	--	<10	--	62	--	60	--	--	--	--
MAY												
08...	0.55	0.250	<0.010	<10	1	60	<0.5	30	<1.0	<1	<3	2
SEP												
05...	1.5	0.670	<0.010	--	--	--	--	--	--	--	--	--

DATE	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
NOV												
27...	4	<1	35	4	<0.1	<10	<1	<2	<1.0	870	<6	16
FEB												
05...	5	<1	32	5	<0.1	<10	<1	<1	<1.0	830	<6	10
06...	5	--	33	4	--	--	--	1	--	900	--	6
MAY												
08...	18	<1	21	5	<0.1	<10	2	<1	<1.0	450	<6	<3
SEP												
05...	--	--	--	--	<0.1	--	--	--	--	--	--	--

DATE	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOSPHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) (01028)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) (01029)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) (01052)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) (01053)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) (71921)
NOV												
27...	14	5.7	170	3	<10	2	<10	4	2900	<10	240	<0.01

DATE	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DISSOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) (80060)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
NOV												
27...	30	3.4	10	4.8	8.3	3.6	7.6	0.10	1.8	--	445	1320
FEB												
05...	--	--	--	--	--	--	--	--	--	--	554	1270
06...	--	--	--	--	--	--	--	--	--	0.90	--	--
MAY												
08...	--	2.9	47	3.5	36	2.7	33	0.05	1.1	--	3220	31500
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR-DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)	ENDO-SULFAN, TOTAL (UG/L) (39388)
NOV												
27...	30	90	350	--	--	--	--	--	--	--	--	--
FEB												
05...	23	K7	K4	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
08...	33	K140	490	--	--	--	--	--	--	--	--	--
SEP												
05...	--	4700	3800	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	PARA-THION, TOTAL (UG/L) (39540)	TOX-APHENE, TOTAL (UG/L) (39400)	TOTAL TRI-THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	0.02
SEP												
05...	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01	<1	<0.01	--

DATE	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER-THANE TOTAL (UG/L) (39034)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)	CHLOR-DYRIFOS TOTAL RECOVER (UG/L) (38932)	DI-SYSTON TOTAL (UG/L) (39011)	PHORATE TOTAL (UG/L) (39023)	DEF TOTAL (UG/L) (39040)	2, 4-DP TOTAL (UG/L) (82183)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L (82614)
MAY											
08...	<0.01	<0.01	--	--	--	--	--	--	--	<0.01	--
SEP											
05...	--	--	<0.1	<0.10	<0.01	0.01	<0.01	<0.01	<0.01	--	<0.01

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
FEB									
05...	1004	22	1.20	13	622	8.4	3.0	11.5	396
05...	1005	32	1.52	23	622	8.3	2.5	11.7	513
05...	1006	42	1.85	30	620	8.3	2.5	11.7	347
05...	1007	52	2.28	39	620	8.3	2.5	11.7	588
05...	1008	62	2.35	57	620	8.3	2.5	11.8	659
05...	1009	72	2.40	56	620	8.2	2.5	11.8	665
05...	1010	82	2.70	57	620	8.3	2.5	11.8	380
05...	1011	92	3.00	65	620	8.3	2.5	11.7	534
05...	1012	102	2.45	69	619	8.3	2.5	11.7	700
05...	1013	112	2.58	51	619	8.3	2.5	11.5	857
05...	1014	122	2.30	53	619	8.3	2.5	11.5	691
05...	1015	132	2.72	55	619	8.3	2.5	11.7	748
05...	1016	142	2.75	59	619	8.2	2.5	11.7	728
05...	1017	152	2.60	68	619	8.3	2.5	11.7	802
05...	1018	162	2.80	71	619	8.2	2.5	11.8	781
05...	1019	172	2.48	57	618	8.3	2.5	11.8	338
05...	1020	182	1.70	28	618	8.3	3.0	11.8	275

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAY									
08...	1601	155	1.3	68	357	8.3	12.5	8.7	340
08...	1602	185	2.3	327	357	8.3	12.5	8.8	310
08...	1603	211	2.5	379	356	8.3	12.5	8.8	284
08...	1604	235	2.8	429	356	8.3	12.5	8.8	260
08...	1605	256	5.0	602	356	8.3	12.5	8.8	239
08...	1606	271	4.1	405	357	8.3	12.5	8.8	224
08...	1607	286	4.6	484	357	8.3	12.5	8.8	209
08...	1608	301	5.3	545	356	8.3	12.5	8.8	194
08...	1609	319	4.3	471	357	8.3	12.5	8.8	176
08...	1610	345	2.6	80	356	8.3	12.5	8.8	150

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-81, 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	CHARGE, INST. CUBIC FEET PER SECOND (00061)	DIS-SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
NOV 27...	1504	1060	684	8.3	4.0	3.0	45	11.9	240
FEB 05...	1544	920	665	8.3	8.5	4.5	44	11.6	240
MAR 13...	1200	895	690	8.5	13.0	7.0	130	10.5	260
APR 03...	1330	977	660	8.5	18.0	14.0	95	9.0	260
JUL 09...	1030	752	557	8.7	27.0	23.0	18	7.3	220
SEP 05...	0900	314	807	8.3	21.0	19.0	17	8.6	280

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV 27...	110	73	15	46	1	2.4	149	7
FEB 05...	110	71	15	45	1	2.6	147	7
MAR 13...	120	75	17	49	1	2.6	153	7
APR 03...	130	73	18	47	1	2.7	149	4
JUL 09...	94	68	11	34	1	2.4	132	8
SEP 05...	140	81	19	65	2	3.3	167	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 27...	134	200	17	0.40	8.2	438	442
FEB 05...	132	190	17	0.30	8.2	443	428
MAR 13...	137	220	14	0.30	9.2	471	469
APR 03...	128	220	13	0.30	8.2	461	459
JUL 09...	122	150	13	0.30	4.3	340	356
SEP 05...	137	300	21	0.40	3.2	546	575

SAN JUAN RIVER BASIN

09352900 VALLECITO CREEK NEAR BAYFIELD, CO
(Hydrologic Bench-Mark Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1968; October 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1962 to September 1982.

REMARKS.--Radio-chemistry analyses from the 1990 water year included in this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: (Water years 1963-82) Maximum, 20.0°C July 10, 1974; minimum, 0.0°C on many days during winter months each year

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 26...	1200	60	79	8.1	2.0	0.7	11.0	<1	K2	36
MAR 18...	1200	18	89	7.8	1.0	0.9	10.6	<1	<1	43
JUN 04...	1050	229	66	7.5	4.5	0.7	9.9	<1	<1	31
AUG 12...	0930	86	72	8.3	9.5	1.0	8.8	K5	38	28

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 26...	11	2.1	1.1	0.1	0.5	31	26	7.2	1.3
MAR 18...	13	2.5	1.3	0.1	0.8	34	28	10	0.4
JUN 04...	9.2	1.9	0.9	0.1	0.6	--	--	8.4	0.2
AUG 12...	8.5	1.6	0.7	0.1	0.5	23	19	7.9	0.1

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 26...	0.4	4.1	38	44	0.05	5.16	0.08	0.02	0.10
MAR 18...	0.2	4.4	50	50	0.07	2.47	--	<0.01	0.21
JUN 04...	0.3	3.6	65	41	0.09	40.2	--	<0.01	0.16
AUG 12...	0.3	3.2	24	35	0.03	5.57	--	<0.01	0.07

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 26...	0.10	0.05	0.03	--	<0.2	--	<0.01	<0.01	<0.01
MAR 18...	0.17	<0.01	<0.01	--	0.3	--	0.02	<0.01	<0.01
JUN 04...	0.12	0.03	0.02	0.27	0.3	--	0.02	0.02	<0.01
AUG 12...	0.08	0.03	0.02	--	<0.2	<0.2	<0.01	<0.01	<0.01

K Based on non-ideal colony count.

Appendix 4b. USGS water resources data, Colorado, 1991 (Ugland et al. 1992)

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV										
26...	30	<1	13	<0.5	<1	1	<3	2	9	1
MAR										
18...	10	<1	13	0.5	<1	<1	<3	2	8	<1
JUN										
04...	50	<1	12	<0.5	1	--	<3	4	30	<1
AUG										
12...	30	<1	10	<0.5	<1	<1	<3	2	9	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV										
26...	<4	4	<0.1	<10	2	<1	<1	29	<6	<3
MAR										
18...	<4	<1	<0.1	<10	1	<1	<1	37	<6	7
JUN										
04...	<4	20	<0.1	<10	3	<1	<1	22	<6	24
AUG										
12...	<4	3	<0.1	<10	2	<1	<1	25	<6	4

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
JUL									
10...	1200	0.9	1.1	1.2	<0.6	<0.6	<0.6	0.10	0.31

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
MAR									
18...	1200	1.5	1.3	1.5	<0.6	<0.6	<0.6	0.08	0.49
JUN									
04...	1050	0.9	0.9	1.0	<0.6	<0.6	<0.6	0.06	0.39

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS AND CROSS SECTION PROFILES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	STREAM WIDTH (FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)
NOV								
26...	1205	3.50	50.0	81	8.2	2.0	10.8	11
26...	1206	10.0	50.0	77	8.2	2.0	11.1	7
26...	1207	16.0	50.0	72	8.1	2.0	10.9	2
26...	1208	20.0	50.0	73	8.1	2.0	11.1	3
26...	1209	24.0	50.0	73	8.0	2.0	11.0	38
26...	1210	30.5	50.0	72	8.0	2.0	11.0	2
26...	1211	37.0	50.0	73	8.0	2.0	10.7	1
26...	1212	45.0	50.0	77	8.0	2.0	10.6	4
MAR								
18...	1205	4.00	46.0	88	7.8	1.0	10.5	3
18...	1206	12.0	46.0	88	7.8	1.0	10.5	3
18...	1207	16.0	46.0	91	7.9	1.0	10.5	2
18...	1208	20.0	46.0	88	7.8	1.0	10.7	4
18...	1209	26.0	46.0	87	7.8	1.0	10.7	5
18...	1210	30.0	46.0	90	7.8	1.0	10.6	5
18...	1211	36.0	46.0	91	7.8	1.0	10.6	2
18...	1212	43.0	46.0	89	7.8	1.0	10.5	3
JUN								
04...	1055	4.00	64.0	67	7.4	4.5	--	--
04...	1056	24.0	64.0	66	7.5	4.5	--	--
04...	1057	30.0	64.0	66	7.5	4.5	--	--
04...	1058	37.0	64.0	65	7.5	4.5	--	--
04...	1059	40.0	64.0	66	7.5	4.5	--	--
04...	1100	46.0	64.0	66	7.5	4.5	--	--
04...	1101	52.0	64.0	66	7.5	4.5	--	--
04...	1102	57.0	64.0	66	7.5	4.5	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
26...	1200	60	8	1.3
MAR				
18...	1200	18	3	0.15
JUN				
04...	1050	229	3	1.9
AUG				
12...	0930	86	2	0.46

09354500 LOS PINOS RIVER AT LA BOCA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to May 1974, January 1988 to September 1991 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAY										
29...	1635	207	257	--	20.0	7.8	88	28	4.4	12
AUG										
13...	0930	206	224	8.6	18.0	7.7	92	29	4.8	12

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
MAY										
29...	0.6	2.4	98	15	1.3	0.4	5.6	127	128	0.17
AUG										
13...	0.5	1.9	106	10	1.1	0.2	7.3	146	130	0.20

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY									
29...	71.0	0.03	<0.05	0.02	0.68	0.70	0.11	0.06	6.4
AUG									
13...	81.2	0.03	<0.05	0.05	0.85	0.90	0.12	0.08	6.9

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)
MAY									
29...	2200	<1	<1	10	<1	<1	2	2	1
AUG									
13...	1900	<1	--	<10	<1	--	2	--	3

DATE	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
MAY									
29...	<5	7	4	1800	59	6200	1	<10	120
AUG									
13...	--	6	--	1700	90	--	--	--	100

09354500 LOS PINOS RIVER AT LA BOCA, CO

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
MAY 29...	670	<0.1	0.01	<1	7	<1	<1	<10	20
AUG 13...	--	<0.1	--	1	3	<1	--	<10	--

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 29...	1635	<1	<1	<0.1	<1	<0.1	<0.1	<0.1	<0.1

DATE	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 29...	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<1	<10

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 05...	1255	216	187	15.5
NOV 13...	1340	244	200	8.0
JAN 17...	1410	88	296	0.0
MAR 06...	0955	319	221	2.5
APR 08...	1420	732	147	7.0
AUG 01...	1245	218	213	20.0

SAN JUAN RIVER BASIN

09355000 SPRING CREEK AT LA BOCA, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1988 to September 1991 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAY										
29....	1430	68	330	8.4	20.0	7.0	100	31	5.9	24
AUG										
13...	0830	73	294	8.6	16.5	8.0	100	31	6.2	22

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
MAY										
29...	1	3.5	127	40	0.7	0.3	7.4	177	189	0.24
AUG										
13...	0.9	2.9	126	29	1.5	0.2	7.8	178	176	0.24

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY									
29...	32.5	0.18	<0.05	0.11	0.59	0.70	0.54	0.16	11
AUG									
13...	35.1	0.05	<0.05	0.12	0.68	0.80	0.21	0.19	9.6

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)
MAY									
29...	19000	2	6	10	<1	<1	12	2	10
AUG									
13...	7200	<1	--	20	<1	--	6	--	4

DATE	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
MAY									
29...	<5	15	6	15000	130	3800	19	<10	650
AUG									
13...	--	12	--	5600	180	--	--	--	290

09355000 SPRING CREEK AT LA BOCA, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
MAY 29...	330	0.1	0.02	<1	22	<1	<1	80	30
AUG 13...	--	<0.1	--	<1	9	<1	--	30	--

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 05...	1450	38	336	17.0
NOV 13...	1435	6.1	1000	9.5
MAR 06...	1130	23	483	4.5
APR 08...	1150	13	526	9.0
AUG 01...	1020	66	279	19.5

09371500 McELMO CREEK NEAR CORTEZ, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Jan. 1, 1982 to current year. Water-quality analysis since August 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Feb. 6, 1982 to current year.
WATER TEMPERATURES: Feb. 6, 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1982.

REMARKS.--Daily records are poor, stream is not well mixed at location of monitor probes. Readings at the probe location may not represent mean cross-section characteristics. Daily maximum and minimum specific conductance data available in district office. Interruptions in the daily record are the result of instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 5,020 microsiemens April 16, 1990; minimum, 720 microsiemens May 17, 1991.
WATER TEMPERATURES: Maximum 26.5°C July 18,19 1985, July 1, 1990; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 4,990 microsiemens Jan. 1; minimum, 720 microsiemens May 17.
WATER TEMPERATURES: Maximum 25.5°C July 5; minimum 0.0°C, many days during November through February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT										
25...	1130	60	2010	8.6	7.5	--	1100	250	120	110
NOV										
14...	1400	42	2530	8.5	6.0	11.1	1400	300	150	140
JAN										
16...	1130	25	3150	8.0	0.0	--	1700	350	200	210
MAR										
11...	1100	27	3050	8.3	6.0	--	1700	330	220	210
APR										
19...	1100	16	3050	8.6	6.5	--	1600	300	200	240
JUN										
07...	1430	78	1680	8.4	16.0	--	870	200	90	83
JUL										
03...	1100	49	1640	8.5	18.0	--	850	200	85	82
AUG										
08...	1100	89	1490	8.6	15.0	--	820	190	85	65
20...	0950	86	1530	8.6	16.5	--	760	180	75	62
22...	1330	74	1570	8.5	19.5	--	800	190	78	61

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT										
25...	1	4.3	246	1000	20	<0.1	9.1	1660	2.26	268
NOV										
14...	2	4.2	241	1300	27	0.3	10	2090	3.10	259
JAN										
16...	2	5.2	317	1600	42	0.6	12	2610	3.55	178
MAR										
11...	2	5.1	277	2200	48	0.8	8.2	3190	4.34	232
APR										
19...	3	4.8	191	1900	41	0.5	4.9	2810	3.82	121
JUN										
07...	1	5.2	204	840	21	0.4	11	1370	1.87	289
JUL										
03...	1	3.8	234	750	12	0.2	10	1280	1.75	170
AUG										
08...	1	4.5	229	740	16	0.3	12	1250	1.70	300
20...	1	4.4	239	780	17	0.3	11	1270	1.73	296
22...	0.9	4.3	243	760	16	0.3	12	1270	1.72	253

09371520 McELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°19'36", long 108°42'00", in NE¼NE¼ sec.3, T.35 N, R.17 W; Montezuma County, Hydrologic Unit 14080202, on left bank adjacent to abandoned gravel pit 1.5 mi downstream from Mud Creek, 1.9 mi upstream from Trail Canyon, and 5.5 mi south of Cortez.

PERIOD OF RECORD.--October 1990 to September 1991.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1990 to September 1991.
WATER TEMPERATURES: October 1990 to September 1991.

INSTRUMENTATION.--Water-quality monitor since October 1990.

REMARKS.--Daily maximum and minimum specific conductance data available in district office. Interruptions in the daily record are the result of instrument malfunctions. Daily records are rated poor.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Not determined.
WATER TEMPERATURES: Maximum recorded 25.1°C July 6, but may have been higher during periods of no record; minimum 0.0°C, several days during November and December.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
OCT									
25...	1400	2040	8.7	9.5	1100	250	120	110	1
MAR									
11...	1300	3040	8.3	7.0	2200	330	330	210	2
JUN									
07...	0900	1740	8.3	14.5	870	200	90	86	1
AUG									
08...	1145	1510	8.5	18.0	860	200	88	67	1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT								
25...	4.3	240	1100	21	<0.1	9.2	1760	2.39
MAR								
11...	5.3	267	2000	46	0.8	7.9	3090	4.20
JUN								
07...	5.9	227	840	22	0.4	10	1390	1.89
AUG								
08...	4.4	238	750	14	0.3	12	1280	1.74

09372000 MCELMO CREEK NEAR COLORADO-UTAH STATE LINE CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1981, August 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT										
29...	1415	55	2330	8.3	13.0	1200	250	130	130	2
NOV										
14...	1130	56	2570	8.4	6.0	1300	290	150	150	2
JAN										
18...	1045	12	3130	8.1	0.0	1700	340	200	220	2
MAR										
13...	1130	29	3180	8.2	6.0	1700	330	220	220	2
APR										
30...	1030	6.0	3170	8.2	10.0	1600	300	210	250	3
JUN										
20...	1125	40	2040	--	18.5	1000	220	110	130	2
AUG										
14...	1115	59	1910	8.5	20.0	1100	230	120	99	1
20...	1130	81	1860	8.6	19.0	940	210	100	97	1
22...	1230	50	2050	8.5	21.0	940	210	100	98	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT									
29...	4.8	249	1200	23	<0.1	9.3	1900	2.58	280
NOV									
14...	4.6	252	1300	29	0.1	9.5	2090	2.90	322
JAN									
18...	5.4	315	1800	43	0.6	12	2810	3.82	91.0
MAR									
13...	5.5	262	2100	47	0.8	7.0	3090	4.20	242
APR									
30...	9.2	245	1700	48	0.5	3.6	2670	3.63	43.2
JUN									
20...	5.8	275	1100	30	0.5	12	1770	2.41	192
AUG									
14...	4.5	250	1000	22	0.3	13	1640	2.23	261
20...	5.4	241	970	24	0.3	12	1560	2.13	342
22...	5.5	261	1000	23	0.3	13	1610	2.18	217

SAN JUAN RIVER BASIN

09378600 MONTEZUMA CREEK NEAR BLUFF, UT

WATER-QUALITY RECORDS

PERIOD OF RECORD.—November 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
FEB , 1991											
20...	1030	6.6	560	8.00	5.0	1.5	55	17	3.1	120	82
MAR											
12...	1100	0.22	1910	8.30	7.0	11.0	300	78	25	330	70

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)
FEB , 1991										
20...	7	2.5	130	33	0.40	5.8	409	0.56	7.32	0.096
MAR										
12...	8	7.0	660	120	0.40	--	1430	1.94	0.85	0.080

DATE	TIME	BORON, DIS-SOLVED (UG/L AS B)
FEB , 1991		
20...	1030	70
MAR		
12...	1100	210

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SEDI, MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
FEB , 1991						
20...	1030	6.6	1.5	80	3450	62
MAR						
12...	1100	0.22	11.0	--	104	0.06

Appendix 4c. USGS water resources data, Utah, 1991 (RcMillard et al. 1992)

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1929 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to September 1977, October 1980 to current year.
WATER TEMPERATURES: May 1944 to September 1961, October 1964 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1929 to September 1980.

REMARKS.--Unpublished daily records of specific conductance obtained before water year 1965 were included in the determination of extremes for period of daily record and are available in files of district office.

INSTRUMENTATION.--Water-quality monitor since October 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,790 microsiemens Sept. 19, 1959; minimum daily, 208 microsiemens June 17, 1952.
WATER TEMPERATURES: Maximum, 33.0°C July 31, 1959; minimum, 0.0°C on many days during winter period of most years.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 383,000 mg/L Sept. 21, 1929; minimum daily mean, no flow on several days in 1934 and 1939.
SEDIMENT LOADS: Maximum daily, 15,700,000 tons Oct. 20, 1972; minimum daily, 0 tons on several days in 1934 and 1939.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,780 microsiemens Sept. 13; minimum observed, 320 microsiemens May 21.
WATER TEMPERATURES: Maximum recorded, 26.9°C July 4; minimum recorded, 0.9°C Dec. 6-11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	NITRO-GEN DIS-SOLVED (MG/L AS N)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT , 1990											
15...	0800	1400	640	8.20	15.0	12.5	--	10.0	650	--	--
NOV											
20...	1130	1100	750	8.20	13.5	8.5	65	9.80	651	--	--
FEB , 1991											
20...	1400	1790	840	8.10	16.0	5.0	--	11.3	660	--	--
MAR											
22...	1050	1070	820	8.10	10.5	7.5	240	10.1	657	--	<1
APR											
18...	0930	1550	660	8.30	13.0	13.0	--	9.20	650	--	--
MAY											
21...	1030	4130	320	8.10	25.0	16.0	280	8.20	650	--	--
JUN											
18...	1100	2530	430	8.00	33.0	19.5	--	7.80	660	--	--
JUL											
23...	1130	640	800	8.40	32.5	24.0	1000	7.10	660	1.1	<1
AUG											
26...	1200	340	950	8.30	39.0	26.0	--	7.00	660	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)
OCT , 1990											
15...	--	280	--	79	--	19	--	43	25	1	--
NOV											
20...	--	300	83	83	23	21	48	53	28	1	3.3
FEB , 1991											
20...	--	220	--	68	--	12	--	100	49	3	--
MAR											
22...	<1	320	82	86	28	24	67	74	34	2	4.5
APR											
18...	--	230	--	69	--	15	--	47	30	1	--
MAY											
21...	--	130	--	41	--	7.6	--	14	18	0.5	--
JUN											
18...	--	150	--	47	--	8.6	--	29	29	1	--
JUL											
23...	<1	290	90	84	29	19	56	60	31	2	10
AUG											
26...	--	350	--	86	--	32	--	69	30	2	--

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE WATER DIS IT FIELD MG/L AS CO3	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT , 1990											
15...	2.6	--	--	--	220	16	0.30	9.2	524	469	--
NOV											
20...	2.6	0	172	141	270	16	0.30	8.0	522	541	0.71
FEB , 1991											
20...	3.0	--	--	--	260	14	0.40	7.0	574	562	--
MAR											
22...	2.8	0	168	138	310	20	0.30	8.6	619	612	0.84
APR											
18...	2.3	--	--	--	230	11	0.30	8.5	437	458	0.59
MAY											
21...	1.8	0	102	84	85	5.7	0.20	7.6	214	215	0.29
JUN											
18...	2.1	--	--	--	120	8.0	0.40	7.4	285	279	0.39
JUL											
23...	3.8	6	170	149	250	16	0.30	8.7	541	536	0.74
AUG											
26...	3.9	--	--	--	400	23	0.4	6.9	684	696	0.93

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)
OCT , 1990										
15...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	1550	--	--	<0.010	<0.010	0.300	0.300	0.050	0.040	0.05
FEB , 1991										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	1790	--	--	<0.010	<0.010	0.520	0.500	<0.010	0.020	0.03
APR										
18...	1830	--	--	--	<0.010	--	0.390	--	<0.010	--
MAY										
21...	2390	0.170	--	0.050	<0.010	0.220	0.210	0.050	<0.010	--
JUN										
18...	1950	--	--	--	<0.010	--	0.310	--	0.010	0.01
JUL										
23...	935	--	0.630	<0.010	0.010	0.650	0.640	0.030	0.020	0.03
AUG										
26...	628	--	--	--	<0.010	--	<0.050	--	<0.010	--

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
OCT , 1990										
15...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	0.45	0.50	--	0.80	3.5	0.160	0.090	0.050	0.020	0.06
FEB , 1991										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	--	0.30	--	0.82	3.6	0.060	0.030	0.020	0.020	0.06
APR										
18...	--	--	--	--	--	--	--	--	0.020	0.06
MAY										
21...	0.25	0.30	--	0.52	2.3	0.100	0.010	0.060	<0.010	--
JUN										
18...	--	--	--	--	--	--	--	--	0.010	0.03
JUL										
23...	1.3	1.3	0.50	1.9	8.6	0.480	0.830	0.020	<0.010	--
AUG										
26...	--	--	--	--	--	--	--	--	<0.010	--

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV , 1990												
20...	1130	<10	1	1	78	<0.5	<1.0	<1	<3	2	<3	<1
MAR , 1991												
22...	1050	20	2	<1	160	<0.5	<1.0	<1	<3	1	9	1
MAY												
21...	1030	20	--	1	88	<0.5	<1.0	<1	<3	2	34	<1
JUL												
23...	1130	<10	2	1	130	<0.5	<1.0	1	<3	3	<3	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV , 1990											
20...	40	<1	<0.1	<10	<1	1	<3	<1.0	1100	<6	5
MAR , 1991											
22...	40	<1	<0.1	<10	1	<1	1	<1.0	1100	<6	14
MAY											
21...	13	2	<0.1	<10	<1	--	<1	<1.0	420	<6	17
JUL											
23...	40	1	<0.1	10	<1	2	2	<1.0	1100	<6	3

DATE	TIME	BORON, DISSOLVED (UG/L AS B)
OCT , 1990		
15...	0800	60
FEB , 1991		
20...	1400	50
APR		
18...	0930	40
JUN		
18...	1100	40
AUG		
26...	1200	100

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1010	760	907	---	---	---	720	680	706	---	---	---
2	800	510	678	---	---	---	720	700	709	---	---	---
3	650	520	568	---	---	---	720	690	708	---	---	---
4	770	660	693	---	---	---	720	700	709	---	---	---
5	680	600	644	---	---	---	720	700	710	---	---	---
6	600	550	575	---	---	---	720	710	717	---	---	---
7	620	540	576	---	---	---	730	650	690	---	---	---
8	630	590	611	---	---	---	690	570	630	---	---	---
9	680	600	641	---	---	---	630	550	586	---	---	---
10	---	---	---	---	---	---	590	540	568	---	---	---
11	---	---	---	---	---	---	640	470	539	---	---	---
12	---	---	---	---	---	---	730	690	710	---	---	---
13	---	---	---	---	---	---	720	700	712	---	---	---
14	---	---	---	---	---	---	730	720	724	---	---	---
15	---	---	---	---	---	---	740	720	730	---	---	---
16	660	640	649	---	---	---	740	730	733	---	---	---
17	670	640	653	---	---	---	870	740	845	---	---	---
18	670	640	651	---	---	---	850	820	833	---	---	---
19	660	630	646	---	---	---	830	790	809	---	---	---
20	---	---	---	---	---	---	790	700	726	---	---	---
21	---	---	---	730	710	721	790	650	765	---	---	---
22	---	---	---	730	710	721	---	---	---	---	---	---
23	---	---	---	730	720	729	---	---	---	---	---	---
24	---	---	---	770	720	732	---	---	---	---	---	---
25	---	---	---	720	710	715	---	---	---	---	---	---
26	---	---	---	720	690	707	---	---	---	---	---	---
27	---	---	---	720	700	711	---	---	---	---	---	---
28	---	---	---	730	710	720	---	---	---	---	---	---
29	---	---	---	740	710	724	---	---	---	---	---	---
30	---	---	---	730	700	721	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	830	590	801	800	550	608	550	520	537
2	---	---	---	810	480	554	622	560	580	540	510	526
3	---	---	---	889	560	701	800	540	615	590	510	551
4	---	---	---	1030	890	958	810	550	592	580	490	516
5	---	---	---	1040	940	982	580	550	570	590	500	532
6	---	---	---	970	870	910	560	510	542	580	540	559
7	---	---	---	930	880	909	530	490	509	560	520	550
8	---	---	---	910	850	874	510	460	483	560	510	539
9	---	---	---	890	840	865	590	410	519	510	470	485
10	---	---	---	870	840	857	570	530	550	490	470	478
11	---	---	---	840	810	821	560	550	556	500	460	480
12	---	---	---	830	810	823	580	560	573	460	440	448
13	---	---	---	830	800	821	590	400	541	460	430	447
14	---	---	---	830	800	820	590	400	510	460	430	444
15	---	---	---	830	590	792	430	400	414	460	440	448
16	---	---	---	820	800	808	450	410	429	450	420	441
17	---	---	---	870	800	828	450	420	440	440	420	430
18	---	---	---	870	810	833	670	430	569	460	430	443
19	---	---	---	850	820	831	630	580	613	470	450	460
20	---	---	---	890	840	856	600	540	573	480	430	454
21	859	830	845	860	830	846	580	530	557	---	---	---
22	870	830	846	900	810	845	540	500	528	---	---	---
23	900	840	862	820	580	734	530	500	517	---	---	---
24	890	830	857	920	590	802	510	480	498	---	---	---
25	860	830	844	840	580	777	510	480	494	---	---	---
26	870	840	860	830	590	785	520	500	510	---	---	---
27	880	830	856	810	590	747	540	510	526	---	---	---
28	860	820	834	810	590	756	550	530	536	---	---	---
29	---	---	---	810	590	766	580	520	543	---	---	---
30	---	---	---	800	580	693	540	520	531	---	---	---
31	---	---	---	800	560	644	---	---	---	---	---	---
MONTH	---	---	---	1040	480	808	810	400	534	---	---	---

09379500 SAN JUAN RIVER NEAR BLUFF, UT—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	550	520	530	---	---	---	---	---	---
2	---	---	---	550	480	516	---	---	---	---	---	---
3	---	---	---	540	470	506	---	---	---	---	---	---
4	---	---	---	540	470	507	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	1000	610	838
13	---	---	---	---	---	---	---	---	---	1780	730	1030
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	450	410	430	---	---	---	---	---	---	---	---	---
20	440	390	408	---	---	---	---	---	---	---	---	---
21	430	400	407	---	---	---	---	---	---	---	---	---
22	449	410	430	---	---	---	---	---	---	---	---	---
23	450	420	435	---	---	---	---	---	---	---	---	---
24	450	410	426	---	---	---	---	---	---	---	---	---
25	450	430	436	---	---	---	---	---	---	---	---	---
26	460	440	450	---	---	---	---	---	---	---	---	---
27	470	450	456	---	---	---	---	---	---	---	---	---
28	490	460	471	---	---	---	---	---	---	---	---	---
29	510	480	497	---	---	---	---	---	---	---	---	---
30	539	500	514	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.2	17.4	18.2	12.8	11.6	12.0	3.1	2.0	2.6	---	---	---
2	19.0	17.3	18.2	12.8	10.7	11.7	3.2	2.0	2.6	---	---	---
3	17.2	16.1	16.9	11.3	8.5	9.9	2.7	1.4	2.0	---	---	---
4	18.1	16.1	17.2	9.1	8.1	8.7	2.0	1.1	1.4	---	---	---
5	18.3	16.4	17.5	8.6	7.6	8.0	1.4	1.0	1.3	---	---	---
6	18.3	16.9	17.8	7.8	7.2	7.5	1.4	.9	1.2	---	---	---
7	17.8	16.8	17.2	7.4	6.3	7.0	1.4	.9	1.2	---	---	---
8	16.7	14.8	15.6	7.4	5.5	6.4	1.4	.9	1.2	---	---	---
9	14.5	12.9	13.7	8.1	6.6	7.4	1.3	.9	1.2	---	---	---
10	13.8	11.9	13.1	8.6	7.2	7.9	1.4	.9	1.2	---	---	---
11	13.9	11.8	13.0	8.8	7.5	8.2	1.5	.9	1.2	---	---	---
12	14.1	12.3	13.5	8.9	7.6	8.3	3.2	1.6	2.3	---	---	---
13	14.2	12.2	13.3	8.9	7.7	8.4	4.6	3.1	3.7	---	---	---
14	14.6	12.6	13.8	9.1	7.9	8.5	5.4	4.3	4.7	---	---	---
15	14.9	12.9	14.0	9.4	8.0	8.7	4.9	2.9	3.6	---	---	---
16	14.8	13.3	14.2	9.3	8.5	9.0	4.2	3.2	3.7	---	---	---
17	14.8	13.4	14.2	9.5	8.5	9.0	4.5	3.3	4.0	---	---	---
18	14.0	12.1	13.0	9.6	8.7	9.1	4.1	2.5	3.1	---	---	---
19	14.2	12.7	13.6	9.5	8.6	8.9	2.5	1.2	1.9	---	---	---
20	13.7	12.1	12.8	9.6	8.5	9.0	2.3	1.2	1.7	---	---	---
21	11.9	10.4	11.0	8.9	7.6	8.0	1.5	1.2	1.4	---	---	---
22	10.5	9.3	10.1	7.6	6.1	6.9	1.7	1.3	1.5	---	---	---
23	11.0	9.4	10.2	6.9	5.6	6.3	---	---	---	---	---	---
24	11.9	9.9	10.9	6.4	4.9	5.6	---	---	---	---	---	---
25	12.6	10.9	11.8	5.8	4.4	5.2	---	---	---	---	---	---
26	12.9	11.4	12.2	5.8	5.0	5.3	---	---	---	---	---	---
27	13.1	11.5	12.4	5.5	4.5	4.9	---	---	---	---	---	---
28	13.6	11.9	12.8	5.0	3.6	4.2	---	---	---	---	---	---
29	13.7	12.2	13.1	4.4	2.7	3.4	---	---	---	---	---	---
30	13.7	12.3	13.1	3.5	2.2	2.8	---	---	---	---	---	---
31	13.5	12.5	13.0	---	---	---	---	---	---	---	---	---
MONTH	19.2	9.3	13.9	12.8	2.2	7.5	---	---	---	---	---	---

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.6	7.1	7.3	10.9	9.9	10.4	15.3	12.5	14.1
2	---	---	---	7.7	5.4	6.7	12.9	9.8	11.4	15.1	13.1	14.0
3	---	---	---	9.9	7.0	8.3	15.1	12.0	13.5	14.3	12.1	13.4
4	---	---	---	10.2	7.9	9.5	15.9	12.0	14.3	14.5	12.6	13.6
5	---	---	---	10.3	9.7	10.1	15.9	14.0	15.2	17.7	12.6	14.3
6	---	---	---	10.3	9.0	9.8	15.8	14.2	15.2	15.7	14.1	15.0
7	---	---	---	9.9	7.1	8.2	15.9	15.1	15.5	18.8	14.5	16.2
8	---	---	---	7.9	7.0	7.5	15.9	14.5	15.3	18.7	15.9	17.2
9	---	---	---	7.9	7.0	7.5	14.6	12.0	13.2	18.6	15.3	16.3
10	---	---	---	7.9	7.0	7.5	12.9	10.9	12.4	15.7	14.2	15.1
11	---	---	---	7.9	7.0	7.4	12.5	10.1	11.5	15.5	13.1	14.4
12	---	---	---	7.6	7.0	7.3	12.1	10.0	10.7	16.3	13.2	14.8
13	---	---	---	9.7	7.0	8.1	10.9	9.6	10.3	17.1	13.8	15.3
14	---	---	---	9.8	7.4	8.5	12.7	9.5	11.1	17.7	14.0	15.2
15	---	---	---	7.9	7.0	7.6	12.7	10.2	11.7	15.4	13.3	14.3
16	---	---	---	10.7	7.0	8.6	14.5	10.9	13.2	16.7	13.6	15.2
17	---	---	---	10.4	7.0	9.3	15.3	12.0	13.9	18.2	14.7	16.5
18	---	---	---	10.9	7.7	9.7	15.8	12.2	14.5	18.1	15.1	16.5
19	---	---	---	10.9	9.2	9.9	16.0	13.3	14.8	18.3	15.3	16.9
20	---	---	---	10.3	7.2	8.9	16.4	14.1	15.5	18.6	15.9	17.5
21	6.8	4.9	5.9	10.0	7.5	8.8	17.8	14.0	15.6	18.7	15.8	17.5
22	7.0	5.9	6.5	10.0	7.0	8.5	17.8	13.9	15.3	18.3	16.2	17.4
23	7.6	6.2	7.0	10.9	7.2	9.5	16.2	14.7	15.6	17.3	14.0	15.5
24	8.1	6.4	7.4	14.9	9.6	11.5	16.4	13.9	15.3	18.4	14.5	16.3
25	8.1	6.5	7.4	10.9	10.0	10.5	16.3	14.4	15.2	18.9	16.6	17.8
26	7.8	5.0	6.8	9.9	7.1	8.6	14.3	12.1	13.3	19.1	16.8	18.1
27	7.6	5.0	6.6	7.9	5.5	7.0	13.8	11.5	12.5	19.1	16.9	18.3
28	7.7	7.1	7.5	10.3	7.2	8.9	13.7	9.5	11.1	19.7	16.8	18.5
29	---	---	---	10.2	7.5	8.9	13.7	10.3	12.2	19.6	16.8	18.4
30	---	---	---	10.4	7.1	8.6	14.6	11.2	13.1	18.8	16.0	17.3
31	---	---	---	12.2	7.2	9.5	---	---	---	17.1	15.0	15.9
MONTH	---	---	---	14.9	5.4	8.6	17.8	9.5	13.4	19.7	12.1	16.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.1	13.8	15.2	24.3	21.2	22.9	---	---	---	---	---	---
2	17.9	15.3	16.6	25.2	22.4	24.0	---	---	---	---	---	---
3	19.5	16.3	17.7	25.8	23.2	24.8	---	---	---	---	---	---
4	20.4	17.6	19.1	26.9	23.6	25.5	---	---	---	---	---	---
5	21.2	18.4	19.9	---	---	---	---	---	---	---	---	---
6	20.9	18.2	19.8	---	---	---	---	---	---	---	---	---
7	21.5	19.2	20.4	---	---	---	---	---	---	---	---	---
8	22.1	18.8	20.7	---	---	---	---	---	---	---	---	---
9	22.4	19.5	21.2	---	---	---	---	---	---	---	---	---
10	22.4	20.3	21.6	---	---	---	---	---	---	---	---	---
11	22.4	20.1	21.3	---	---	---	---	---	---	---	---	---
12	22.8	19.7	21.4	---	---	---	---	---	---	21.5	16.8	19.0
13	22.3	20.4	21.2	---	---	---	---	---	---	19.3	17.6	18.3
14	21.7	20.1	20.9	---	---	---	---	---	---	18.8	16.9	18.0
15	21.3	18.9	20.4	---	---	---	---	---	---	18.6	17.1	18.0
16	21.8	19.2	20.8	---	---	---	---	---	---	18.3	16.3	17.3
17	21.9	19.3	20.9	---	---	---	---	---	---	18.6	16.4	17.3
18	22.0	19.5	20.9	---	---	---	---	---	---	18.9	17.0	17.9
19	21.3	20.0	20.6	---	---	---	---	---	---	20.1	17.4	18.6
20	21.6	18.0	19.7	---	---	---	---	---	---	20.7	18.2	19.4
21	21.8	19.2	20.9	---	---	---	---	---	---	21.0	18.7	19.8
22	22.3	19.4	21.0	---	---	---	---	---	---	21.2	19.3	20.3
23	22.5	19.8	21.4	---	---	---	---	---	---	21.2	18.9	20.0
24	22.5	19.9	20.9	---	---	---	---	---	---	20.4	18.2	19.3
25	20.9	19.3	19.8	---	---	---	---	---	---	19.9	17.6	18.9
26	20.1	19.0	19.6	---	---	---	---	---	---	20.1	18.1	19.2
27	20.1	18.8	19.4	---	---	---	---	---	---	20.4	18.4	19.6
28	20.7	17.4	19.1	---	---	---	---	---	---	20.9	19.2	20.2
29	21.6	19.4	20.5	---	---	---	---	---	---	20.6	19.3	20.2
30	23.5	19.8	21.7	---	---	---	---	---	---	21.1	18.7	20.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	23.5	13.8	20.2	---	---	---	---	---	---	---	---	---

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV , 1990						
20...	1145	1100	8.5	--	557	1650
MAR , 1991						
22...	1050	1070	7.5	86	847	2450
MAY						
21...	1030	4130	16.0	54	1550	17300
JUL						
23...	1130	640	24.0	100	1910	3300

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)
NOV 07...	1230	640	274	8.5	11.5	8.0	2.2	630	13.8
JAN 17...	0800	503	298	7.4	-6.5	3.0	5.0	620	13.3
MAR 17...	1045	595	282	8.0	16.5	6.5	4.4	696	13.6
MAY 04...	1500	3140	272	7.9	20.0	7.5	3.2	622	12.3
JUL 21...	1400	469	286	7.9	31.5	14.0	1.7	620	11.2
AUG 13...	0930	618	275	7.6	22.5	8.5	1.7	630	10.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV 07...	100	23	32	5.9	14	0.6	1.8	83	8
JAN 17...	110	20	32	6.1	15	0.6	1.9	104	0
MAR 17...	100	11	31	5.9	16	0.7	1.8	110	0
MAY 04...	100	18	31	6.2	15	0.6	2.0	103	0
JUL 21...	110	26	33	6.8	16	0.7	1.8	103	0
AUG 13...	100	19	31	6.5	15	0.6	1.8	104	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 07...	82	47	2.3	0.20	9.6	164	162
JAN 17...	85	50	4.9	0.20	10	152	171
MAR 17...	90	48	3.4	0.20	9.4	177	170
MAY 04...	84	49	1.8	0.20	11	165	167
JUL 21...	84	51	2.0	0.10	9.7	171	171
AUG 13...	85	51	3.4	0.20	9.9	171	170

Appendix 4d. USGS water resources data, New Mexico, 1992 (Cruz et al 1993)

COLORADO RIVER BASIN

SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

PERIOD OF RECORD.--Water years 1943, 1945, 1958-59, 1969-73, 1975, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
NOV 04...	1430	283	588	8.5	5.5	6.0	620	12.2	<10	--	--	250
MAR 18...	0830	485	523	8.1	7.5	4.0	609	11.4	30	K11	66	210
MAY 05...	1500	2640	230	7.8	27.0	12.5	610	10.2	22	K5	K28	110
AUG 05...	1400	573	456	8.4	30.5	20.0	620	9.4	18	K8	K16	200

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)
NOV 04...	79	13	25	0.7	3.0	147	120	21	0.30	6.4	356	--
MAR 18...	64	13	18	0.5	2.1	138	110	11	0.30	5.8	308	0.240
MAY 05...	35	5.2	3.9	0.2	0.90	73	41	2.9	0.30	5.6	139	0.100
AUG 05...	63	10	19	0.6	2.5	120	93	18	0.40	7.6	286	--

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
NOV 04...	0.069	<0.010	0.010	0.081	0.079	0.020	0.010	0.18	0.20	0.28	0.030
MAR 18...	0.230	0.010	0.020	0.250	0.250	0.030	0.040	0.27	0.30	0.55	0.090
MAY 05...	--	0.010	<0.010	0.110	0.100	0.040	0.030	--	<0.20	--	0.030
AUG 05...	--	0.010	<0.010	<0.050	<0.050	0.010	<0.010	--	<0.20	--	0.010

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS-PHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)
NOV 04...	0.010	<0.010	1.6	60	<3	<2.0	81	740	360	7	2
MAR 18...	0.010	0.020	5.1	40	8	--	--	--	--	--	--
MAY 05...	0.030	<0.010	3.7	20	24	--	--	--	--	--	--
AUG 05...	0.020	<0.010	2.3	--	4	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) (01029)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) (01052)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) (01053)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) (01093)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV											
04...	3	<5	30	8300	60	610	0.03	290	20	15	84
MAR											
18...	--	--	--	--	--	--	--	--	284	372	89
MAY											
05...	--	--	--	--	--	--	--	--	115	820	41
AUG											
05...	--	--	--	--	--	--	--	--	13	20	67

09364500 ANIMAS RIVER AT FARMINGTON, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to current year.
WATER TEMPERATURE: December 1950 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1950 to current year.

REMARKS.--Once-daily water temperature readings were made by the field observer, and once-daily specific conductance values were determined in the laboratory from daily suspended sediment samples collected by the field observer.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,980 microsiemens, Aug. 19, 1944; minimum daily, 89 microsiemens, June 15, 1985.
WATER TEMPERATURE: Maximum daily, 32.0°C, Aug. 26, 1966 and July 16, 1977; minimum daily, 0.0°C, on many days during winter months each year.
SEDIMENT CONCENTRATION: Maximum daily mean, 36,800 mg/L, July 23, 1954; minimum daily mean, 1 mg/L on several days during 1956, 1958, and 1974.
SEDIMENT LOAD: Maximum daily, 337,000 tons, July 23, 1954; minimum daily, less than .50 ton on many days during 1955-57, 1959-60, 1963, 1972, 1974, and 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 834 microsiemens, Jan. 15; minimum daily, 249 microsiemens, June 13.
WATER TEMPERATURE: Maximum daily, 27.0°C, Aug. 3; minimum daily, 0.5°C, Jan. 15.
SEDIMENT CONCENTRATION: Maximum daily mean, 8,480 mg/L, Apr. 2; minimum daily mean, 17 mg/L, July 2, Sept. 11.
SEDIMENT LOAD: Maximum daily, 21,700 tons, May 22; minimum daily, 11 tons, Sept. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JAN											
15...	1400	255	834	8.3	1.5	0.5	12	643	14.3	<2	K9
MAR											
18...	1200	501	578	8.2	11.5	8.0	110	626	11.2	K15	K39
MAY											
05...	0800	1800	287	7.6	10.0	10.0	40	630	9.3	340	320
AUG											
03...	1600	437	540	8.4	31.5	25.0	7.0	630	8.4	83	210

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
JAN										
15...	350	170	110	17	38	0.9	3.3	204	5	175
MAR										
18...	250	100	76	14	24	0.7	1.8	178	0	146
MAY										
05...	130	42	41	5.7	7.3	0.3	1.1	103	0	84
AUG										
03...	250	110	78	12	28	0.8	2.5	137	13	134

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JAN											
15...	220	26	0.40	8.9	443	532	0.260	0.010	<0.010	0.270	0.270
MAR											
18...	140	15	0.30	6.2	369	367	--	<0.010	<0.010	0.220	0.210
MAY											
05...	55	3.3	<0.10	5.5	167	171	0.110	0.030	<0.010	0.140	0.120
AUG											
03...	130	18	0.40	8.0	336	358	--	0.010	<0.010	<0.050	<0.050

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
JAN 15...	0.030	<0.010	0.27	0.30	0.57	0.060	<0.010	0.020	<0.010	6	17
MAR 18...	0.030	0.020	0.17	0.20	0.42	0.230	<0.010	0.010	0.020	8	6
MAY 05...	0.060	<0.010	--	<0.20	--	0.050	<0.010	0.070	<0.010	23	6
AUG 03...	0.020	0.010	--	<0.20	--	<0.010	<0.010	0.010	<0.010	13	15

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)
JAN 15...	1400	<10	81	<3	61	<10	<1	<1	<1.0	1400	<6
MAR 18...	1200	10	82	<3	30	<10	<1	1	<1.0	850	<6
MAY 05...	0800	40	61	<3	11	<10	<1	<1	<1.0	400	<6
AUG 03...	1600	10	88	<3	42	<10	<1	<1	<1.0	1000	<6

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)
JAN 15...	1400	255	834	0.5	133	92	34	--	--	--	--
MAR 18...	1200	501	578	8.0	732	990	38	--	--	--	--
MAY 05...	0800	1800	287	10.0	5470	26600	2	--	--	--	--
AUG 03...	1600	437	540	25.0	30	35	77	--	--	--	--
24...	1700	791	--	20.0	6360	13600	100	56	71	85	97

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	SEDIMENT, SUSPENDED (MG/L) (80154)
AUG 13...	1240	6	.80	5.9	608	8.08	22.6	7.8	309
13...	1241	18	.94	28	609	8.09	22.7	7.8	318
13...	1242	30	1.24	46	609	8.13	22.8	7.8	325
13...	1243	42	1.62	57	608	8.16	22.8	7.8	317
13...	1244	54	1.54	59	608	8.18	22.8	7.8	317
13...	1245	66	1.78	54	609	8.18	22.7	7.8	315
13...	1246	78	1.52	42	609	8.19	22.8	7.8	316
13...	1247	90	1.10	34	609	8.20	23.0	7.8	395
13...	1248	102	1.60	37	610	8.20	23.3	7.8	303
13...	1249	114	1.62	7.1	614	8.19	23.4	7.5	310

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	31	28	108	118	130	126	132	111	108	87	178	183
2	45	42	111	122	116	107	113	94	110	83	162	176
3	35	32	103	113	149	145	121	100	130	99	187	240
4	35	26	96	94	174	167	103	88	99	76	726	1200
5	34	23	100	93	143	141	92	85	143	108	622	907
6	29	22	112	115	145	141	98	87	154	115	569	818
7	29	22	114	122	96	89	87	75	110	83	501	650
8	29	18	99	97	61	55	81	63	81	61	597	769
9	35	21	84	85	75	66	82	61	75	62	693	847
10	39	22	136	130	437	401	77	55	85	73	481	524
11	42	26	102	103	617	674	124	98	88	79	443	439
12	47	29	37	33	645	754	113	87	87	78	545	548
13	47	32	28	25	104	111	113	87	92	85	379	486
14	41	27	29	25	77	75	119	88	90	84	594	833
15	35	22	318	599	87	79	95	76	279	280	891	1310
16	43	25	900	1760	77	63	59	42	278	248	692	1030
17	67	42	917	1390	78	71	63	48	158	139	516	754
18	72	48	758	1040	80	76	72	56	111	94	395	549
19	81	62	436	563	81	83	101	82	119	99	308	389
20	78	57	136	157	67	67	92	70	218	170	231	264
21	68	45	108	112	64	59	84	64	321	256	188	217
22	67	42	118	119	61	54	87	67	280	249	229	260
23	72	49	115	114	94	86	91	69	268	259	157	184
24	141	111	143	136	95	83	94	72	587	579	266	281
25	146	105	179	185	79	64	91	69	779	737	224	189
26	146	103	172	174	85	75	99	73	271	258	266	232
27	152	111	170	173	73	58	94	70	210	194	207	182
28	156	117	168	161	82	64	99	73	177	168	313	320
29	161	137	171	158	91	71	91	71	181	183	348	362
30	160	158	179	164	97	81	96	75	---	---	412	497
31	133	139	---	---	90	76	97	81	---	---	418	668
TOTAL	---	1743	---	8280	---	4262	---	2337	---	5086	---	16308

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5460	11100	637	3790	145	1000	23	81	41	57	43	67
2	8480	18700	441	2720	126	841	17	53	36	45	33	50
3	1230	2210	293	1740	112	720	29	74	32	40	45	64
4	612	1150	333	1810	100	626	27	63	36	38	37	49
5	658	1280	264	1330	163	1060	47	107	48	48	34	40
6	945	1920	210	1130	112	861	36	82	35	34	29	30
7	834	1700	251	1560	121	923	48	109	30	30	38	36
8	716	1580	213	1330	89	648	46	105	59	66	33	28
9	838	2030	199	1340	74	496	45	100	117	123	27	21
10	860	2290	642	4340	80	483	45	100	49	48	18	13
11	835	2420	383	2130	81	503	598	1290	245	296	17	11
12	911	2930	248	1240	84	539	1330	3260	882	1040	29	19
13	956	3310	220	1090	146	1100	622	1710	427	445	20	13
14	793	3000	163	871	221	1710	226	580	106	92	20	13
15	706	2930	87	499	177	1270	84	178	122	107	24	13
16	445	1720	72	414	119	742	87	167	175	140	35	24
17	320	1130	80	442	91	478	96	170	134	98	32	24
18	359	1240	140	811	78	368	83	132	99	71	29	20
19	387	1360	220	1260	104	531	95	139	84	52	133	181
20	343	1110	421	2870	110	616	97	134	81	43	311	619
21	295	860	1950	16500	90	520	85	114	77	39	242	420
22	256	681	2580	21700	32	175	80	106	68	32	195	282
23	351	877	2010	15200	22	115	80	102	58	30	135	158
24	304	712	1440	11400	24	116	182	272	169	284	102	109
25	224	542	1290	11200	24	112	559	1460	251	676	83	81
26	216	580	1040	9290	20	89	2800	12700	171	470	44	42
27	487	1460	259	2550	18	74	862	2860	134	356	53	48
28	639	2220	172	1880	18	69	131	333	125	279	40	35
29	660	2970	132	1250	31	114	108	212	88	170	29	24
30	685	3710	181	1550	56	203	81	136	69	118	38	31
31	---	---	201	1530	---	---	64	97	68	113	---	---
TOTAL	---	79722	---	126767	---	17102	---	27026	---	5480	---	2565

TOTAL LOAD FOR YEAR: 296678 TONS.

09367540 SAN JUAN RIVER NEAR FRUITLAND, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 36°44'25", long 108°24'09", in NW¼SE¼ sec.10, T.29 N., R.15 W., San Juan County, Hydrologic Unit 14080105, on right bank 300 ft downstream from Four Corners Powerplant highway bridge, 0.4 mi west of Fruitland, 10 mi downstream from La Plata River, 14.0 mi upstream from Chaco River, and at mile 239.

DRAINAGE AREA.--8,010 mi², approximately.

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Discharged estimated from station 09365000 San Juan River at Farmington, which is approximately 11 miles upstream.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)
NOV									
06...	0930	E1120	567	8.1	10.5	6.5	83	636	10.8
JAN									
15...	1200	E1240	680	7.7	0.5	0.5	25	642	13.0
MAR									
19...	1500	E1100	548	8.2	14.5	9.5	7.9	637	11.6
MAY									
06...	1800	E5300	310	7.9	19.5	12.5	31	640	9.3
JUL									
20...	1530	E600	576	8.0	35.0	24.0	99	630	7.6
AUG									
12...	1600	E600	--	7.8	31.0	25.0	550	640	6.6

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV									
06...	250	130	77	15	47	1	3.0	153	0
JAN									
15...	240	110	76	13	45	1	2.5	164	0
MAR									
19...	200	83	62	12	33	1	2.0	148	0
MAY									
06...	120	31	37	6.2	15	0.6	1.7	106	0
JUL									
20...	210	95	69	10	40	1	2.5	145	0
AUG									
12...	230	96	76	9.5	49	1	3.2	162	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV							
06...	125	200	14	0.30	9.4	495	441
JAN							
15...	134	180	17	0.30	8.9	387	423
MAR							
19...	121	140	13	0.30	8.0	348	343
MAY							
06...	87	63	3.1	0.20	8.9	171	187
JUL							
20...	119	140	13	0.30	7.4	364	353
AUG							
12...	133	180	18	0.40	7.7	425	423

09368000 SAN JUAN RIVER AT SHIPROCK, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1941-45, 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1941 to September 1945, July 1957 to September 1986, October 1989 tocurrent year.
WATER TEMPERATURE: December 1950 to September 1986, October 1989 to current year.

INSTRUMENTATION.--Water-temperature and specific-conductance monitor.

REMARKS.--Interruptions in record were due to probes silted, probes out of water, or malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: (water years, 1957-86, 1990-91) Maximum, 4,360 microsiemens July 31, 1959; minimum, 138 microsiemens, Nov. 1, 1981.
WATER TEMPERATURE: Maximum 34.0°C, July 20, 1968; minimum, 0.0°C on many days during winter months each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,770 microsiemens, Sept. 13; minimum daily, 258 microsiemens, June 10.
WATER TEMPERATURE: Maximum daily, 27.6°C, July 14; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
JAN 14...	1300	902	758	7.9	1.5	1.0	36	640	13.5	K7	K60	270
MAY 06...	1400	5270	313	8.0	22.5	12.0	43	640	9.1	180	350	130
JUN 09...	1500	6840	306	7.6	28.0	14.0	57	640	8.9	150	190	120
AUG 04...	1230	589	613	8.2	36.0	22.5	74	640	7.2	220	300	240

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
JAN 14...	120	81	15	52	1	2.6	181	0	148	210	19
MAY 06...	37	39	6.6	16	0.6	1.7	107	0	88	68	3.2
JUN 09...	34	37	6.8	15	0.6	<0.10	106	0	87	61	4.5
AUG 04...	100	74	12	43	1	2.6	160	2	135	160	16

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
JAN 14...	0.30	9.1	470	481	0.400	0.380	0.020	0.010	0.420	0.390	0.050
MAY 06...	<0.10	8.5	185	197	0.080	--	0.020	<0.010	0.100	0.090	0.020
JUN 09...	0.20	8.6	183	--	0.004	--	0.050	<0.010	0.054	0.065	0.070
AUG 04...	0.30	9.2	399	399	0.090	--	0.010	<0.010	0.100	0.093	<0.010

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
JAN											
14...	0.050	0.35	0.40	0.82	0.230	0.040	0.040	0.040	50	8	4
MAY											
06...	0.030	0.28	0.30	0.40	0.100	<0.010	0.020	0.030	--	11	3
JUN											
09...	0.020	0.23	0.30	0.35	0.130	0.050	0.090	<0.010	20	6	4
AUG											
04...	<0.010	--	<0.20	--	0.030	<0.010	0.020	0.020	60	17	3

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)
JAN											
14...	1300	<10	57	<3	36	<10	<1	1	<1.0	1000	<6
MAY											
06...	1400	20	65	<3	15	<10	<1	<1	<1.0	390	<6
JUN											
09...	1500	<10	65	<3	18	<10	<1	<1	<1.0	370	<6
AUG											
04...	1230	<10	90	<3	31	<10	<1	<1	<1.0	950	<6

DATE	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) (01028)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) (01029)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) (01052)
JAN											
14...	<2.0	1.2	40	150	3	<1	2	<5	3	2900	<10

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) (01053)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT) (80030)	ALPHA, COUNT, 2 SIGMA WAT DIS AS NAT U (UG/L) (75986)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	ALPHA SED SUSP DRY WGH AS TH-230 (PCI/L) (04127)	ALPHA, 2 SIGMA SED SUS TOT DRY AS TH-230 (PCI/L) (76004)	GROSS BETA, DISSOLVED (PCI/L AS CS-137) (03515)
JAN											
14...	190	<0.01	20	3.2	3.0	--	2.3	14	--	5.5	3.3
JUN											
09...	--	--	--	1.6	1.3	1.2	0.96	5.4	5.9	4.1	2.4

DATE	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90) (80050)	BETA, 2 SIGMA WATER, DISS, AS SR90/Y90 (PCI/L (75988)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) (80060)	BETA, 2 SIGMA SED, SUSP, TOT DRY SR90Y90 (PCI/L) (76005)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)
JAN										
14...	1.0	2.5	0.80	7.3	6.7	1.8	0.05	0.010	2.1	<1.0
JUN										
09...	0.81	1.8	0.64	5.1	4.8	1.6	0.05	0.010	0.69	<1.0

SAN JUAN RIVER BASIN

09352900 VALLECITO CREEK NEAR BAYFIELD, CO
(Hydrologic Bench-Mark Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1968; October 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1962 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: (Water years 1963-82) Maximum, 20.0°C July 10, 1974; minimum, 0.0°C on many days during winter months each year

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 09...	1230	35	112	7.8	0.0	1.1	11.3	<1	<1	37	11	2.3
MAR 16...	1100	31	92	7.7	1.5	0.9	10.0	<1	<1	39	12	2.3
JUN 02...	1130	328	80	7.9	6.0	0.7	9.5	<1	<1	31	9.4	1.8
JUL 20...	1300	134	52	7.5	9.0	0.4	8.4	K1	K3	20	6.0	1.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE[A] WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE[B] WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY[C] WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC 09...	1.7	0.1	0.7	38	0	32	8.3	3.2	0.3	3.9	56	51
MAR 16...	1.3	0.1	0.5	39	0	32	7.8	<0.1	0.3	4.3	42	—
JUN 02...	0.8	0.1	0.5	32	0	26	5.5	<0.1	0.2	3.2	39	—
JUL 20...	0.6	0.1	0.5	20	0	16	4.8	0.3	0.2	2.8	25	27

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
DEC 09...	0.08	5.22	<0.01	<0.01	0.15	0.15	0.01	0.02	<0.2	<0.01	<0.01	<0.01
MAR 16...	—	—	<0.01	<0.01	0.11	0.10	<0.01	0.01	<0.2	<0.01	<0.01	<0.01
JUN 02...	—	—	<0.01	<0.01	0.10	0.10	0.02	0.02	<0.2	0.02	0.02	<0.01
JUL 20...	0.03	0.04	<0.01	<0.01	0.06	0.07	0.02	0.02	<0.2	<0.01	<0.01	<0.01

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
DEC 09...	30	12	<3	8	<4	2	<10	<1	<1	<1	34	<6
MAR 16...	40	14	<3	18	<4	1	<10	<1	<1	<1	32	<6
JUN 02...	70	7	<3	16	<4	13	<10	1	<1	<1	22	<6
JUL 20...	40	9	<3	7	<4	4	<10	1	<1	<1	19	<6

A-Field dissolved bicarbonate, determined by incremental titration method.
B-Field dissolved carbonate, determined by incremental titration method.
C-Field total dissolved alkalinity, determined by incremental titration method.
K-Based on non-ideal colony count.

Appendix 4c. USGS water resources data, Colorado, 1992 (Ugland et al 1993)

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-81, 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)
NOV 05...	0900	1070	--	8.1	9.5	4.5	46	651	11.3
JAN 14...	0930	774	835	7.8	-3.5	0.5	26	647	14.3
MAR 19...	0830	1180	680	8.3	8.0	6.5	100	650	10.4
MAY 06...	0930	5650	335	8.0	22.0	13.0	77	650	9.5
JUL 07...	1915	1360	498	8.6	24.5	22.5	12	650	8.2
AUG 06...	1130	557	712	8.4	28.0	23.0	33	650	8.3

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV 05...	200	68	65	10	39	1	2.8	165	0
JAN 14...	290	140	85	18	61	2	2.9	183	0
MAR 19...	250	110	71	17	41	1	2.2	165	0
MAY 06...	130	39	40	7.5	17	0.6	1.8	112	0
JUL 07...	190	83	58	11	31	1	2.0	118	6
AUG 06...	270	130	79	18	49	1	2.6	146	11

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 05...	135	150	10	0.30	8.7	373	367
JAN 14...	150	240	20	0.30	9.2	513	526
MAR 19...	135	200	15	0.30	8.1	434	436
MAY 06...	92	69	3.4	0.30	9.0	213	203
JUL 07...	107	130	7.9	0.20	6.3	317	310
AUG 06...	138	210	17	0.30	7.0	471	466

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued

RADIOCHEMICAL ANALYSIS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
MAR									
16...	1100	1.0	<0.6	1.4	<0.6	1.1	<0.6	0.06	0.49
JUN									
02...	1130	0.9	<0.6	<0.6	<0.6	<0.6	<0.6	0.05	0.41

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
29...	1350	24	90	1.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
09...	1230	35	0	0.04
MAR				
16...	1100	31	2	0.17
JUN				
02...	1130	328	5	4.3
JUL				
20...	1300	134	2	0.62

09371500 McELMO CREEK NEAR CORTEZ, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Jan. 1, 1982 to current year. Water-quality analysis since August 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Feb. 6, 1982 to current year.
WATER TEMPERATURES: Feb. 6, 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1982.

REMARKS.--Daily records are poor, stream is not well mixed at location of monitor probes. Readings at the probe location may not represent mean cross-section characteristics. Daily maximum and minimum specific conductance data available in district office. Interruptions in the daily record are the result of instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 5,020 microsiemens April 16, 1990; minimum, 720 microsiemens May 17, 1991.
WATER TEMPERATURES: Maximum 26.5°C July 18,19 1985, July 1, 1990; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 3,740 microsiemens March 28; minimum, 1,080 microsiemens July 24.
WATER TEMPERATURES: Maximum 24.6°C July 15; minimum 0.0°C, many days during November through February.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT										
23...	1100	54	1820	8.4	8.5	990	230	100	93	1
DEC										
16...	1230	37	2600	8.4	0.0	1700	360	200	180	2
FEB										
06...	1200	48	2550	8.3	0.0	1500	310	180	200	2
MAR										
09...	1415	79	2610	8.3	7.5	1600	320	200	190	2
APR										
10...	1315	31	3200	8.3	13.0	1600	330	200	230	2
17...	0950	26	3290	8.3	10.5	1600	310	200	250	3
MAY										
19...	1320	61	1720	8.3	18.0	850	190	92	88	1
27...	1300	309	2200	8.4	15.5	990	230	100	120	2
JUN										
16...	1315	77	1490	8.4	16.5	800	190	79	72	1
JUL										
15...	1420	122	1430	8.5	19.5	730	170	73	61	1
SEP										
08...	1350	85	1560	8.5	15.5	850	210	78	60	0.9

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT									
23...	3.9	234	680	20	1.0	9.2	1280	1.74	188
DEC									
16...	4.7	248	1700	41	0.4	11	2650	3.60	264
FEB									
06...	7.1	289	1600	39	0.4	11	2520	3.43	327
MAR									
09...	6.3	268	1700	41	0.3	9.0	2630	3.57	560
APR									
10...	4.8	227	1800	48	0.5	7.2	2760	3.75	231
17...	5.0	220	1800	49	0.4	4.6	2750	3.74	193
MAY									
19...	4.5	230	720	20	0.2	10	1260	1.72	208
27...	7.4	194	990	28	0.6	9.8	1600	2.18	1340
JUN									
16...	3.5	213	670	18	0.3	9.4	1170	1.59	243
JUL									
15...	4.5	221	540	20	0.3	11	1010	1.38	333
SEP									
08...	3.4	217	650	16	0.3	10	1160	1.57	266

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	2230	2340	2930	---	---	3340	2190	1830	1480	1390	---
2	1440	2250	2330	2940	---	---	3190	1940	1780	1450	1390	---
3	1400	2240	2470	3020	---	---	3270	1880	1790	1450	1400	---
4	1410	2220	2840	2910	---	---	3260	1980	1800	1480	1420	---
5	1500	2200	2910	2870	---	---	3260	1820	1790	1520	1360	---
6	1540	2150	3000	2870	---	---	3260	1750	1760	1550	1370	---
7	1580	2190	3100	2890	---	3030	3290	1880	1790	1590	1420	---
8	1560	2200	3100	2890	---	3050	3290	1930	1800	1610	1390	---
9	1570	2170	2880	2830	---	3080	3280	1810	1790	1560	1350	1580
10	1640	2230	2610	2710	---	3080	3310	2150	1690	1570	1290	1540
11	1720	2270	2510	2810	---	3060	3230	1690	1640	1670	1270	1570
12	1760	2260	2640	2630	---	3110	3310	1670	1610	1760	1260	1550
13	1950	2310	2690	2590	---	3120	3370	1650	1640	1620	1330	1540
14	1940	2300	2710	2760	---	3120	3390	1620	1600	1500	1300	1510
15	1940	2450	2800	---	---	3250	3400	1710	1600	1470	1300	1480
16	1990	2480	2850	---	---	3340	3330	1730	1600	1460	1320	1470
17	1970	2560	2870	---	---	3120	3360	1760	1630	1460	1330	1430
18	2020	2690	2920	---	---	3150	3320	1760	1670	1460	1350	1430
19	2160	2630	3010	---	---	3150	3290	1690	1700	1420	1300	1610
20	1920	2400	3060	---	---	3160	3090	1730	1520	1490	1310	1530
21	1620	2610	2990	---	---	3190	2950	1690	1500	1490	1310	1470
22	1750	2720	3010	---	---	3230	3060	1630	1510	1480	1300	1430
23	1900	2660	3040	---	---	3270	3070	1600	1470	1360	1290	1440
24	2050	2420	2960	---	---	3190	2960	1660	1440	1250	---	1480
25	2080	2400	2960	---	---	3190	2870	1640	1490	1320	---	1500
26	2060	2450	2950	---	---	3200	2920	1900	1460	1370	---	1500
27	2050	2440	2930	---	---	3240	2840	2030	1480	1430	---	1530
28	2190	2470	2930	---	---	3510	2670	1990	1480	1410	---	1530
29	2070	2430	2920	---	---	3180	2370	1990	1470	1380	---	1510
30	2090	2370	2880	---	---	3160	2150	1980	1540	1400	---	1570
31	2200	---	2890	---	---	3300	---	1840	---	1400	---	---
MEAN	1820	2380	2840	---	---	---	3120	1820	1630	1480	---	---

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

TEMPERATURE WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	10.6	4.5	.7	1.5	.0	.2	.0	---	---	---	---
2	15.2	10.4	4.5	1.9	.2	.0	.0	.0	---	---	---	---
3	14.4	9.6	2.2	.0	.0	.0	.0	.0	---	---	---	---
4	13.0	8.8	4.0	.6	.0	.0	.0	.0	---	---	---	---
5	12.0	6.9	5.8	1.6	.0	.0	.0	.0	---	---	---	---
6	12.1	6.9	7.1	3.0	.0	.0	.0	.0	---	---	---	---
7	12.4	7.2	7.8	3.7	.6	.0	.0	.0	---	---	9.4	4.0
8	13.0	7.9	7.0	2.9	.0	.0	.0	.0	---	---	7.6	5.1
9	13.0	8.4	8.0	4.1	.0	.0	.0	.0	---	---	8.0	4.2
10	13.4	8.3	7.3	6.5	.4	.0	.0	.0	---	---	8.1	2.6
11	13.1	8.5	9.0	5.7	1.5	.4	.0	.0	---	---	8.7	2.8
12	12.3	8.3	8.0	4.8	2.1	.3	.0	.0	---	---	9.9	3.2
13	12.6	8.3	6.5	3.0	1.1	.0	.0	.0	---	---	10.5	3.9
14	12.3	7.7	6.7	4.1	.0	.0	.0	.0	---	---	10.8	4.3
15	12.7	8.0	6.3	2.4	.0	.0	.0	.0	---	---	10.7	4.7
16	12.4	7.5	2.8	1.5	.5	.0	---	---	---	---	10.7	4.7
17	11.9	7.4	4.8	2.5	1.3	.0	---	---	---	---	9.2	5.3
18	12.0	7.5	4.3	2.6	1.5	.0	---	---	---	---	8.1	4.3
19	11.5	7.4	3.1	1.2	2.0	.4	---	---	---	---	9.9	2.9
20	11.0	8.0	2.5	.0	1.0	.0	---	---	---	---	10.4	2.9
21	11.7	7.9	3.3	.7	.9	.0	---	---	---	---	7.6	4.3
22	10.7	8.0	2.4	.6	2.0	.3	---	---	---	---	8.5	5.2
23	10.7	8.2	.7	.0	.5	.0	---	---	---	---	9.8	5.4
24	10.8	8.8	.6	.0	.0	.0	---	---	---	---	10.7	6.2
25	10.4	7.9	3.1	.2	.0	.0	---	---	---	---	12.0	4.9
26	9.8	6.4	2.8	.3	.0	.0	---	---	---	---	12.2	5.8
27	8.1	6.7	3.6	.5	.0	.0	---	---	---	---	9.6	7.2
28	6.7	3.9	4.4	1.9	1.2	.0	---	---	---	---	8.7	6.1
29	3.9	2.5	3.6	1.9	1.1	.0	---	---	---	---	10.0	5.8
30	4.1	2.7	2.1	.6	.6	.0	---	---	---	---	9.3	6.9
31	3.9	1.0	---	---	1.5	.0	---	---	---	---	9.3	6.9
MONTH	15.5	1.0	9.0	.0	2.1	.0	---	---	---	---	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.7	7.2	18.8	11.4	18.7	13.5	20.4	14.8	23.1	17.2	18.1	12.2
2	12.1	5.9	17.7	10.7	19.4	12.7	21.2	13.5	21.8	16.8	18.0	13.6
3	14.1	6.7	17.3	11.9	19.1	14.2	21.9	13.7	22.8	16.7	17.3	14.1
4	15.1	7.9	17.8	11.7	20.7	14.3	22.5	16.0	23.0	17.7	17.4	13.8
5	16.1	9.2	17.9	11.2	21.7	16.2	23.4	15.3	22.2	18.7	17.3	12.2
6	16.0	8.8	16.7	13.2	21.1	15.8	24.1	16.6	20.8	18.2	17.9	12.6
7	16.5	8.7	16.3	12.2	20.0	14.7	20.4	17.1	21.9	17.3	18.1	12.7
8	16.8	8.7	17.9	12.3	17.3	14.7	21.5	16.3	23.0	18.1	18.4	12.5
9	16.5	8.6	16.0	12.5	18.5	12.7	22.6	16.9	22.9	17.7	18.3	12.6
10	16.5	8.9	15.2	10.2	20.4	13.7	21.3	17.4	23.9	19.1	18.4	12.8
11	17.7	9.0	17.3	10.6	21.6	15.4	21.9	18.1	22.0	18.5	18.2	13.2
12	17.2	9.9	19.0	12.7	21.9	15.1	19.7	17.4	22.7	17.1	17.6	13.6
13	15.3	9.1	19.6	12.5	21.3	14.7	20.7	16.3	23.1	17.5	17.8	14.0
14	15.6	10.8	19.7	12.3	20.1	14.1	21.1	16.1	23.2	17.8	17.4	13.6
15	16.6	10.7	19.6	12.6	19.7	12.8	24.6	16.7	23.0	17.9	18.5	14.7
16	16.9	9.4	20.3	12.7	19.3	13.2	21.8	16.4	21.9	17.7	19.0	15.4
17	17.3	9.6	20.2	12.7	19.2	12.1	22.5	16.8	22.2	17.7	18.7	14.5
18	14.0	9.6	20.6	13.6	21.3	13.1	21.0	16.7	21.6	16.4	16.2	13.6
19	12.0	6.8	19.9	14.4	21.9	14.2	22.4	16.3	22.0	16.5	15.6	14.1
20	13.2	5.3	17.5	14.4	21.8	14.9	21.8	17.5	22.1	15.9	15.8	13.0
21	15.1	6.4	16.6	13.1	22.0	14.9	22.7	17.5	22.4	18.0	16.2	12.5
22	16.7	9.6	16.2	11.9	22.0	14.9	22.2	17.6	20.1	17.7	16.7	12.7
23	16.6	8.8	16.2	12.8	22.5	15.6	21.0	17.6	17.7	16.5	17.2	13.0
24	17.7	8.6	16.4	13.1	23.5	16.3	18.2	16.8	17.6	15.3	16.9	13.1
25	16.9	9.3	15.7	12.4	22.0	16.6	20.7	16.7	17.5	14.6	16.7	13.8
26	18.5	9.1	18.2	13.0	21.2	15.1	22.4	17.2	18.2	13.9	14.7	10.5
27	18.9	10.5	18.3	14.2	21.6	15.6	22.5	16.5	17.5	12.9	14.6	9.9
28	19.7	10.8	17.9	13.4	22.9	15.5	22.0	16.7	18.0	12.7	14.8	10.2
29	19.5	11.8	16.3	13.8	22.1	15.9	23.1	16.9	17.2	13.6	15.5	10.9
30	17.9	11.7	16.3	12.1	22.0	15.7	22.2	17.2	18.6	14.0	15.6	11.1
31	---	---	18.5	12.7	---	---	22.5	16.6	18.1	15.1	---	---
MONTH	19.7	5.3	20.6	10.2	23.5	12.1	24.6	13.5	23.9	12.7	19.0	9.9

09371520 McELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°19'36", long 108°42'00", in NE1/4NE1/4 sec.3, T.35 N, R.17 W, Montezuma County, Hydrologic Unit 14080202, on left bank adjacent to abandoned gravel pit 1.5 mi downstream from Mud Creek, 1.9 mi upstream from Trail Canyon, and 5.5 mi south of Cortez.

PERIOD OF RECORD.--October 1990 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1990 to current year.
WATER TEMPERATURES: October 1990 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1990.

REMARKS.--Daily maximum and minimum specific conductance data available in district office. Interruptions in the daily record were due to malfunctions of the instrument. Daily records are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 3,710 microsiemens, Mar. 28, 1992; minimum recorded, 1,030 microseimens, May 25, 1992.
WATER TEMPERATURE: Maximum recorded, 25.1°C, July 6, 1991, but may have been higher during instrument malfunction July 3, 4 and Aug. 8-14.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 3,710 microsiemens, Mar. 28; minimum recorded, 1,030 microseimens, May 25.
WATER TEMPERATURES: Maximum recorded, 24.2°C, July 6 and August 10; minimum, not determined.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
OCT									
23...	1400	1850	8.4	10.0	990	230	100	91	1
MAR									
09...	1145	3000	8.4	6.0	1600	330	200	200	2
MAY									
19...	1200	1750	8.3	18.0	880	200	93	91	1
JUN									
16...	1230	1490	8.4	15.5	790	190	77	69	1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT								
23...	3.8	215	920	21	0.4	9.1	1500	2.05
MAR								
09...	4.0	263	1600	40	0.4	8.7	2540	3.46
MAY								
19...	4.7	230	730	23	0.3	10	1290	1.75
JUN								
16...	3.2	217	660	17	0.3	9.2	1160	1.57

09371520 McELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEC. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	---	---	---	---	2390	3270	1830	1350	1320	1610	1550
2	1370	---	---	---	---	2410	3070	2030	1380	1320	1780	1520
3	1430	---	---	---	---	2510	3180	1530	1410	1320	1590	1520
4	1560	---	---	---	---	2490	3210	1570	1450	1350	1610	1520
5	1590	---	---	---	---	2650	3280	1530	1570	1390	1580	1530
6	1680	---	---	---	---	2780	3250	1420	1440	1420	1540	1520
7	1670	---	---	---	---	2920	3280	1380	1460	1480	1580	1540
8	1710	---	---	---	---	2990	3290	1400	1510	1490	1520	---
9	1630	---	---	---	---	3080	3280	1400	1500	1450	1560	---
10	1590	---	---	---	---	3140	3270	1620	1470	1450	1470	1410
11	1610	---	---	---	---	3130	3200	1510	1460	1530	1470	1230
12	1620	---	---	---	---	3180	3170	1540	1450	1680	1470	1230
13	1680	---	---	---	---	3180	3160	1550	1480	1570	1570	1260
14	1710	---	---	---	---	3180	3130	1570	1500	1450	1570	1260
15	1710	---	---	---	---	3230	3140	1440	1520	---	1550	1180
16	1760	---	---	---	---	3370	3270	1430	1540	---	1500	1170
17	1790	---	---	---	---	3190	3330	1480	1580	---	1430	1170
18	1780	---	---	---	---	3210	3270	1560	1610	1470	1330	1170
19	1770	---	---	---	---	3230	3210	1740	1590	1400	1300	1240
20	1800	---	---	---	---	3260	3090	1780	1250	1460	1290	1190
21	1750	---	---	---	2780	3270	2890	1530	1070	1490	1320	1200
22	1850	---	---	---	2360	3280	2900	1190	1070	1500	1290	1200
23	---	---	---	---	2270	3360	2980	1150	1100	1450	1270	1230
24	---	---	---	---	2290	3290	2900	1130	1120	1460	1280	1250
25	---	---	---	---	2410	3290	2850	1120	1170	1580	1260	1300
26	---	---	---	---	2410	3330	3020	1310	1190	1500	1300	1330
27	---	---	---	---	2440	3380	2820	1340	1200	1480	1470	1410
28	---	---	---	---	2410	3460	2650	1360	1220	1530	1420	1470
29	---	---	---	---	2390	3190	2180	1360	1240	1560	1390	1530
30	---	---	---	---	---	3120	1860	1390	1280	1600	1400	1570
31	---	---	---	---	---	3160	---	1360	---	1640	1430	---
MEAN	---	---	---	---	---	3090	3050	1470	1370	---	1460	---

09371520 McELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ, CO--Continued

TEMPERATURE, WATER (DEC. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	11.1	---	---	---	---	---	---	---	---	8.0	3.7
2	15.7	10.9	---	---	---	---	---	---	---	---	8.7	5.2
3	14.9	10.1	---	---	---	---	---	---	---	---	8.2	5.6
4	13.4	9.4	---	---	---	---	---	---	---	---	8.3	5.6
5	12.3	7.4	---	---	---	---	---	---	---	---	7.4	5.4
6	12.6	7.5	---	---	---	---	---	---	---	---	8.6	4.0
7	12.9	7.8	---	---	---	---	---	---	---	---	9.7	4.3
8	13.4	8.4	---	---	---	---	---	---	---	---	7.9	5.4
9	13.4	8.9	---	---	---	---	---	---	---	---	6.7	4.5
10	13.8	8.8	---	---	---	---	---	---	---	---	8.3	2.9
11	13.6	9.0	---	---	---	---	---	---	---	---	9.1	3.2
12	12.9	8.8	---	---	---	---	---	---	---	---	10.2	3.5
13	13.1	8.6	---	---	---	---	---	---	---	---	11.0	4.3
14	12.7	8.1	---	---	---	---	---	---	---	---	11.1	4.7
15	13.1	8.4	---	---	---	---	---	---	---	---	11.4	5.1
16	12.8	7.9	---	---	---	---	---	---	---	---	11.3	5.0
17	12.1	7.8	---	---	---	---	---	---	---	---	9.7	5.7
18	12.2	7.9	---	---	---	---	---	---	---	---	9.9	4.5
19	11.8	7.8	---	---	---	---	---	---	---	---	10.2	3.2
20	11.1	8.3	---	---	---	---	---	---	---	---	11.0	3.3
21	11.7	8.2	---	---	---	---	---	---	6.2	1.9	8.1	4.6
22	11.1	8.3	---	---	---	---	---	---	4.9	1.7	8.7	5.7
23	---	---	---	---	---	---	---	---	5.9	2.7	10.4	5.9
24	---	---	---	---	---	---	---	---	5.4	1.1	11.6	6.7
25	---	---	---	---	---	---	---	---	6.1	1.9	12.7	5.4
26	---	---	---	---	---	---	---	---	6.4	1.6	13.1	6.3
27	---	---	---	---	---	---	---	---	7.2	1.8	10.5	7.8
28	---	---	---	---	---	---	---	---	7.7	2.4	9.1	6.7
29	---	---	---	---	---	---	---	---	7.9	2.8	10.4	6.3
30	---	---	---	---	---	---	---	---	---	---	10.1	7.4
31	---	---	---	---	---	---	---	---	---	---	9.8	7.4
MONTH	---	---	---	---	---	---	---	---	---	---	13.1	2.9

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.3	7.8	19.2	11.7	18.7	13.7	21.3	15.1	23.5	17.6	18.0	12.9
2	12.7	6.1	18.1	11.0	19.4	13.1	21.1	13.7	22.2	17.3	18.6	14.3
3	14.4	7.0	18.0	12.1	18.9	14.5	22.1	13.8	22.7	17.2	18.0	14.7
4	15.1	8.1	17.4	11.8	20.7	14.5	22.9	16.1	22.9	18.1	18.1	14.4
5	16.6	9.4	18.0	11.2	21.8	16.4	23.8	15.5	22.7	19.1	17.8	12.9
6	16.7	9.2	16.8	13.3	21.3	16.2	24.2	16.7	20.8	18.5	18.2	13.3
7	17.3	9.0	17.0	12.3	19.9	14.8	20.8	17.2	22.3	17.6	18.4	13.4
8	17.5	9.0	17.7	12.5	17.5	14.9	21.8	16.4	23.2	18.4	18.6	13.3
9	17.1	8.9	16.1	12.4	19.0	12.8	22.7	16.9	23.3	18.1	18.6	13.5
10	16.8	9.6	14.8	10.2	20.3	13.9	21.4	17.4	24.2	19.4	18.8	13.5
11	17.9	9.2	17.0	10.9	21.8	15.6	22.3	18.1	22.3	18.9	18.8	13.8
12	17.8	10.2	19.2	12.9	22.0	15.4	19.8	17.4	23.1	17.6	18.4	14.2
13	16.1	9.5	19.7	12.8	21.5	14.9	20.5	16.5	23.3	17.9	18.3	14.6
14	15.0	11.0	19.5	12.7	20.4	14.4	21.1	16.3	23.5	18.1	17.9	14.3
15	17.4	10.9	19.9	12.9	19.9	13.1	---	---	23.9	18.2	19.0	15.3
16	16.9	9.7	20.3	13.0	19.2	13.4	---	---	22.4	18.1	19.5	16.0
17	17.9	9.9	19.7	13.0	19.2	12.4	---	---	22.7	18.0	19.0	15.0
18	14.0	9.7	19.7	13.8	21.5	13.3	21.4	17.2	21.8	16.9	16.7	14.3
19	12.6	6.9	20.8	14.7	22.2	14.4	22.7	16.8	22.1	16.8	15.9	14.8
20	15.3	5.7	17.4	14.4	22.0	15.1	22.3	18.0	22.5	16.3	16.1	13.8
21	16.0	6.6	17.1	13.2	22.1	15.1	22.9	18.0	23.1	18.2	16.6	13.3
22	17.4	9.8	16.5	12.0	22.5	15.1	22.5	18.1	20.4	18.0	17.1	13.4
23	17.4	9.2	16.1	12.9	22.8	15.8	21.6	18.2	18.0	16.9	17.6	13.7
24	18.5	9.0	16.1	12.9	23.4	16.6	19.0	17.2	18.0	15.9	17.6	13.7
25	17.3	9.7	15.4	12.5	21.9	16.7	21.3	17.2	18.0	15.2	17.2	14.2
26	19.2	9.4	17.6	12.9	21.8	15.3	22.6	17.8	18.7	14.5	15.1	11.3
27	19.7	10.7	17.7	14.6	21.5	15.8	22.8	17.1	18.1	13.4	15.2	10.8
28	19.9	11.1	17.6	13.7	23.0	15.5	22.4	17.2	18.6	13.3	15.4	11.0
29	19.8	12.0	16.5	14.1	22.3	16.1	23.3	17.4	17.8	14.2	16.0	11.6
30	18.2	12.1	16.0	12.4	22.4	15.8	22.2	17.6	19.0	14.7	16.0	11.9
31	---	---	18.4	12.9	---	---	23.0	16.9	18.6	15.7	---	---
MONTH	19.9	5.7	20.8	10.2	23.4	12.4	---	---	24.2	13.3	19.5	10.8

09372000 MCELMO CREEK NEAR COLORADO-UTAH STATE LINE CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1981, August 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT										
24...	1100	52	2000	8.2	10.0	1200	250	130	120	2
DEC										
17...	1130	51	2590	8.3	1.5	1700	350	200	200	2
FEB										
04...	1430	85	2430	8.3	3.0	1500	290	180	190	2
MAR										
09...	1045	97	2580	8.4	6.0	1500	300	190	200	2
APR										
10...	1115	38	3100	8.3	12.0	1500	300	190	220	2
17...	0805	33	3030	8.4	11.5	1500	280	190	230	3
MAY										
19...	1100	40	2120	8.3	19.5	1200	240	140	150	2
28...	1200	196	1990	8.3	18.0	940	210	100	110	2
JUN										
16...	1030	69	1670	8.4	16.5	890	200	94	99	1
JUL										
15...	1115	127	1600	8.3	18.0	860	200	87	82	1
AUG										
04...	1345	61	1710	8.7	23.0	940	210	100	100	1
SEP										
08...	1120	73	1840	8.2	15.0	990	230	100	99	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT									
24...	6.1	278	1000	42	0.6	9.6	1720	2.35	242
DEC									
17...	5.5	259	1700	46	0.4	11	2670	3.63	367
FEB									
04...	7.1	179	1500	43	0.4	9.1	2330	3.16	534
MAR									
09...	5.7	255	1500	41	0.4	8.7	2400	3.26	628
APR									
10...	4.9	147	1700	47	0.4	4.8	2560	3.48	262
17...	4.7	198	1700	46	0.5	3.5	2570	3.50	229
MAY									
19...	6.1	287	1000	25	0.2	12	1750	2.37	189
28...	6.4	217	880	23	0.5	11	1470	2.00	778
JUN									
16...	4.0	222	810	23	0.3	9.8	1370	1.87	256
JUL									
15...	5.5	226	750	23	<0.1	11	1290	1.76	444
AUG									
04...	4.4	241	880	25	0.3	12	1480	2.01	243
SEP									
08...	4.3	246	830	22	0.4	11	1440	1.96	285

SAN JUAN RIVER BASIN

09378600 MONTEZUMA CREEK NEAR BLUFF, UT

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
APR 15...	1330	1.9	890	8.6	22.0	22.0	190	52	15	100	52

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)
APR 15...	3	4.9	170	48	0.4	8.9	519	0.71	2.66	0.05

DATE	TIME	BORON, DIS-SOLVED (UG/L AS B)
APR 15...	1330	150

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
APR 15...	1330	1.9	22.0	54	1220	6.3

Appendix 4f. USGS water resources data, Utah, 1992 (ReMillard et al 1993)

09379500 SAN JUAN RIVER NEAR BLUFF, UT
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1929 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to September 1977, October 1980 to current year.
WATER TEMPERATURES: May 1944 to September 1961, October 1964 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1929 to September 1980.

REMARKS.--Unpublished daily records of specific conductance obtained before water year 1965 were included in the determination of extremes for period of daily record and are available in files of district office.

INSTRUMENTATION.--Water-quality monitor since October 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,790 microsiemens Sept. 19, 1959; minimum daily, 208 microsiemens June 17, 1952.
WATER TEMPERATURES: Maximum, 33.0°C July 31, 1959; minimum, 0.0°C on many days during winter period of most years.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 383,000 mg/L Sept. 21, 1929; minimum daily mean, no flow on several days in 1934 and 1939.
SEDIMENT LOADS: Maximum daily, 15,700,000 tons Oct. 20, 1972; minimum daily, 0 tons on several days in 1934 and 1939.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,460 microsiemens Jan. 10; minimum observed, 330 microsiemens June 7, 9-11.
WATER TEMPERATURES: Maximum recorded, 28.2°C Aug. 16; minimum recorded, 0.7°C Dec. 6, 8, Jan. 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 01...	1130	605	860	8.4	33.0	19.0	--	8.3	656	--	--	340
NOV 26...	1115	1110	960	8.2	6.0	2.5	300	11.7	663	<1	<1	350
DEC 18...	1200	938	970	8.1	5.0	2.0	--	12.0	650	--	--	320
FEB 24...	1230	1430	1170	8.4	20.0	7.0	--	10.7	660	--	--	440
MAR 23...	1100	1130	780	8.4	15.0	12.0	96	9.6	660	--	--	300
APR 16...	1200	3400	550	8.0	24.0	14.5	--	9.0	650	--	--	180
MAY 27...	1100	7990	420	8.2	22.0	17.0	520	7.6	653	--	--	160
JUN 17...	1230	3780	375	8.1	29.0	16.0	--	8.0	655	--	--	140
JUL 29...	1130	1710	630	8.2	33.0	24.0	5100	6.9	654	--	--	200
AUG 26...	1030	4070	820	8.0	22.5	19.0	--	7.0	659	--	--	200

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 01...	93	25	61	28	1	3.3	--	--	--	290	17	0.3
NOV 26...	98	26	66	29	2	3.5	0	200	163	320	17	0.4
DEC 18...	92	23	72	32	2	3.4	--	--	--	320	21	0.4
FEB 24...	110	39	81	29	2	3.0	--	--	--	410	23	0.3
MAR 23...	80	23	49	26	1	2.6	7	154	138	250	17	0.3
APR 16...	52	12	31	27	1	2.1	--	--	--	130	7.6	0.2
MAY 27...	45	11	23	24	0.8	2.2	0	113	93	100	6.1	0.3
JUN 17...	41	8.7	18	22	0.7	1.6	--	--	--	81	5.4	0.2
JUL 29...	61	11	55	37	2	3.3	0	127	104	190	15	0.4
AUG 26...	60	12	92	49	3	4.3	--	--	--	230	18	0.5

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 01...	7.6	564	587	0.77	921	--	0.13	--	0.01	--	0.14	--
NOV 26...	9.2	628	643	0.85	1880	0.53	--	0.01	<0.01	0.54	0.54	<0.01
DEC 18...	8.9	656	635	0.89	1660	--	--	--	<0.01	--	0.64	--
FEB 24...	8.8	798	773	1.09	3080	--	--	--	<0.01	--	0.77	--
MAR 23...	7.7	516	515	0.70	1570	--	--	<0.01	<0.01	0.39	0.39	0.01
APR 16...	7.5	328	311	0.45	3010	--	--	--	<0.01	--	0.35	--
MAY 27...	9.1	268	254	0.36	5780	--	--	<0.01	<0.01	0.16	0.16	0.01
JUN 17...	8.3	222	218	0.30	2270	--	--	--	<0.01	--	0.11	--
JUL 29...	9.3	410	411	0.56	1890	0.48	--	0.02	<0.01	0.50	0.50	0.03
AUG 26...	8.7	520	530	0.71	5710	--	--	--	<0.01	--	0.78	--

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT 01...	0.02	0.03	--	--	--	--	--	--	--	0.03	0.09
NOV 26...	0.01	0.01	--	0.60	1.1	5.0	0.33	0.03	0.03	0.02	0.06
DEC 18...	0.01	0.01	--	--	--	--	--	--	--	0.03	0.09
FEB 24...	0.01	0.01	--	--	--	--	--	--	--	0.04	0.12
MAR 23...	0.01	0.01	--	<0.20	--	--	0.23	0.04	0.03	0.03	0.09
APR 16...	<0.01	--	--	--	--	--	--	--	--	0.03	0.09
MAY 27...	<0.01	--	0.99	1.0	1.2	5.1	0.50	0.03	0.02	0.01	0.03
JUN 17...	0.03	0.04	--	--	--	--	--	--	--	0.02	0.06
JUL 29...	0.03	0.04	2.4	2.4	2.9	13	0.96	0.03	0.01	0.02	0.06
AUG 26...	0.04	0.05	--	--	--	--	--	--	--	0.01	0.03

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 26...	1115	20	120	<3	9	44	<1
MAR 23...	1100	20	77	<3	<3	33	<1
MAY 27...	1100	20	150	<3	19	16	1
JUL 29...	1130	10	99	<3	<3	24	<1

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
NOV 26...	<10	<1	1	<1.0	1400	<6
MAR 23...	<10	1	1	<1.0	960	<6
MAY 27...	<10	1	<1	<1.0	640	<6
JUL 29...	<10	1	1	<1.0	940	<6

DATE	TIME	BORON, DIS-SOLVED (UG/L AS B)
OCT 01...	1130	80
DEC 18...	1200	70
FEB 24...	1230	80
APR 16...	1200	40
JUN 17...	1230	30
AUG 26...	1030	100

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	950	900	925	1020	990	1000	1080	1040	1060
2	---	---	---	950	890	919	1000	970	984	1070	1020	1040
3	---	---	---	910	860	887	1000	960	984	1430	1000	1030
4	---	---	---	910	880	894	1010	950	971	1040	960	991
5	---	---	---	900	870	884	980	940	963	1040	980	1000
6	---	---	---	890	860	874	960	870	910	1070	1020	1050
7	---	---	---	890	850	873	920	860	886	1020	960	987
8	---	---	---	890	860	875	860	760	796	1050	980	1010
9	---	---	---	880	840	866	950	760	824	1050	1000	1010
10	---	---	---	870	840	859	960	910	942	1460	1020	1080
11	---	---	---	850	810	838	950	870	918	1050	990	1010
12	---	---	---	880	810	837	930	790	882	1020	1000	1010
13	---	---	---	880	820	844	970	790	927	1050	1020	1030
14	---	---	---	980	830	917	1040	930	987	1090	1010	1060
15	---	---	---	930	870	909	---	---	---	1040	1000	1020
16	---	---	---	1410	760	854	---	---	---	1030	990	1010
17	---	---	---	1410	920	988	---	---	---	1050	969	1010
18	---	---	---	1020	950	986	---	---	---	1000	960	975
19	---	---	---	1020	900	978	1050	1020	1040	1010	960	985
20	---	---	---	---	---	---	1020	880	969	---	---	---
21	---	---	---	---	---	---	920	880	901	---	---	---
22	---	---	---	---	---	---	1020	910	949	---	---	---
23	---	---	---	---	---	---	950	910	925	---	---	---
24	---	---	---	---	---	---	1030	910	984	880	840	859
25	---	---	---	---	---	---	1070	1010	1040	890	830	860
26	---	---	---	---	---	---	1070	1020	1050	880	840	859
27	---	---	---	1030	980	997	1100	1030	1060	890	840	872
28	---	---	---	1030	1000	1010	1090	1050	1070	900	850	877
29	---	---	---	1030	990	1010	1070	1050	1060	900	850	876
30	---	---	---	1020	990	1010	1060	1040	1050	910	860	877
31	---	---	---	---	---	---	1070	1030	1050	910	860	883
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	900	840	870	1090	1020	1050	900	840	864	490	420	465
2	880	830	855	1070	990	1040	890	840	854	480	430	463
3	---	---	---	1060	980	1040	920	870	892	480	410	453
4	---	---	---	1080	980	1010	920	850	885	470	410	450
5	---	---	---	1120	1000	1060	860	830	847	470	440	456
6	---	---	---	1090	1000	1040	870	820	836	480	450	468
7	---	---	---	1020	960	996	830	780	811	480	440	466
8	---	---	---	1020	960	988	820	790	806	480	450	465
9	---	---	---	970	940	953	800	710	752	800	450	481
10	---	---	---	1030	940	991	720	660	695	560	480	515
11	---	---	---	1010	930	981	690	620	669	670	520	608
12	---	---	---	1000	950	973	680	630	659	600	460	517
13	---	---	---	970	910	943	670	590	628	490	410	463
14	---	---	---	950	910	932	610	570	592	---	---	---
15	---	---	---	960	910	933	---	---	---	---	---	---
16	---	---	---	960	920	942	---	---	---	---	---	---
17	---	---	---	960	880	920	580	530	548	---	---	---
18	---	---	---	920	860	886	540	520	527	---	---	---
19	---	---	---	---	---	---	530	500	517	---	---	---
20	---	---	---	---	---	---	520	490	506	---	---	---
21	---	---	---	---	---	---	500	470	492	---	---	---
22	---	---	---	---	---	---	500	470	486	---	---	---
23	---	---	---	---	---	---	500	480	490	---	---	---
24	---	---	---	870	810	838	500	460	487	---	---	---
25	1120	1040	1070	900	840	872	500	440	481	---	---	---
26	1100	1030	1060	890	850	874	510	450	490	---	---	---
27	1060	1010	1040	880	830	855	520	450	494	---	---	---
28	1070	1000	1040	840	800	824	520	440	485	480	420	446
29	1060	1010	1040	886	810	842	500	430	477	510	420	441
30	---	---	---	980	890	938	490	430	467	510	400	422
31	---	---	---	970	900	943	---	---	---	430	390	415
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	430	400	416	480	420	451	769	690	723	---	---	---
2	440	370	411	500	440	463	800	720	762	---	---	---
3	430	390	410	490	420	461	810	730	780	---	---	---
4	420	340	397	500	430	473	828	780	801	---	---	---
5	420	360	401	520	440	484	860	780	822	---	---	---
6	420	350	393	558	480	516	868	760	820	---	---	---
7	420	330	383	560	520	543	1030	760	837	---	---	---
8	400	380	389	570	520	544	1010	830	909	---	---	---
9	400	330	379	580	470	529	930	830	888	---	---	---
10	410	330	386	590	500	545	940	840	902	---	---	---
11	420	330	384	701	530	566	920	810	881	---	---	---
12	420	350	393	730	550	597	940	830	887	---	---	---
13	430	360	403	690	540	623	930	820	870	---	---	---
14	420	370	406	840	660	733	910	840	875	---	---	---
15	410	360	393	820	630	700	900	800	860	---	---	---
16	400	370	385	690	580	624	960	840	896	---	---	---
17	420	360	388	650	580	607	950	840	890	---	---	---
18	430	350	397	660	560	619	910	790	853	---	---	---
19	460	380	416	690	610	645	880	790	835	---	---	---
20	460	380	421	680	560	644	880	790	840	---	---	---
21	450	370	415	727	640	682	910	820	867	---	---	---
22	450	360	401	750	680	725	960	890	919	---	---	---
23	430	350	399	880	640	727	1090	890	921	---	---	---
24	440	350	394	920	590	721	1020	880	914	---	---	---
25	460	350	414	788	590	662	1240	850	958	---	---	---
26	450	380	424	797	720	756	1320	800	942	---	---	---
27	540	400	463	---	---	---	1080	871	980	---	---	---
28	510	400	440	---	---	---	---	---	---	---	---	---
29	480	390	439	---	---	---	---	---	---	---	---	---
30	470	400	439	690	620	662	---	---	---	---	---	---
31	---	---	---	720	660	685	---	---	---	---	---	---
MONTH	540	330	406	---	---	---	---	---	---	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.6	18.5	19.8	7.0	5.6	6.4	4.3	2.9	3.4	3.2	2.3	2.7
2	20.0	18.1	19.2	7.0	6.0	6.3	3.0	1.5	2.1	2.9	2.0	2.3
3	19.4	17.4	18.5	6.0	4.7	5.4	2.1	1.1	1.4	2.2	1.8	2.0
4	18.7	16.7	17.6	6.1	4.5	5.2	1.4	.9	1.2	2.7	1.3	1.8
5	17.1	14.7	16.1	7.3	5.2	6.1	1.4	.8	1.2	3.9	2.6	3.1
6	16.6	14.5	15.9	8.6	6.5	7.4	1.4	.7	1.2	4.3	3.6	4.0
7	16.7	14.9	16.0	9.9	7.8	8.7	1.3	.9	1.2	4.2	3.4	3.7
8	17.4	15.0	16.2	10.3	8.9	9.6	1.3	.7	1.1	3.3	2.4	2.9
9	17.5	15.7	16.7	11.1	9.4	10.1	1.7	.9	1.3	3.2	2.3	2.7
10	17.6	15.7	16.8	11.2	10.6	11.0	2.2	1.2	1.6	2.9	2.0	2.3
11	17.8	15.9	17.0	12.0	10.6	11.2	3.2	2.2	2.8	2.1	1.5	1.7
12	17.7	16.0	17.0	12.0	10.6	11.2	3.8	2.7	3.3	2.4	1.4	1.7
13	17.4	15.5	16.5	11.3	9.1	9.9	4.1	3.6	3.9	1.9	1.0	1.4
14	16.7	14.9	16.0	9.3	7.8	8.3	3.9	3.2	3.5	1.3	.8	1.2
15	16.6	14.9	15.9	9.0	8.6	8.8	3.3	2.6	2.9	1.3	.8	1.1
16	16.6	14.7	15.7	8.7	7.9	8.1	2.9	2.3	2.6	1.3	.8	1.2
17	16.4	14.5	15.5	7.9	6.2	6.9	2.4	2.0	2.2	1.3	.8	1.2
18	16.2	14.5	15.5	7.7	7.1	7.3	2.2	1.8	2.1	1.3	.8	1.2
19	16.2	14.5	15.5	7.2	5.8	6.3	2.7	1.9	2.4	1.4	.7	1.1
20	16.1	14.7	15.5	6.3	4.8	5.3	3.9	2.6	3.2	1.4	.8	1.2
21	15.9	13.9	14.8	5.4	4.6	4.9	3.9	3.5	3.6	1.6	.9	1.3
22	15.3	14.2	14.8	5.2	4.3	4.8	4.3	3.1	3.9	1.8	.9	1.4
23	15.1	14.0	14.7	4.5	3.2	3.7	4.3	3.7	4.0	1.9	1.0	1.5
24	15.2	13.7	14.5	3.8	2.5	3.1	4.0	3.6	3.9	2.4	1.0	1.8
25	15.0	13.8	14.5	4.2	3.1	3.6	3.7	2.9	3.2	3.1	1.5	2.3
26	14.5	12.9	13.6	4.3	3.4	3.9	3.0	2.4	2.6	3.5	2.0	2.8
27	13.6	11.7	12.5	4.7	3.5	4.1	2.6	2.2	2.4	3.9	2.4	3.3
28	11.7	9.7	10.6	5.9	4.2	4.9	2.9	2.4	2.7	4.0	2.6	3.4
29	9.7	8.0	8.6	5.9	5.0	5.5	3.2	2.6	2.9	4.0	2.5	3.4
30	8.0	6.6	7.2	5.6	4.3	4.9	3.5	3.0	3.3	4.2	2.6	3.5
31	7.0	5.5	6.5	---	---	---	3.7	2.8	3.2	4.3	2.9	3.7
MONTH	20.6	5.5	15.0	12.0	2.5	6.8	4.3	.7	2.6	4.3	.7	2.2

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	430	400	416	480	420	451	769	690	723	---	---	---
2	440	370	411	500	440	463	800	720	762	---	---	---
3	430	390	410	490	420	461	810	730	780	---	---	---
4	420	340	397	500	430	473	828	780	801	---	---	---
5	420	360	401	520	440	484	860	780	822	---	---	---
6	420	350	393	558	480	516	868	760	820	---	---	---
7	420	330	383	560	520	543	1030	760	837	---	---	---
8	400	380	389	570	520	544	1010	830	909	---	---	---
9	400	330	379	580	470	529	930	830	888	---	---	---
10	410	330	386	590	500	545	940	840	902	---	---	---
11	420	330	384	701	530	566	920	810	881	---	---	---
12	420	350	393	730	550	597	940	830	887	---	---	---
13	430	360	403	690	540	623	930	820	870	---	---	---
14	420	370	406	840	660	733	910	840	875	---	---	---
15	410	360	393	820	630	700	900	800	860	---	---	---
16	400	370	385	690	580	624	960	840	896	---	---	---
17	420	360	388	650	580	607	950	840	890	---	---	---
18	430	350	397	660	560	619	910	790	853	---	---	---
19	460	380	416	690	610	645	880	790	835	---	---	---
20	460	380	421	680	560	644	880	790	840	---	---	---
21	450	370	415	727	640	682	910	820	867	---	---	---
22	450	360	401	750	680	725	960	890	919	---	---	---
23	430	350	399	880	640	727	1090	890	921	---	---	---
24	440	350	394	920	590	721	1020	880	914	---	---	---
25	460	350	414	788	590	662	1240	850	958	---	---	---
26	450	380	424	797	720	756	1320	800	942	---	---	---
27	540	400	463	---	---	---	1080	871	980	---	---	---
28	510	400	440	---	---	---	---	---	---	---	---	---
29	480	390	439	---	---	---	---	---	---	---	---	---
30	470	400	439	690	620	662	---	---	---	---	---	---
31	---	---	---	720	660	685	---	---	---	---	---	---
MONTH	540	330	406	---	---	---	---	---	---	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.6	18.5	19.8	7.0	5.6	6.4	4.3	2.9	3.4	3.2	2.3	2.7
2	20.0	18.1	19.2	7.0	6.0	6.3	3.0	1.5	2.1	2.9	2.0	2.3
3	19.4	17.4	18.5	6.0	4.7	5.4	2.1	1.1	1.4	2.2	1.8	2.0
4	18.7	16.7	17.6	6.1	4.5	5.2	1.4	.9	1.2	2.7	1.3	1.8
5	17.1	14.7	16.1	7.3	5.2	6.1	1.4	.8	1.2	3.9	2.6	3.1
6	16.6	14.5	15.9	8.6	6.5	7.4	1.4	.7	1.2	4.3	3.6	4.0
7	16.7	14.9	16.0	9.9	7.8	8.7	1.3	.9	1.2	4.2	3.4	3.7
8	17.4	15.0	16.2	10.3	8.9	9.6	1.3	.7	1.1	3.3	2.4	2.9
9	17.5	15.7	16.7	11.1	9.4	10.1	1.7	.9	1.3	3.2	2.3	2.7
10	17.6	15.7	16.8	11.2	10.6	11.0	2.2	1.2	1.6	2.9	2.0	2.3
11	17.8	15.9	17.0	12.0	10.6	11.2	3.2	2.2	2.8	2.1	1.5	1.7
12	17.7	16.0	17.0	12.0	10.6	11.2	3.8	2.7	3.3	2.4	1.4	1.7
13	17.4	15.5	16.5	11.3	9.1	9.9	4.1	3.6	3.9	1.9	1.0	1.4
14	16.7	14.9	16.0	9.3	7.8	8.3	3.9	3.2	3.5	1.3	.8	1.2
15	16.6	14.9	15.9	9.0	8.6	8.8	3.3	2.6	2.9	1.3	.8	1.1
16	16.6	14.7	15.7	8.7	7.9	8.1	2.9	2.3	2.6	1.3	.8	1.2
17	16.4	14.5	15.5	7.9	6.2	6.9	2.4	2.0	2.2	1.3	.8	1.2
18	16.2	14.5	15.5	7.7	7.1	7.3	2.2	1.8	2.1	1.3	.8	1.2
19	16.2	14.5	15.5	7.2	5.8	6.3	2.7	1.9	2.4	1.4	.7	1.1
20	16.1	14.7	15.5	6.3	4.8	5.3	3.9	2.6	3.2	1.4	.8	1.2
21	15.9	13.9	14.8	5.4	4.6	4.9	3.9	3.5	3.6	1.6	.9	1.3
22	15.3	14.2	14.8	5.2	4.3	4.8	4.3	3.1	3.9	1.8	.9	1.4
23	15.1	14.0	14.7	4.5	3.2	3.7	4.3	3.7	4.0	1.9	1.0	1.5
24	15.2	13.7	14.5	3.8	2.5	3.1	4.0	3.6	3.9	2.4	1.0	1.8
25	15.0	13.8	14.5	4.2	3.1	3.6	3.7	2.9	3.2	3.1	1.5	2.3
26	14.5	12.9	13.6	4.3	3.4	3.9	3.0	2.4	2.6	3.5	2.0	2.8
27	13.6	11.7	12.5	4.7	3.5	4.1	2.6	2.2	2.4	3.9	2.4	3.3
28	11.7	9.7	10.6	5.9	4.2	4.9	2.9	2.4	2.7	4.0	2.6	3.4
29	9.7	8.0	8.6	5.9	5.0	5.5	3.2	2.6	2.9	4.0	2.5	3.4
30	8.0	6.6	7.2	5.6	4.3	4.9	3.5	3.0	3.3	4.2	2.6	3.5
31	7.0	5.5	6.5	---	---	---	3.7	2.8	3.2	4.3	2.9	3.7
MONTH	20.6	5.5	15.0	12.0	2.5	6.8	4.3	.7	2.6	4.3	.7	2.2

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.5	3.1	3.9	10.7	8.5	9.5	13.3	11.3	12.3	17.1	14.5	15.9
2	4.9	3.4	4.3	11.4	9.7	10.6	14.9	12.5	13.5	17.0	14.5	15.9
3	5.9	4.2	5.0	11.9	10.6	11.5	15.2	13.2	14.2	17.4	14.7	16.1
4	5.6	4.6	5.1	11.9	9.9	10.8	15.9	13.5	14.5	17.5	14.8	16.2
5	5.1	3.6	4.4	11.4	10.2	10.9	16.6	14.5	15.6	17.7	15.3	16.6
6	4.8	3.8	4.4	11.3	9.7	10.5	16.7	14.7	15.8	17.5	15.8	16.5
7	4.8	3.7	4.2	11.4	9.4	10.3	17.5	15.0	16.1	17.2	14.9	16.0
8	7.0	4.6	5.3	11.3	9.7	10.2	17.5	15.6	16.6	16.7	15.1	16.1
9	7.5	4.8	6.2	10.1	8.6	9.5	17.6	15.4	16.4	15.9	15.0	15.6
10	8.1	5.9	6.2	10.4	8.4	9.5	17.6	15.8	16.7	15.4	13.5	14.4
11	6.1	5.2	5.6	10.9	8.8	10.0	18.0	15.6	16.6	15.6	12.9	14.3
12	7.3	5.7	6.4	11.5	9.1	10.4	17.9	16.0	16.9	17.0	14.3	15.5
13	7.2	6.9	7.1	12.4	9.8	11.2	17.8	15.8	16.8	18.0	15.1	16.5
14	8.8	6.0	7.3	12.9	10.7	12.0	18.1	16.0	17.0	18.3	15.4	16.9
15	8.6	5.6	6.7	13.1	11.2	12.3	18.0	16.2	16.9	18.1	15.4	17.0
16	8.0	5.8	6.4	13.4	11.4	12.6	16.6	14.5	15.5	18.3	15.2	16.9
17	7.5	4.4	5.1	13.4	11.5	12.2	16.6	14.3	15.4	18.4	15.4	17.0
18	5.7	4.3	5.0	12.3	10.1	11.3	15.5	13.6	14.3	18.6	16.0	17.4
19	8.0	4.4	5.6	11.4	9.5	10.6	13.5	11.5	12.4	18.6	16.8	17.9
20	7.5	4.9	6.4	12.0	9.7	10.9	12.7	10.4	11.6	17.9	16.6	16.9
21	8.5	6.1	7.3	11.8	10.2	10.9	13.3	10.7	12.0	16.9	15.4	16.0
22	8.8	7.0	7.9	11.7	10.3	11.2	14.3	12.5	13.3	15.6	13.8	14.7
23	9.4	7.6	8.5	12.0	10.6	11.5	14.5	12.6	13.6	15.8	14.0	14.9
24	8.7	6.7	7.8	13.1	10.4	11.8	14.8	12.4	13.7	16.5	15.4	15.7
25	7.9	6.3	7.2	14.0	11.1	12.6	15.2	12.5	13.8	17.2	15.1	16.2
26	8.0	6.1	7.1	14.4	12.4	13.4	16.7	13.3	14.6	17.7	14.8	15.9
27	8.8	6.6	7.7	14.2	12.1	12.8	17.0	14.1	15.5	17.7	16.3	17.2
28	9.5	7.3	8.4	12.7	11.2	12.0	17.8	14.4	16.0	17.3	15.4	16.5
29	9.8	8.0	9.0	14.0	11.5	12.6	17.8	15.0	16.4	17.0	15.5	16.2
30	---	---	---	14.4	12.7	13.7	17.6	14.7	16.3	16.0	14.0	15.0
31	---	---	---	13.8	12.3	12.8	---	---	---	17.0	14.9	16.0
MONTH	9.8	3.1	6.3	14.4	8.4	11.4	18.1	10.4	15.0	18.6	12.9	16.1
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.2	14.8	16.1	21.4	19.6	20.5	27.1	23.5	25.4	22.3	19.4	20.8
2	17.6	14.6	16.2	22.0	19.2	20.5	27.1	24.2	25.9	22.2	20.4	21.4
3	17.6	15.8	16.5	23.2	20.1	21.3	27.6	24.8	26.4	22.2	20.2	21.4
4	17.9	15.1	16.5	24.0	21.6	22.6	27.4	24.9	26.1	22.0	20.3	21.0
5	18.8	16.4	17.5	24.9	21.8	23.4	27.1	25.0	25.9	21.6	18.8	20.1
6	18.5	16.6	17.6	25.2	22.8	24.2	25.5	23.5	24.7	21.6	19.9	20.9
7	18.3	15.6	17.2	25.2	23.2	23.9	26.9	23.5	25.2	22.0	19.9	21.0
8	18.0	16.1	16.8	23.9	22.3	23.0	26.7	23.7	25.0	22.0	19.9	21.2
9	17.8	14.6	16.1	25.3	22.4	23.6	27.0	24.2	25.9	22.0	20.2	21.4
10	18.3	15.3	16.8	25.3	23.5	24.4	28.1	24.6	26.5	22.5	20.0	21.3
11	18.7	16.6	17.7	25.3	23.5	24.4	27.6	25.3	26.3	22.5	20.7	21.8
12	19.1	16.6	18.0	23.9	22.4	23.0	27.4	23.6	25.6	22.5	20.9	21.7
13	19.3	16.7	18.1	22.8	20.5	21.8	27.8	24.6	26.4	22.4	20.6	21.5
14	19.2	16.8	17.8	23.2	20.9	22.2	27.8	24.4	26.3	23.3	21.0	22.2
15	18.4	15.7	17.1	23.7	21.2	22.5	28.1	24.4	26.4	23.6	21.8	22.8
16	18.3	16.0	17.3	24.4	21.9	23.2	28.2	24.8	26.6	24.0	22.3	23.3
17	19.1	15.8	17.4	25.2	22.4	23.9	27.6	24.7	25.9	24.0	21.7	22.6
18	20.3	16.8	18.4	25.1	23.1	24.3	27.9	24.2	25.9	22.8	20.7	21.4
19	21.6	18.0	19.6	25.5	22.4	24.0	27.3	24.4	26.0	21.8	18.8	20.4
20	22.0	18.9	20.5	26.5	23.3	24.8	26.8	23.7	25.6	20.7	18.4	19.6
21	22.1	18.9	20.6	25.6	22.8	24.5	26.7	23.6	25.4	21.0	18.8	19.8
22	22.1	18.7	20.7	25.4	23.3	24.5	25.3	23.1	23.9	21.1	19.0	20.1
23	22.2	19.3	21.1	25.1	13.0	22.5	23.1	22.0	22.6	21.4	19.0	20.1
24	22.1	19.7	21.1	23.0	18.3	21.6	24.1	21.1	22.5	21.3	19.4	20.4
25	22.2	20.1	21.5	24.1	21.1	22.5	23.3	20.9	21.9	21.1	19.1	19.9
26	22.0	20.1	21.2	25.2	22.5	24.0	21.7	19.6	20.6	19.7	17.5	18.5
27	22.1	19.6	21.0	24.9	22.3	23.7	21.0	18.8	19.8	19.0	16.7	17.8
28	23.3	20.3	21.7	24.7	21.8	23.5	21.3	18.8	20.0	19.0	16.8	18.0
29	23.3	20.9	22.0	25.5	22.6	24.3	21.3	18.7	20.3	19.3	17.2	18.3
30	22.1	19.9	21.0	26.1	22.9	24.6	21.0	18.8	20.5	19.8	17.6	18.7
31	---	---	---	26.1	23.4	25.1	21.0	20.1	20.5	---	---	---
MONTH	23.3	14.6	18.7	26.5	13.0	23.3	28.2	18.7	24.4	24.0	16.7	20.6

09379500 SAN JUAN RIVER NEAR BLUFF, UT--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-, CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SED. SUSP. SIEVE DIAM. DIAM. FINER THAN .062 MM	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV						
26...	1115	1110	2.5	88	926	2780
MAR						
23...	1100	1130	12.0	76	394	1200
MAY						
27...	1100	7990	17.0	82	2640	57000

species	tissue	condition	river mile
OCTOBER '92 TRIP (Hogback diversion to Mexican Hat)			
Ictalurus punctatus	(anal sample taken)	healthy	100
I. punctatus	lesion-dorsal	moribund	100
I. punctatus	lesion-peduncle	moribund	95
Gila robusta	skin (Lernaea)	moribund	96
G. robusta	(skin sample taken)	healthy	137
Ptychocheilus lucius	(anal sample taken)	healthy	129
P. lucius	(anal, skin taken)	healthy	139
Cyprinus carpio	lesion-opercle	moribund	131
C. carpio	lesion-dorsal	moribund	156
C. carpio	lesion/tumor, anal	moribund	77
Catostomus discobolus	"tumor"-fin	moribund	131
Catostomus latipinnis*	(anal&kidney taken)	healthy	75 (5 fish)
C. latipinnis	lesion-head	moribund	76
" "*	(anal&kidney taken)	healthy	85 (2 fish)
" "*	(anal&kidney taken)	healthy	100 (6 fish)
" "	anal (lesion)	moribund	80
" "	lesion-dorsal	moribund	80
" "	lesion-pectoral	moribund	95
" "	abrasion-opercle	moribund?	95
" "	lesion-opercle	moribund	103
" "	mouth hemorrhaging	moribund	106
" "	lesion-head	moribund	111
" "	skin hemorrhaging	moribund	115
" "	lesion-near eye	moribund	121
" "	lesion-dorsal	moribund	140 (2 fish)
" "	skin hemorrhaging	moribund	140
" "	lesion-fin	moribund	140
" "	"tumor"-fin	moribund	140
" "	lesion-near eye	moribund	141
" "	lesion-dorsal	moribund	144
" "	lesion-dorsal	moribund	146 (2 fish)
" "	lesion-dorsal	moribund	152 (3 fish)
" "	lesion-dorsal	moribund	156 (2 fish)

* samples from these fish also submitted for PAH assay

MAY '93 TRIP (Shiprock to Bluff secondary channels):			
I. punctatus	lesion-dorsal	moribund	130
" "	lesion-dorsal	moribund	135 (2 fish)
" "	lesion-dorsal	moribund	140
P. lucius	(skin sample taken)	healthy	122
Cyprinus carpio	lesion-head	moribund	130
Catostomus discobolus	lesion-isthmus	moribund	95
C. discobolus	lesion-head	moribund	130
Catostomus latipinnis	distended abdomen	moribund	88
C. latipinnis	lesion-ventral	moribund?	100
" "	(histol. tissues)	healthy	109 (2 fish)
" "	fin growth (histol)	moribund	109
" "	lesion-dorsal	moribund	110
" "	lesion-ventral	moribund?	116 (2 fish)
" "	fin growth (histol)	moribund	121
" "	lesion-dorsal	moribund	147

Appendix 5 Fish sampled from the San Juan River, October 1992 and May 1993, for pathogen identification (Shanks 1993)

SEC. 305. (a) The Administrator, in cooperation with the States and with the assistance of appropriate Federal agencies, shall prepare a report to be submitted to the Congress on or before January 1, 1974, which shall—

(1) describe the specific quality, during 1973, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, of all navigable waters and the waters of the contiguous zone;

(2) include an inventory of all point sources of discharge (based on a qualitative and quantitative analysis of discharges) of pollutants, into all navigable waters and the waters of the contiguous zone; and

(3) identify specifically those navigable waters, the quality of which—

(A) is adequate to provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allow recreational activities in and on the water;

(B) can reasonably be expected to attain such level by 1977 or 1983; and

(C) can reasonably be expected to attain such level by any later date..

(b)(1) Each State shall prepare and submit to the Administratro by April 1, 1975, and shall bring up to date by April 1, 1976, and biennially thereafter, a report which shall include—

(A) a description of the water quality of all navigable waters in such State during the preceding year, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, correlated with the quality of water required by the objective of this Act (as identified by the Administrator pursuant to criteria published under section 304(a) of this Act) and the water quality described in subparagraph (B) of this paragraph;

(B) an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water;

(C) an analysis of the extent to which the elimination of the discharge of pollutants and a level of water quality which provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities in and on the water, have been or will be achieved by the requirements of this Act, together with recommendations as to additional action necessary to achieve such objectives and for what waters such additional action is necessary;

(D) an estimate of (i) the environmental impact, (ii) the economic and social costs necessary to achieve the objective of this Act in such State, (iii) the economic and social benefits of such achievement, and (iv) an estimate of the date of such achievement; and

(E) a description of the nature and extent of nonpoint sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs.

(2) The Administrator shall transmit such State reports, together with an analysis thereof, to Congress on or before October 1, 1975, and October 1, 1976, and biennially thereafter.

Appendix 6. Section 305(b) of the Clean Water Act (Senate Committee on the Environment and Public Works 1982)

Sampling Stations

Station	Approximate river miles (km)		STORET Code	Location (Elevation in feet)
1	0.0	(0.0)	SJR104	The San Juan River above NM Hwy. 17 bridge in Blanco (5,600).
2	11.0	(17.7)	SJR106	San Juan River @ the NM Hwy. 44 bridge above the City of Bloomfield WWTP (5,400).
3	11.5	(18.5)	SJR106.5	City of Bloomfield WWTP outfall (5,390).
4	12.0	(19.3)	SJR107	San Juan River ¼ mile below the City of Bloomfield WWTP (5,380).
5	25.0	(40.2)	SJR109	San Juan River, above the Animas River, one mile above the Farmington WWTP (5,260).
6	25.5	(41.0)	SJR112E	City of Farmington WWTP effluent ditch (5,250).
7	26.0	(41.8)	SJR113	San Juan River, below the Farmington, WWTP, at the Hwy 371 (Bisti) Bridge (5,231).
8			SJR403.002510	Animas River 5 miles above Farmington on Southside River Road (5,360).
9			SJR402.001510	La Plata at the Hwy 550 Bridge near Farmington (5,214).
10	60.5	(97.3)	SJR121	San Juan River 100 meters above the Shiprock WWTP effluent ditch (4,850).
11	60.7	(97.7)	SJR401.000120	Shiprock WWTP effluent channel (4,840).
12	61.0	(98.2)	SJR122	San Juan River ¼ mile below the Shiprock effluent channel (4,830).

Appendix 7a. Sampling sites (Smolka 1985)

Appendix 7b. Summary of mean nutrient and total nonfilterable residue (TSS) concentrations discharged by the three WWTPs along the San Juan River, November 11-14, 1984 (Smolka 1985)

WWTP Site	Maximum Hydraulic Loading Capacity (MGD)	Total Phosphorus (as P) mg/l	Total Nitrate-Nitrite (as N) mg/l	Total Ammonia (as N) mg/l	Total Inorganic Nitrogen (as N) mg/l	TSS mg/l
Bloomfield	0.5	2.52	2.41	8.83	11.24	20.4
Farmington	3.5	3.63	1.66	15.36	17.02	30.6
Shiprock	0.6	1.14	0.50	4.35	4.85	33.4

Water quality data collected on the San Juan River, November 12-14, 1984.

STORET RETRIEVAL DATE 85/06/24
SJR104 SJR401004040
36 43 27.0 107 48 43.0 4
SAN JUAN RIVER AT BRIDGE NEAR BLANCO
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101
0001 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR . PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1230	10.0	230.0	8.2	10.4	114.00	0.010	0.010	0.180	0.990	0.006
84/11/13 0755	3.8	231.0	7.8	10.7	98.00	0.020	0.030	0.140	0.310	0.001
84/11/13 1540	8.9	225.0	8.4	10.9	116.00	0.010	0.010	0.140	0.670	0.007
84/11/14 0805	6.5	219.0	7.6	10.0	101.00	0.020	0.040	0.180	0.990	0.001
84/11/14 1500	8.9	225.0	8.4	11.1	118.00	0.020	0.010	0.200	0.250	0.010
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	10.0	231.0	8.4	11.1	118.00	0.020	0.040	0.200	0.990	0.010
MINIMUM	3.8	219.0	7.6	10.0	98.00	0.010	0.010	0.140	0.250	0.001
MEAN	7.6	226.0	8.1	10.6	109.40	0.016	0.020	0.168	0.642	0.005
STAND DEV	2.5	4.8	0.4	0.4	9.21	0.005	0.014	0.027	0.356	0.004
STAND ERR	1.1	2.1	0.2	0.2	4.12	0.002	0.006	0.012	0.159	0.002

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1230		184.0	61.4	3.5	1.3	95.6	26.3	1.6	13.8	
84/11/13 0755		182.0	58.9	6.9	1.8	96.3	25.2	1.9	13.8	10.0
84/11/14 1500		154.0	58.3	2.1	2.2	107.0	26.4	1.9	13.8	
00/00/00										
STATION NUMBER		3	3	3	3	3	3	3	3	1
MAXIMUM		184.0	61.4	6.9	2.2	107.0	26.4	1.9	13.8	10.0
MINIMUM		154.0	58.3	2.1	1.3	95.6	25.2	1.6	13.8	10.0
MEAN		173.3	59.5	4.2	1.8	99.6	26.0	1.8	13.8	10.0
STAND DEV		16.8	1.6	2.5	0.4	6.4	0.7	0.2	0.0	
									0.0	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1230	5.0	120.0	1.0	5.0	5.0	0.5	5.0	1.0

Appendix 7c. Water quality data collected at sites along the San Juan River, November 12-14, 1984 (Smolka 1985)

STORET RETRIEVAL DATE 85/06/24
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO S 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NNEX 14080101
0001 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1305	9.4	273.0	8.1	10.2	110.00	0.030	0.050	0.090	1.130	0.002
84/11/13 0825	5.2	279.0	8.0	10.2	99.00	0.050	0.050	0.120	1.230	0.002
84/11/13 1520	10.2	270.0	8.0	9.7	106.00	0.040	0.040	0.110	0.600	0.002
84/11/14 0920	7.8	260.0	7.8	10.2	101.00	0.050	0.060	0.300	0.920	0.004
84/11/14 1430	8.8	271.0	8.0	9.9	105.00	0.080	0.010	0.120	0.630	0.002
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	10.2	279.0	8.1	10.2	110.00	0.080	0.060	0.300	1.230	0.004
MINIMUM	5.2	260.0	7.8	9.7	99.00	0.030	0.010	0.090	0.600	0.002
MEAN	8.3	270.6	8.0	10.0	104.20	0.050	0.042	0.148	0.902	0.003
STAND DEV	1.9	6.9	0.1	0.2	4.33	0.019	0.019	0.086	0.285	0.001
STAND ERR	0.9	3.1	0.0	0.1	1.93	0.008	0.009	0.038	0.127	0.000

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1305		242.0	80.2	3.2	3.4	103.4	30.6	1.9	18.4	
84/11/13 0825		218.0	80.6	2.4	3.0	104.4	31.1	1.6	18.4	10.0
84/11/13 1520	44.0									
84/11/14 0920	73.0									
84/11/14 1430	90.0									
00/00/00										
STATION NUMBER	3	2	2	2	2	2	2	2	2	1
MAXIMUM	90.0	242.0	80.6	3.2	3.4	104.4	31.1	1.9	18.4	10.0
MINIMUM	44.0	218.0	80.2	2.4	3.0	103.4	30.6	1.6	18.4	10.0
MEAN	69.0	230.0	80.4	2.8	3.2	103.9	30.8	1.8	18.4	10.0
STAND DEV	23.3	17.0	0.3	0.6	0.3	0.7	0.4	0.3	0.0	
STAND ERR	13.4	12.0	0.2	0.4	0.2	0.5	0.2	0.2	0.0	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1305	5.0	10.0	1.0	5.0	5.0	0.5	5.0	1.0

STORET RETRIEVAL DATE 85/07/19
N10020770 SJR401004025 SJR106.5
36 42 42.0 107 59 00.0 4
CITY OF BLOOMFIELD WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
SAN JUAN
21NMEX 830820
0001 FEET DEPTH

/TYPA/MUN/TREATD/OUTFL/PIPE

DATE FROM TO		00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12	1330	14.3	707.0	7.3	6.9	83.00	2.570	2.670	12.870	15.380	0.080
84/11/13	0840	11.9	694.0	7.2	6.0	79.00	2.360	1.800	2.190	3.590	0.009
84/11/13	1505	13.4	819.0	7.3	6.9	82.00	3.000	1.660	11.400	13.750	0.067
84/11/14	0930	12.8	995.0	7.2	7.4	85.00	2.100	3.660	4.820	6.890	0.021
84/11/14	1420	13.6	620.0	7.3	6.7	80.00	2.570	2.260	12.860	15.850	0.076
00/00/00											
STATION	NUMBER	5	5	5	5	5	5	5	5	5	5
	MAXIMUM	14.3	995.0	7.3	7.4	85.00	3.000	3.660	12.870	15.850	0.080
	MINIMUM	11.9	620.0	7.2	6.0	79.00	2.100	1.660	2.190	3.590	0.009
	MEAN	13.2	767.0	7.3	6.8	81.80	2.520	2.410	8.828	11.092	0.051
	STAND DEV	0.9	146.0	0.1	0.5	2.39	0.331	0.804	4.983	5.523	0.033
	STAND ERR	0.4	65.3	0.0	0.2	1.07	0.148	0.360	2.229	2.470	0.015

00/00/00

DATE FROM TO		00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCDR /100ML
84/11/12	1330	25.0	685.0	231.6	41.8	11.3	108.9	90.5	7.4	89.7	
84/11/13	0840	16.0	662.0	262.7	28.3	10.9	150.8	94.7	6.2	82.8	140.0
84/11/13	1505	19.0									
84/11/14	0930	19.0									
84/11/14	1420	23.0	662.0	254.0	28.8	16.8	98.7	88.9	8.6	87.4	
00/00/00											
STATION	NUMBER	5	3	3	3	3	3	3	3	3	1
	MAXIMUM	25.0	685.0	262.7	41.8	16.8	150.8	94.7	8.6	89.7	140.0
	MINIMUM	16.0	662.0	231.6	28.3	10.9	98.7	88.9	6.2	82.8	140.0
	MEAN	20.4	669.7	249.4	33.0	13.0	119.5	91.4	7.4	86.6	140.0
	STAND DEV	3.6	13.3	16.0	7.7	3.3	27.6	3.0	1.2	3.5	
	STAND ERR	1.6	7.7	9.3	4.4	1.9	15.9	1.7	0.7	2.0	

00/00/00

DATE FROM TO		01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12	1330	5.0	100.0	10.0	5.0	5.0	0.5	5.0	1.0

STORET RETRIEVAL DATE 85/06/24
SJR401.004020 SJR401004020 SJR107
36 41 60.0 108 00 00.0 4
SAN JUAN RIVER BELOW BLOOMFIELD WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO
21NMEX 850419
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1350	9.1	283.0	8.1	10.0	105.00	0.080	0.110	0.250	0.220	0.006
84/11/13 0900	6.0	279.0	8.1	10.3	101.00	0.060	0.160	0.110	0.210	0.002
84/11/13 1450	11.0	271.0	8.1	10.0	112.00	0.050	0.090	0.370	0.430	0.011
84/11/14 0950	7.2	274.0	7.8	10.1	102.00	0.110	0.130	0.280	0.260	0.003
84/11/14 1400	8.9	276.0	7.9	10.0	107.00	0.080	0.100	0.230	0.220	0.004
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	11.0	283.0	8.1	10.3	112.00	0.110	0.160	0.370	0.430	0.011
MINIMUM	6.0	271.0	7.8	10.0	101.00	0.050	0.090	0.110	0.210	0.002
MEAN	8.4	276.6	8.0	10.1	105.40	0.076	0.118	0.248	0.268	0.005
STAND DEV	1.9	4.6	0.1	0.1	4.39	0.023	0.028	0.094	0.093	0.004
STAND ERR	0.9	2.1	0.1	0.1	1.97	0.010	0.012	0.042	0.041	0.002

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1350	85.0	240.0	85.2	3.2	2.3	103.4	32.6	1.6	20.7	
84/11/13 0900	51.0	222.0	83.5	3.4	3.0	103.9	32.1	2.3	25.3	30.0
84/11/13 1450	39.0									
84/11/14 0950	77.0									
84/11/14 1400	130.0	224.0	81.7	6.7	2.5	102.0	30.4	1.9	20.7	
00/00/00										
STATION NUMBER	5	3	3	3	3	3	3	3	3	1
MAXIMUM	130.0	240.0	85.2	6.7	3.0	103.9	32.6	2.3	25.3	30.0
MINIMUM	39.0	222.0	81.7	3.2	2.3	102.0	30.4	1.6	20.7	30.0
MEAN	76.4	228.7	83.5	4.4	2.6	103.1	31.7	1.9	22.2	30.0
STAND DEV	35.3	9.9	1.8	2.0	0.4	1.0	1.2	0.4	2.7	
STAND ERR	15.8	5.7	1.0	1.1	0.2	0.6	0.7	0.2	1.5	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1350	5.0	140.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 85/06/24
SJR401.004010 SJR401004010 SJR109
36 42 25.0 108 12 34.0 4
SAN JUAN R ABV THE ANIMAS RIVER IN FARMINGTON
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419
0000 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1505	8.8	294.0	8.1	9.9	104.00	0.070	0.120	0.090	0.190	0.002
84/11/13 0945	7.0	283.0	8.1	10.1	101.00	0.060	0.090	0.210	0.190	0.005
84/11/13 1410	9.8	284.0	8.1	10.0	108.00	0.080	0.140	0.080	0.210	0.002
84/11/14 1030	7.5	281.0	8.0	10.3	104.00	0.130	0.120	0.180	0.214	0.003
84/11/14 1310	9.2	288.0	7.5	10.0	107.00	0.090	0.130	0.070	0.190	0.000
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	9.8	294.0	8.1	10.3	108.00	0.130	0.140	0.210	0.214	0.005
MINIMUM	7.0	281.0	7.5	9.9	101.00	0.060	0.090	0.070	0.190	0.000
MEAN	8.5	286.0	8.0	10.1	104.80	0.086	0.120	0.126	0.199	0.003
STAND DEV	1.2	5.1	0.3	0.2	2.78	0.027	0.019	0.064	0.012	0.002
STAND ERR	0.5	2.3	0.1	0.1	1.24	0.012	0.008	0.029	0.005	0.001

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1505	113.0	276.0	86.7	2.8	4.0	106.3	32.1	1.6	20.7	
84/11/13 0945	104.0	276.0	84.8	3.4	2.3	104.4	31.8	1.6	20.7	10.0
84/11/13 1410	64.0									
84/11/14 1030	136.0									
84/11/14 1310	131.0	306.0	86.3	12.5	1.6	105.3	33.3	1.9	23.0	
00/00/00										
STATION NUMBER	5	3	3	3	3	3	3	3	3	1
MAXIMUM	136.0	306.0	86.7	12.5	4.0	106.3	33.3	1.9	23.0	10.0
MINIMUM	64.0	276.0	84.8	2.8	1.3	104.4	31.8	1.6	20.7	10.0
MEAN	109.6	286.0	85.9	6.2	2.6	105.3	32.4	1.7	21.5	10.0
STAND DEV	28.6	17.3	1.0	5.4	1.2	1.0	0.8	0.2	1.3	
STAND ERR	12.8	10.0	0.6	3.1	0.7	0.6	0.5	0.1	0.8	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1505	5.0	100.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 85/06/24
SJP112E SJR401002015
36 43 18.1 108 13 18.0 4
FARMINGTON EFFLUENT AT PIPE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN R MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080105
0001 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONIZD NH3-NH3 MG/L
84/11/12 1550	15.8	1326.0	7.2	6.5	81.00	3.540	1.820	17.690	21.600	0.098
84/11/13 1010	14.8	1216.0	7.2	5.5	67.00	3.540	1.560	13.810	17.200	0.071
84/11/13 1350	17.9	1142.0	7.2	6.1	79.00	3.640	1.740	14.190	17.700	0.092
84/11/14 1040	16.0	1168.0	7.2	6.0	75.00	3.720	1.510	16.130	19.700	0.091
84/11/14 1235	17.0	1021.0	7.3	5.7	73.00	3.690	1.670	15.000	18.700	0.115
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	17.9	1326.0	7.3	6.5	81.00	3.720	1.820	17.690	21.600	0.115
MINIMUM	14.8	1021.0	7.2	5.5	67.00	3.540	1.510	13.810	17.200	0.071
MEAN	16.3	1174.6	7.2	6.0	75.00	3.626	1.660	15.364	18.980	0.094
STAND DEV	1.2	111.1	0.0	0.4	5.48	0.084	0.127	1.575	1.751	0.016
STAND ERR	0.5	49.7	0.0	0.2	2.45	0.037	0.057	0.704	0.783	0.007

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1550	40.0	776.0	214.4	132.4	21.4	109.1	97.0	10.1	133.0	
84/11/13 1010	22.0	746.0	213.8	98.1	20.8	134.4	85.7	10.5	120.0	0.0
84/11/13 1350	37.0									
84/11/14 1040	19.0									
84/11/14 1235	35.0	752.0	222.0	53.3	20.2	130.9	93.6	11.7	110.0	
00/00/00										
STATION NUMBER	5	3	3	3	3	3	3	3	3	1
MAXIMUM	40.0	776.0	222.0	132.4	21.4	134.4	97.0	11.7	133.0	0.0
MINIMUM	19.0	746.0	213.8	53.3	20.2	109.1	85.7	10.1	110.0	0.0
MEAN	30.6	758.0	216.7	94.6	20.8	124.8	92.1	10.8	121.0	0.0
STAND DEV	9.4	15.9	4.6	39.7	0.6	13.7	5.8	0 8	11.5	
STAND ERR	4.2	9.2	2.6	22.9	0.3	7.9	3 3	0.5	6.7	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1550	5.0	100.0	1.0	12.0	5.0	0.5	5.0	1.0

STORET RETRIEVAL DATE 85/06/24
SJR113 SJR401002010 0936500
36 43 21.0 108 12 30.0 4
SAN JUAN RIVER AT BISTI BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 780414 14080104
0005 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1005	8.8	410.0	8.3	10.0	105.00	0.210	0.110	0.590	0.650	0.023
84/11/13 1025	6.5	397.0	8.4	10.7	105.00	0.260	0.100	0.500	0.500	0.021
84/11/13 1650	8.5	412.0	8.2	9.8	84.48	0.200	0.090	0.530	0.610	0.016
84/11/14 1105	7.5	398.0	8.2	10.6	103.00	0.250	0.150	0.870	0.080	0.025
84/11/14 1250	8.4	410.0	8.2	10.7	111.00	0.250	0.110	0.440	0.430	0.014
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	8.8	412.0	8.4	10.7	111.00	0.260	0.150	0.870	0.650	0.025
MINIMUM	6.5	397.0	8.2	9.8	84.48	0.200	0.090	0.440	0.080	0.014
MEAN	7.9	405.4	8.3	10.4	101.70	0.234	0.112	0.586	0.454	0.020
STAND DEV	0.9	7.3	0.1	0.4	10.08	0.027	0.023	0.168	0.227	0.005
STAND ERR	0.4	3.3	0.0	0.2	4.51	0.012	0.010	0.075	0.101	0.002

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1005	66.0									
84/11/12 1605		336.0	115.5	6.8	7.8	154.8	55.9	2.7	27.6	
84/11/13 1025	44.0	250.0	111.6	11.5	6.9	134.9	57.6	2.3	25.3	70.0
84/11/13 1650	37.0									
84/11/14 1105	79.0									
84/11/14 1250	70.0	358.0	111.0	10.9	9.2	133.0	55.2	2.7	27.6	
00/00/00										
STATION NUMBER	5	3	3	3	3	3	3	3	3	1
MAXIMUM	79.0	358.0	115.5	11.5	9.2	154.8	57.6	2.7	27.6	70.0
MINIMUM	37.0	250.0	111.0	6.8	6.9	133.0	55.2	2.3	25.3	,70.0
MEAN	59.2	314.7	112.7	9.7	8.0	140.9	56.2	2.6	26.8	70.0
STAND DEV	17.9	57.1	2.4	2.6	1.2	12.1	1.2	0.2	1.3	
STAND ERR	8.0	33.0	1.4	1.5	0.7	7.0	0.7	0.1	0.8	
99/99/99										

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1605	5.0	170.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 85/06/24
SJR401.000120 SJR401000120 NM0020621 SJR121.5
36 47 23.0 108 43 48.0 4
CITY OF SHIPROCK WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/MUN/TREATD/OUTFL/PIPE
21NWEX 850419
0000 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONIZD NH3-NH3 MG/L
84/11/12 1735	11.0	1446.0	7.1	4.1	45.00	1.720	0.720	6.800	6.800	0.021
84/11/13 0820	8.1	1940.0	7.1	3.2	33.00	0.280	0.280	1.130	1.100	0.003
84/11/13 1400	15.1	2132.0	7.2	5.4	65.00	0.320	0.280	1.430	1.400	0.008
84/11/14 0835	8.0	1407.0	7.2	4.7	48.00	2.200	0.740	8.180	8.000	0.025
84/11/14 1315	15.5	2083.0	7.3	4.4	53.00	1.200	0.480	4.230	4.350	0.029
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	15.5	2132.0	7.3	5.4	65.00	2.200	0.740	8.180	8.000	0.029
MINIMUM	8.0	1407.0	7.1	3.2	33.00	0.280	0.280	1.130	1.100	0.003
MEAN	11.5	1801.6	7.2	4.4	48.80	1.144	0.500	4.354	4.330	0.017
STAND DEV	3.6	349.9	0.1	0.8	11.67	0.848	0.225	3.146	3.106	0.011
STAND ERR	1.6	156.5	0.0	0.4	5.22	0.379	0.101	1.407	1.389	0.005

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1735	21.0	1120.0	570.6	30.0	55.9	253.7	163.0	5.5	113.0	
84/11/13 0820	42.0	1596.0	933.0	31.1	141.0	205.0	189.0	4.7	173.0	370.0
84/11/13 1400	12.0									
84/11/14 0835	64.0									
84/11/14 1315	28.0	1782.0	908.5	39.0	121.0	341.3	220.0	6.6	168.0	
00/00/00										
STATION NUMBER	5	3	3	3	3	3	3	3	3	1
MAXIMUM	64.0	1782.0	933.0	39.0	141.0	341.3	220.0	6.6	173.0	370.0
MINIMUM	12.0	1120.0	570.6	30.0	55.9	205.0	163.0	4.7	113.0	370.0
MEAN	33.4	1499.3	804.0	33.4	106.0	266.7	190.7	5.6	151.3	370.0
STAND DEV	20.3	341.4	202.5	4.9	44.5	69.1	28.5	1.0	33.3	
STAND ERR	9.1	197.1	116.9	2.8	25.7	39.9	16.5	0.6	19.2	
99/99/99										

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1735	5.0	120.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 85/06/24
SJR401.000125 SJR401000125 SJR121
36 47 24.0 108 43 38.0 4
SAN JUAN RIVER ABOVE SHIPROCK WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419
0000 FEET DEPTH

DATE FROM TO		00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1720		10.0	394.0	8.1	10.1	108.00	0.090	0.380	0.010	0.310	0.000
84/11/13 0810		5.9	439.0	8.1	10.0	97.00	0.080	0.530	0.040	0.290	0.001
84/11/13 1430		8.9	451.0	8.1	10.2	105.00	0.080	0.390	0.020	0.170	0.001
84/11/14 0825		6.0	439.0	8.0	10.1	97.00	0.090	0.390	0.010	0.200	0.000
84/11/14 1305		8.9	436.0	8.1	10.3	107.00	0.110	0.360	0.050	0.090	0.001
00/00/00											
STATION	NUMBER	5	5	5	5	5	5	5	5	5	5
	MAXIMUM	10.0	451.0	8.1	10.3	108.00	0.110	0.530	0.050	0.310	0.001
	MINIMUM	5.9	394.0	8.0	10.0	97.00	0.080	0.360	0.010	0.090	0.000
	MEAN	7.9	431.8	8.1	10.1	102.80	0.090	0.410	0.026	0.212	0.001
	STAND DEV	1.9	21.9	0.0	0.1	5.40	0.012	0.068	0.018	0.090	0.000
	STAND ERR	0.8	9.8	0.0	0.1	2.42	0.005	0.030	0.008	0.040	0.000

DATE FROM TO		00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1720		132.0	291.0	138.1	9.8	17.8	125.7	51.7	1.9	32.2	
84/11/13 0810		113.0	314.0	137.4	8.4	19.1	154.6	52.8	1.9	32.2	140.0
84/11/13 1430		85.0									
84/11/14 0825		75.0									
84/11/14 1305		123.0	286.0	128.8	8.4	102.0	129.9	51.1	2.3	32.2	
00/00/00											
STATION	NUMBER	5	3	3	3	3	3	3	3	3	1
	MAXIMUM	132.0	314.0	138.1	9.8	102.0	154.6	52.8	2.3	32.2	140.0
	MINIMUM	75.0	286.0	128.8	8.4	17.8	125.7	51.1	1.9	32.2	140.0
	MEAN	105.6	297.0	134.8	8.9	46.3	136.7	51.9	2.1	32.2	140.0
	STAND DEV	24.6	14.9	5.2	0.8	48.2	15.6	0.9	0.2	0.0	
	STAND ERR	11.0	8.6	3.0	0.5	27.9	9.0	0.5	0.1	0.0	

DATE FROM TO		01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1720		5.0	100.0	1.0	5.0	5.0	0.5	5.0	1.0

STORET RETRIEVAL DATE 85/07/19
SJR403.002510 SJR403002510
36 45 16.0 108 08 28.0 4
ANIMAS RIVER ABOVE FARMINGTON NM
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO
21NRIEX 850419
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

DATE FROM TO		00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12	1440	9.3	474.0	8.4	11.8	125.00	0.040	0.160	0.010	0.070	0.001
84/11/13	1000	4.9	461.0	8.2	11.5	110.00	0.030	0.160	0.090	0.210	0.002
84/11/13	1625	8.0	472.0	8.3	10.9	113.00	0.040	0.160	0.010	0.120	0.000
84/11/14	1050	6.0	476.0	8.1	11.3	111.00	0.040	0.180	0.410	0.430	0.008
84/11/14	1520	8.5	485.0	8.4	10.9	114.00	0.090	0.170	0.120	0.200	0.006
00/00/00											
STATION	NUMBER	5	5	5	5	5	5	5	5	5	5
	MAXIMUM	9.3	485.0	8.4	11.8	125.00	0.090	0.180	0.410	0.430	0.008
	MINIMUM	4.9	461.0	8.1	10.9	110.00	0.030	0.160	0.010	0.070	0.000
	MEAN	7.3	473.6	8.3	11.3	114.60	0.048	0.166	0.128	0.206	0.003
	STAND DEV	1.8	8.6	0.1	0.4	6.03	0.024	0.009	0.165	0.138	0.004
	STAND ERR	0.8	3.9	0.1	0.2	2.69	0.011	0.004	0.074	0.062	0.002

DATE FROM TO		00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12	1440	29.0	311.0	135.3	15.9	14.0	156.9	73.7	2.7	25.3	
84/11/13	1000	15.0	322.0	130.1	13.6	13.6	161.9	74.8	2.7	23.0	0.0
84/11/13	1625	18.0									
84/11/14	1050	37.0									
84/11/14	1520	101.0	350.0	137.4	16.6	19.1	154.1	70.4	2.3	27.6	
00/00/00											
STATION	NUMBER	5	3	3	3	3	3	3	3	3	1
	MAXIMUM	101.0	350.0	137.4	16.6	19.1	161.9	74.8	2.7	27.6	0.0
	MINIMUM	15.0	311.0	130.1	13.6	13.6	154.1	70.4	2.3	23.0	0.0
	MEAN	40.0	327.7	134.3	15.4	15.6	157.6	73.0	2.6	25.3	0.0
	STAND DEV	35.2	20.1	3.8	1.6	3.1	4.0	2.3	0.2	2.3	
	STAND ERR	15.7	11.6	2.2	0.9	1.8	2.3	1.3	0.1	1.3	

DATE FROM TO		01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12	1440	5.0	100.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00									

STORET RETRIEVAL DATE 85/06/24
SJR122 SJR401000115
36 46 35.0 108 43 55.0 4
SAN JUAN RIVER BELOW SHIPROCK
35024 NEW MEXICO
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080105
0001 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONZD NH3-NH3 MG/L
84/11/12 1745	9.8	398.0	8.0	10.2	108.00	0.110	0.320	0.080	0.210	0.002
84/11/13 0830	6.1	400.0	8.0	9.0	95.00	0.110	0.320	0.010	0.200	0.000
84/11/13 1450	8.8	410.0	8.1	10.1	105.00	0.150	0.340	0.040	0.060	0.001
84/11/14 0845	6.8	405.0	8.1	10.3	101.00	0.160	0.340	0.010	0.100	0.000
84/11/14 1325	8.5	406.0	8.1	10.1	104.00	0.140	0.320	0.050	0.070	0.001
00/00/00										
STATION NUMBER	5	5	5	5	5	5	5	5	5	5
MAXIMUM	9.8	410.0	8.1	10.3	108.00	0.160	0.340	0.080	0.210	0.002
MINIMUM	6.1	398.0	8.0	9.0	95.00	0.110	0.320	0.010	0.060	0.000
MEAN	8.0	403.8	8.1	9.9	102.60	0.134	0.328	0.038	0.128	0.001
STAND DEV	1.5	4.8	0.1	0.5	4.93	0.023	0.011	0.029	0.072	0.001
STAND ERR	0.7	2.2	0.0	0.2	2.20	0.010	0.005	0.013	0.032	0.000

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/12 1745	201.0	252.0	125.4	9.8	12.4		50.5	2.3	29.9	
84/11/13 0830	155.0	244.0	125.4	8.4	12.3	129.7	53.6	1.9	29.9	200.0
84/11/13 1450	81.0									
84/11/14 0845	148.0									
84/11/14 1325	191.0	280.0	123.9	4.1	12.2	128.3	51.4	3.1	36.8	
00/00/00										
STATION NUMBER	5	3	3	3	3	2	3	3	3	1
MAXIMUM	201.0	280.0	125.4	9.8	12.4	129.7	53.6	3.1	36.8	200.0
MINIMUM	81.0	244.0	123.9	4.1	12.2	128.3	50.5	1.9	29.9	200.0
MEAN	155.2	258.7	124.9	7.4	12.3	129.0	51.8	2.5	32.2	200.0
STAND DEV	47.3	18.9	0.9	3.0	0.1	1.0	1.6	0.6	4.0	
STAND ERR	21.1	10.9	0.5	1.7	0.1	0.7	0.9	0.3	2.3	

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/12 1745	5.0	120.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 85/06/24
SJR402.001510 SJR402001510 09367500
36 44 23.0 108 14 51.0 4
LA PLATA RIVER NR FARMINGTON, NM
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419
0000 FEET DEPTH

DATE FROM TO	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00400 PH SU	00300 DO MG/L	00301 DO SATUR PERCENT	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00619 UN-IONIZD NH3-NH3 MG/L
84/11/13 0935	4.9	1612.0	8.1	10.1	96.00	0.030	0.440	0.010	0.170	0.000
84/11/13 1600	8.9	1653.0	8.3	9.8	104.00	0.020	0.450	0.010	0.170	0.000
84/11/14 1030	7.8	1734.0	8.1	10.0	103.00	0.020	0.400	0.010	0.150	0.000
84/11/14 1455	10.0	1885.0	8.3	10.0	108.00	0.010	0.380	0.040	0.340	0.002
00/00/00										
STATION NUMBER	4	4	4	4	4	4	4	4	4	4
MAXIMUM	10.0	1885.0	8.3	10.1	108.00	0.030	0.450	0.040	0.340	0.002
MINIMUM	4.9	1612.0	8.1	9.8	96.00	0.010	0.380	0.010	0.150	0.000
MEAN	7.9	1721.0	8.2	10.0	102.75	0.020	0.417	0.017	0.207	0.001
STAND DEV	2.2	120.5	0.1	0.1	4.99	0.008	0.033	0.015	0.089	0.001
STAND ERR	1.1	60.3	0.1	0.1	2.50	0.004	0.017	0.007	0.044	0.000

DATE FROM TO	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00945 SULFATE SO4-TOT MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	31616 FEC COLI MFM-FCBR /100ML
84/11/13 0935	76.0	1398.0	775.8	54.7	149.0	174.2	142.0	2.7	140.0	30.0
84/11/13 1600	49.0	1476.0	782.7	51.6	121.0	228.4	162.0	234.0	136.0	
84/11/14 1030	97.0									
84/11/14 1455	53.0	1506.0	808.7	56.5	120.0	206.1	162.0	2.7	154.0	
00/00/00										
STATION NUMBER	4	3	3	3	3	3	3	3	3	1
MAXIMUM	97.0	1506.0	808.7	56.5	149.0	228.4	162.0	234.0	154.0	30.0
MINIMUM	49.0	1398.0	775.8	51.6	120.0	174.2	142.0	2.7	136.0	30.0
MEAN	68.7	1460.0	789.1	54.3	130.0	202.9	155.3	79.8	143.3	30.0
STAND DEV	22.3	55.7	17.3	2.5	16.5	27.2	11.5	133.5	9.5	
STAND ERR	11.1	32.2	10.0	1.4	9.5	15.7	6.7	77.1	5.5	
99/99/99										

DATE FROM TO	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L
84/11/13 1600	5.0	100.0	1.0	5.0	5.0	0.5	5.0	1.0
00/00/00								

STORET RETRIEVAL DATE 89/10/16 PGM=RET
ND
36 48 35.0 107 36 23.0 4
NAVAJO RESERVOIR TOWARDS THE DAM
35039 NEW MEXICO RIO ARRIBA
110291
/TYPA/AMBNT/LAKE
21NMEX 14080101019 0000.100 ON
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00054 RESVOIR STORAGE AC-FT	82079 TURBIDTY LAB NTU	00078 TRANSP SECCHI METERS	00079 COLOR FORL-ULE SCALE	00204 DEPTH-M 1% LIGHT REMAINS	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00600 TOTAL N N MG/L
89/06/15	1110	VERT	7.5	1404460	5.6	4.50	6	7.5	80	97	3K	168	.49K
89/08/16	1050	VERT	8.5	1360490	3.2	5.40	3	8.5	81	98	3K	154	.23K
89/10/25	1025	VERT	8	1293690	1.8	5.00	6	8.0	83	102	3K	170	.21C

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00605 ORG N N MG/L	00608 NH3+NH4-N DISS MG/L	00610 NH3+NH4-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N TOTAL MG/L	00631 NO2&NO3 N-DISS MG/L	00640 T INORG. NITROGEN MG/L N	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P	00671 PHOS-DIS ORTHO MG/L P
89/06/15	1110	VERT	7.5	.330C	.140	.100K	.430	.04K	.04K	.14K	.040	.020	.010K
89/08/16	1050	VERT	8.5	.140K	.120	.100K	.190	.04K	.06	.09K	.020	.010	.010K
89/10/25	1025	VERT	8	.070C	.140	.100K	.170	.04K	.04K	.14C	.010K	.010K	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00900 TOT HARD CACO3 MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00930 SODIUM NA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00946 SULFATE SO4-DISS MG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L
89/06/15	1110	VERT	7.5	230	40.0	31.7	19.00	11.00	19	36.3	5K	100K	1K
89/08/16	1050	VERT	8.5	118	36.0	6.7	12.00	2.00	5K	36.7	5K	100K	1K
89/10/25	1025	VERT	8	145	36.0	13.4	13.00	3.00	5K	34.5	5K	120	1K

Appendix 8a. Water quality data for Navajo Reservoir, 1989 (New Mexico Department of the Environment 1990)

STORET RETRIEVAL DATE 89/10/16 PGM=RET
NG
36 52 38.0 107 29 34.0 4
NAVAJO RESERVOIR AT GOOSENECK
35039 NEW MEXICO RIO ARRIBA
110291
/TYPA/AMBNT/LAKE
21NMEX 14080101023 0002.760 ON
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00054 RESVOIR STORAGE AC-FT	82079 TURBIDTY LAB NTU	00078 TRANSP SECCHI METERS	00079 COLOR FORL-ULE SCALE	00204 DEPTH-M 1% LIGHT REMAINS	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00600 TOTAL N N MG/L
89/06/15	1000	VERT	11	1404460	1.8	4.40	7	11.0	79	96	3K	166	.68K
89/08/16	0950	VERT	8	1360490	1.8	4.30	4	8.0	82	100	3K	156	.27K
89/10/25	0925	VERT	5.6	1293690	3.4	3.00	7	5.6	88	107	3K	173	.33C

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00605 ORG N N MG/L	00608 NH3+NH4- N DISS MG/L	00610 NH3+NH4- N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00631 NO2&NO3 N-DISS MG/L	00640 T INORG. NITROGEN MG/L N	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P	00671 PHOS-DIS ORTHO MG/L P
89/06/15	1000	VERT	11	.540C	.100K	.100K	.640	.04K	.04K	.14K	.040	.030	.010K
89/08/16	0950	VERT	8	.160K	.100K	.100K	.210	.06	.08	.11K	.020	.010	.010K
89/10/25	0925	VERT	5.6	.190C	.100	.100K	.290	.04K	.04K	.14C	.010K	.010K	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00900 TOT HARD CACO3 MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00930 SODIUM NA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00946 SULFATE SO4-DISS MG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L
89/06/15	1000	VERT	11	190	40.0	22.0	13.00	2.00	10K	36.7			
89/08/16	0950	VERT	8	118	36.0	6.7	12.00	2.00	5K	36.4			
89/10/25	0925	VERT	5.6	135	38.0	9.8	14.00	3.00	5K	31.5			

STORET RETRIEVAL DATE 89/10/16 PGM=RET
NS
36 49 55.0 107 35 58.0 4
NAVAJO RESERVOIR NEAR SIMS MESA
35039 NEW MEXICO RIO ARRIBA
110291
/TYPA/AMBNT/LAKE
21NWEX NQ 14080101020 0000.970 OFF
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00054 RESVOIR STORAGE AC-FT	82079 TURBIDTY LAB NTU	00078 TRANSP SECCHI METERS	00079 COLOR FORL-ULE SCALE	00204 DEPTH-M 1% LIGHT REMAINS	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00530 RESIDUE TOT NFLT MG/L	70300 RESIDUE DISS-180 C MG/L	00600 TOTAL N N MG/L
89/06/15	0900	VERT	6	1404460	2.9	4.30	7	6.0	76	93	3K	162	.61K
89/08/16	0840	VERT	7.5	1360490	2.5	4.30	4	7.5	79	97	3K	154	.25K
89/10/25	0825	VERT	6.2	1293690	2.4	3.75	6	6.2	80	98	3K	169	.26C

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00605 ORG N N MG/L	00608 NH3+NH4-N DISS MG/L	00610 NH3+NH4-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00631 NO2&NO3 N-DISS MG/L	00640 T INORG. NITROGEN MG/L N	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P	00671 PHOS-DIS ORTHO MG/L P
89/06/15	0900	VERT	6	.470C	.100	.100K	.570	.04K	.04K	.14K	.040	.030	.010K
89/08/16	0840	VERT	7.5	.140K	.100K	.100K	.210	.04K	.06	.11K	.020	.020	.010K
89/10/25	0825	VERT	6.2	.120C	.100K	.100K	.220	.04K	.04K	.14C	.010K	.010K	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00900 TOT HARD CACO3 MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00930 SODIUM NA,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00946 SULFATE SO4-DISS MG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L
89/06/15	0900	VERT	6	0	40.0	.0	13.00	3.00	10K	37.3			
89/08/16	0840	VERT	7.5	128	36.0	9.2	12.00	2.00	5K	37.1			
89/10/25	0825	VERT	6.2	121	33.0	9.3	13.00	3.00	5K	34.1			

STORET RETRIEVAL DATE 89/10/16 PGM=RET

ND
36 48 35.0 107 36 23.0 4
NAVAJO RESERVOIR TOWARDS THE DAM
35039 NEW MEXICO RIO ARRIBA
110291 /TYPA/AMBNT/LAKE

21NMEX 14080101019 0000.100 ON
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00031 INCDT LT REMNING PERCENT	00095 CNDUCTVY AT 25C MICROMHO	00010 WATER TEMP CENT	00300 DO MG/L	00400 PH SU	31616 FEC COLI MFM-FCBR /100ML
89/06/15	1110	WATER	0	100.0	287	17.3	8.5	8.00	1K
89/06/15	1110	WATER	1	35.0	291	16.4	8.4		
89/06/15	1110	WATER	2	15.0	291	16.1	8.4		
89/06/15	1110	WATER	3	9.0	291	16.0	8.6		
89/06/15	1110	WATER	4	5.5	290	15.9	8.7		
89/06/15	1110	WATER	5	3.0	289	15.8	8.7		
89/06/15	1110	WATER	6	2.0	288	15.7	8.7		
89/06/15	1110	WATER	7	1.2	288	15.7	8.7		
89/06/15	1110	WATER	8	1.0K	287	15.5	8.7		
89/06/15	1110	WATER	9		286	15.5	8.8		
89/06/15	1110	WATER	10		285	15.3	8.9		
89/06/15	1110	WATER	11		287	14.6	8.9		
89/06/15	1110	WATER	12		295	13.8	8.8		
89/06/15	1110	WATER	13		295	13.0	8.7		
89/06/15	1110	WATER	14		297	12.5	8.8		
89/06/15	1110	WATER	15		300	12.2	8.8		
89/06/15	1110	WATER	16		302	11.9	8.7		
89/06/15	1110	WATER	17		302	11.5	8.8		
89/06/15	1110	WATER	18		306	11.0	8.8		
89/06/15	1110	WATER	19		314	10.2	8.9		
89/06/15	1110	WATER	20		318	9.4	8.8		
89/06/15	1110	WATER	21		322	8.7	8.7		
89/06/15	1110	WATER	22		324	8.2	8.7		
89/06/15	1110	WATER	23		331	7.6	8.6		
89/06/15	1110	WATER	24		334	6.7	8.6		
89/06/15	1110	WATER	25		336	6.3	9.0		
89/06/15	1110	WATER	26		340	6.0	8.9		
89/06/15	1110	WATER	27		342	5.6	9.4		
89/06/15	1110	WATER	28		346	5.4	9.6		
89/06/15	1110	WATER	29		347	4.9			
89/06/15	1110	WATER	30		348	4.6			
89/06/15	1110	WATER	35		353	3.9			
89/06/15	1110	WATER	40		358	3.4			
89/06/15	1110	WATER	45		362	2.9			
89/06/15	1110	WATER	49		365	2.8			
89/08/16	1050	WATER	0	100.0	258	21.6	6.5	8.30	1K
89/08/16	1050	WATER	1	28.0	258	21.3	6.5		
89/08/16	1050	WATER	2	24.0	258	21.0	6.6		
89/08/16	1050	WATER	3	14.0	258	21.0	6.7		
89/08/16	1050	WATER	4	7.0	258	20.9	6.7		
89/08/16	1050	WATER	5	4.5	257	20.9	6.7		
89/08/16	1050	WATER	6	3.1	257	20.8	6.8		
89/08/16	1050	WATER	7	2.0	257	20.8	6.8		
89/08/16	1050	WATER	8	1.4	257	20.8	6.8		
89/08/16	1050	WATER	9		258	20.7	6.8		
89/08/16	1050	WATER	10		266	19.8	6.8		
89/08/16	1050	WATER	11		272	18.6	6.7		
89/08/16	1050	WATER	12		266	17.2	4.2		
89/08/16	1050	WATER	13		263	15.7	4.0		
89/08/16	1050	WATER	14		262	14.8	4.1		
89/08/16	1050	WATER	15		260	14.3	4.2		
89/08/16	1050	WATER	16		261	13.4	4.4		
89/08/16	1050	WATER	17		262	12.6	4.6		
89/08/16	1050	WATER	18		262	11.9	4.7		
89/08/16	1050	WATER	19		263	11.5	4.9		
89/08/16	1050	WATER	20		263	10.8	5.0		
89/08/16	1050	WATER	21		263	10.3	5.1		
89/08/16	1050	WATER	22		264	9.9	5.3		
89/08/16	1050	WATER	23		265	9.6	5.6		
89/08/16	1050	WATER	24		268	8.8	5.8		
89/08/16	1050	WATER	25		271	8.3	5.9		
89/08/16	1050	WATER	26		273	7.9	6.0		
89/08/16	1050	WATER	27		274	6.9	4.2		
89/08/16	1050	WATER	28		276	6.2			
89/08/16	1050	WATER	29		277	5.6			
89/08/16	1050	WATER	30		278	5.4			
89/08/16	1050	WATER	35		278	4.5			
89/08/16	1050	WATER	40		278	3.9			
89/08/16	1050	WATER	45		279	3.4			
89/08/16	1050	WATER	49		279	3.1			

Appendix 8b. Physical water quality data for Navajo Reservoir by depth, 1989 (New Mexico Department of the Environment 1990)

STORET RETRIEVAL DATE 89/10/16 PGM=RET
NG
36 52 38.0 107 29 34.0 4
NAVAJO RESERVOIR AT GOOSENECK
35039 NEW MEXICO RIO ARRIBA
110291
/TYPA/AMBNT/LAKE
21NMEX 14080101023 0002.760 ON
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00031 INCDT LT REMNING PERCENT	00095 CNDUCTVY AT 25C MICROMHO	00010 WATER TEMP CENT	00300 DO MG/L	00400 PH SU	31616 FEC COLI MFM-FCBR /100ML
89/06/15	1000	WATER	0	100.0	240	16.1	8.2	7.90	1K
89/06/15	1000	WATER	1	97.0	240	15.9	8.2		
89/06/15	1000	WATER	2	88.0	240	15.7	8.4		
89/06/15	1000	WATER	3	60.0	241	15.6	8.4		
89/06/15	1000	WATER	4	32.0	242	15.4	8.4		
89/06/15	1000	WATER	5	19.0	241	15.3	8.6		
89/06/15	1000	WATER	6	9.4	241	15.2	8.6		
89/06/15	1000	WATER	7	6.8	241	15.2	8.6		
89/06/15	1000	WATER	8	4.4	241	15.1	8.8		
89/06/15	1000	WATER	9	3.0	242	15.1	8.8		
89/06/15	1000	WATER	10	1.8	244	15.1	8.8		
89/06/15	1000	WATER	11	1.0	245	14.7	8.8		
89/06/15	1000	WATER	12		240	13.0	8.8		
89/06/15	1000	WATER	13		244	12.4	8.8		
89/06/15	1000	WATER	14		245	11.9	8.8		
89/06/15	1000	WATER	15		246	11.7	8.8		
89/06/15	1000	WATER	16		247	11.6	8.8		
89/06/15	1000	WATER	17		247	11.3	8.8		
89/06/15	1000	WATER	18		248	9.8	8.7		
89/06/15	1000	WATER	19		247	9.5	8.7		
89/06/15	1000	WATER	20		249	8.7	8.9		
89/06/15	1000	WATER	21		252	8.2	8.9		
89/06/15	1000	WATER	22		253	7.2	9.0		
89/06/15	1000	WATER	23		254	6.7	9.1		
89/06/15	1000	WATER	24		255	6.5	9.4		
89/06/15	1000	WATER	25		254	5.9	9.6		
89/06/15	1000	WATER	26		255	5.4	9.8		
89/06/15	1000	WATER	27		256	5.1	10.0		
89/06/15	1000	WATER	28		259	4.8			
89/06/15	1000	WATER	29		258	4.6			
89/06/15	1000	WATER	30		259	4.5			
89/06/15	1000	WATER	35		258	4.0			
89/06/15	1000	WATER	40		257	3.4			
89/06/15	1000	WATER	45		257	2.8			
89/06/15	1000	WATER	49		259	2.6			
89/08/16	0950	WATER	0	100.0	256	20.8	6.5	8.40	3
89/08/16	0950	WATER	1	30.0	256	20.7	6.5		
89/08/16	0950	WATER	2	18.0	256	20.7	6.5		
89/08/16	0950	WATER	3	8.0	255	20.7	6.6		
89/08/16	0950	WATER	4	5.0	255	20.6	6.6		
89/08/16	0950	WATER	5	3.0	256	20.6	6.7		
89/08/16	0950	WATER	6	2.0	256	20.6	6.7		
89/08/16	0950	WATER	7	1.5	255	20.5	6.8		
89/08/16	0950	WATER	8	1.0	254	20.5	6.8		
89/08/16	0950	WATER	9		253	20.5	6.7		
89/08/16	0950	WATER	10		264	20.3	6.7		
89/08/16	0950	WATER	11		272	18.6	6.7		
89/08/16	0950	WATER	12		262	16.9	6.7		
89/08/16	0950	WATER	13		259	15.2	5.6		
89/08/16	0950	WATER	14		259	14.4	5.2		
89/08/16	0950	WATER	15		259	13.9	5.1		
89/08/16	0950	WATER	16		259	13.5	5.0		
89/08/16	0950	WATER	17		260	12.7	5.0		
89/08/16	0950	WATER	18		260	12.1	5.0		
89/08/16	0950	WATER	19		261	11.5	5.1		
89/08/16	0950	WATER	20		261	10.7	5.1		
89/08/16	0950	WATER	21		262	10.1	5.2		
89/08/16	0950	WATER	22		263	9.6	5.4		
89/08/16	0950	WATER	23		265	9.2	5.5		
89/08/16	0950	WATER	24		266	8.7	5.7		
89/08/16	0950	WATER	25		266	7.9	5.7		
89/08/16	0950	WATER	26		267	6.8	5.8		
89/08/16	0950	WATER	27		268	6.4	6.0		
89/08/16	0950	WATER	28		270	6.1			
89/08/16	0950	WATER	29		270	5.9			
89/08/16	0950	WATER	30		272	5.6			
89/08/16	0950	WATER	35		277	4.6			
89/08/16	0950	WATER	40		275	3.9			
89/08/16	0950	WATER	45		276	3.4			
89/08/16	0950	WATER	49		274	2.9			

STORET RETRIEVAL DATE 89/10/16 PGM=RET

NS
36 49 55.0 107 35 58.0 4
NAVAJO RESERVOIR NEAR SIMS MESA
35039 NEW MEXICO RIO ARRIBA
110291

/TYPA/AMBNT/LAKE

21NMEX WQ 14080101020 0000.970 OFF
0050 METERS DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (M)	00031 INCDT LT REMNING PERCENT	00095 CNDUCTVY AT 25C MICROMHO	00010 WATER TEMP CENT	00300 DO MG/L	00400 PH SU	31616 FEC COLI MFM-FCBR /100ML
89/06/15	0900	WATER	0	100.0	233	15.9	8.2	8.00	1K
89/06/15	0900	WATER	1	20.0	233	15.8	8.2		
89/06/15	0900	WATER	2	8.0	233	15.7	8.2		
89/06/15	0900	WATER	3	4.5	234	15.5	8.2		
89/06/15	0900	WATER	4	2.4	234	15.3	8.2		
89/06/15	0900	WATER	5	1.5	235	15.2	8.2		
89/06/15	0900	WATER	6	1.0	235	15.2	8.2		
89/06/15	0900	WATER	7	1.0K	236	15.1	8.2		
89/06/15	0900	WATER	8		238	15.0	8.2		
89/06/15	0900	WATER	9		238	14.8	8.2		
89/06/15	0900	WATER	10		237	14.1	8.2		
89/06/15	0900	WATER	11		234	13.7	8.2		
89/06/15	0900	WATER	12		227	13.5	8.2		
89/06/15	0900	WATER	13		226	13.2	8.2		
89/06/15	0900	WATER	14		229	13.0	8.0		
89/06/15	0900	WATER	15		232	12.8	8.0		
89/06/15	0900	WATER	16		241	12.6	8.0		
89/06/15	0900	WATER	17		241	12.1	8.0		
89/06/15	0900	WATER	18		242	11.8	8.0		
89/06/15	0900	WATER	19		243	11.2	8.0		
89/06/15	0900	WATER	20		246	10.7	8.2		
89/06/15	0900	WATER	21		247	10.2	8.1		
89/06/15	0900	WATER	22		247	9.0	8.2		
89/06/15	0900	WATER	23		248	8.5	8.4		
89/06/15	0900	WATER	24		249	8.3	8.4		
89/06/15	0900	WATER	25		249	7.8	8.6		
89/06/15	0900	WATER	26		250	7.2	8.8		
89/06/15	0900	WATER	27		253	6.7	8.9		
89/06/15	0900	WATER	28		255	6.2			
89/06/15	0900	WATER	29		256	5.8			
89/06/15	0900	WATER	30		257	5.6			
89/06/15	0900	WATER	35		259	4.7			
89/06/15	0900	WATER	40		260	4.0			
89/06/15	0900	WATER	45		260	3.6			
89/06/15	0900	WATER	49		260	3.1			
89/08/16	0840	WATER	0	100.0	247	20.2	6.5	8.50	1K
89/08/16	0840	WATER	1	26.0	247	20.3	6.5		
89/08/16	0840	WATER	2	12.0	247	20.3	6.5		
89/08/16	0840	WATER	3	9.0	247	20.3	6.5		
89/08/16	0840	WATER	4	4.2	247	20.3	6.5		
89/08/16	0840	WATER	5	2.8	247	20.2	6.5		
89/08/16	0840	WATER	6	1.8	248	20.2	6.5		
89/08/16	0840	WATER	7	1.2	248	20.2	6.6		
89/08/16	0840	WATER	8		248	20.2	6.6		
89/08/16	0840	WATER	9		248	20.2	6.6		
89/08/16	0840	WATER	10		250	20.2	6.6		
89/08/16	0840	WATER	11		255	18.5	6.5		
89/08/16	0840	WATER	12		261	16.9	6.4		
89/08/16	0840	WATER	13		255	15.7	5.0		
89/08/16	0840	WATER	14		252	15.0	4.8		
89/08/16	0840	WATER	15		252	14.3	4.8		
89/08/16	0840	WATER	16		251	13.6	4.8		
89/08/16	0840	WATER	17		251	13.1	4.8		
89/08/16	0840	WATER	18		251	12.2	4.8		
89/08/16	0840	WATER	19		252	11.4	4.8		
89/08/16	0840	WATER	20		251	10.7	5.1		
89/08/16	0840	WATER	21		251	10.1	5.2		
89/08/16	0840	WATER	22		250	9.5	5.4		
89/08/16	0840	WATER	23		253	8.8	5.5		
89/08/16	0840	WATER	24		255	8.5	5.5		
89/08/16	0840	WATER	25		256	8.1	6.0		
89/08/16	0840	WATER	26		259	7.9	6.2		
89/08/16	0840	WATER	27		261	7.1	6.3		
89/08/16	0840	WATER	28		264	6.3			
89/08/16	0840	WATER	29		265	6.0			
89/08/16	0840	WATER	30		269	5.8			
89/08/16	0840	WATER	35		277	4.6			
89/08/16	0840	WATER	40		278	3.9			
89/08/16	0840	WATER	45		281	3.6			
89/08/16	0840	WATER	49		283	3.3			

TAXON NAME	DATES COLLECTED 89/06/15	89/08/16	89/10/25
1. Dinobryon	357(74.4%)	--0--	3 (2.44)
2. Cyclotella	57 (11.9)	--0--	--0--
3. Chlamydomonas	3 (0.62)	3 (9.1)	6 (4.9)
4. Ankistrodesmus	3 (0.62)	--0--	--0--
5. Chroomonas	3 (0.62)	12 (36.4)	87 (70.7)
6. Cryptomonas	57 (11.9)	6 (18.2)	18 (14.6)
7. Pandorina	--0--	3 (9.1)	--0--
8. Oocystis	--0--	3 (9.1)	--0--
9. Closterium	--0--	3 (9.1)	--0--
10. Staurastrum	--0--	3 (9.1)	3 (2.44)
11. Carteria	--0--	--0--	3 (2.44)
12. Ankyra	--0--	--0--	3 (2.44)
TOTAL	480	33	123

ANALYSES:

Taxa Richness	6	7	7
Shannon-Wiener Diversity Index	1.185	2.550	1.494
Evenness	0.458	0.908	0.532

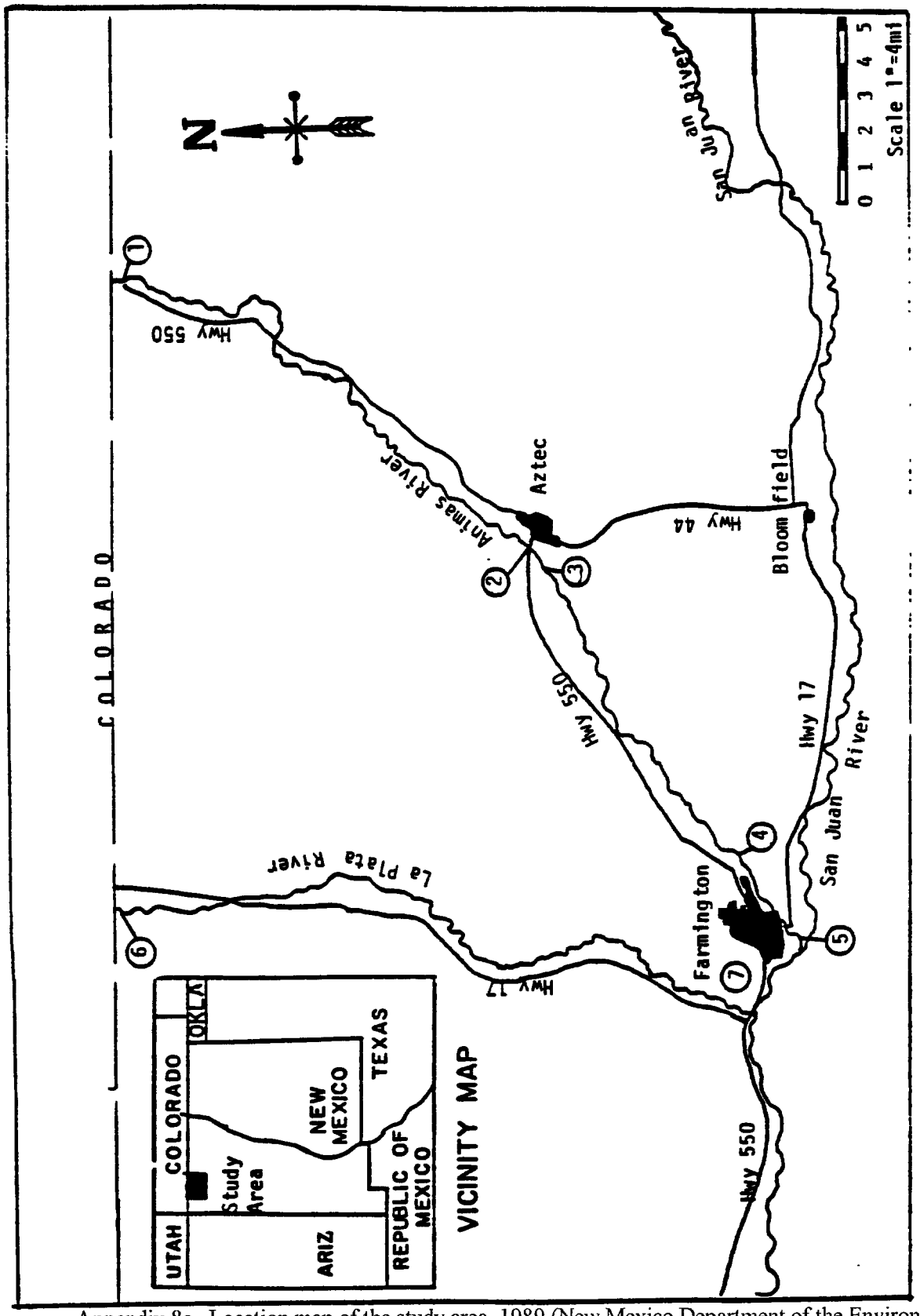
Appendix 8c. Bios retrieval for phytoplankton samples collected from Navajo Reservoir @ dam (ND) (New Mexico Department of the Environment 1990)

TAXON NAME	DATES COLLECTED 09/06/15	89/08/16	89/10/25
1. Dinobryon	282(75.8%)	--0--	--0--
2. Cyclotella	18 (4.84)	--0--	3 (2.3)
3. Chlamydomonas	3 (0.81)	--0--	9 (7.0)
4. Ankistrodesmus	6 (1.61)	--0--	--0--
5. Chroomonas	12 (3.23)	15 (41.7)	57 (44.2)
6. Cryptomonas	24 (6.45)	9 (25.0)	39 (30.2)
7. Pandorina	--0--	--0--	3 (2.3)
8. Oocystis	--0--	--0--	12 (9.3)
9. Closterium	3 (0.81)	--0--	--0--
10. Ankyra	3 (0.81)	--0--	3 (2.3)
11. Euglena	18 (4.8)	--0--	3 (2.3)
12. Asterionella	3 (0.81)	--0--	--0--
13. Aphanizomenon	--0--	6 (16.7)	--0--
14. Anabaena	--0--	3 (8.3)	--0--
15. Ceratium	--0--	3 (8.3)	--0--
TOTAL	372	36	129

ANALYSES:

Taxa Richness	10	5	8
Shannon-Wiener Diversity Index	1.461	2.055	2.134
Evenness	0.440	0.885	0.711

Appendix 8d. Bios retrieval for phytoplankton samples collected from Navajo Reservoir @ Gooseneck (NG) (New Mexico Department of the Environment 1990)



Appendix 8e Location map of the study area, 1989 (New Mexico Department of the Environment 1990)

STORET RETRIEVAL DATE 89/12/20 PAGE 1

SJR04.007095 SJR04003095

36 59 39.0 107 57 00.0 5

FARMINGTON, RIVER 3 COLORADO STATE LINE

35005 NON TIDAL SAN JUAN

COLORADO PLATEAU PAWN 110,00

HYDROLOGIC COLORADO RIVER /TYPA AMBNT/STREAM/BIO

.HUC: 09021 14080105

0000 FEET DEPTH 1806 METERS ELEVATION

220 ARIZ

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CONDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1235	WATER		17.5	511	9.5	8.60	.010	.05	.100K	.15	.150	.050
89/08/22	1100	WATER		16.1	522	9.2	8.40	.010	.06	.100K	.16	.170	.070
89/08/22	1120	WATER		17.4	525	10.0	8.50	.020	.05	.100K	.15	.110	.010
89/08/23	1120	WATER		16.5	479	9.8	8.40	.010K	.04K	.100K	.14	.520	.420
89/08/23	1130	WATER		17.1	469	10.7	8.50	.010K	.04K	.100K	.14	.190	.090

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UNIONIZD NH3 N MG/L	70300 RESIDUE DISS 180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MAGNESIUM MG,DISS MG/L	00935 POTASSIUM K,DISS MG/L
89/08/21	1235	WATER		.20	0.01	340	8	141	172	80.0	19	1.8	5.00
89/08/22	1100	WATER		.23	0.01	356	8	143	174	76.0	21	1.8	5.00
89/08/22	1120	WATER		.16	0.01	356	11						
89/08/23	1120	WATER		.56	0.01	330	4						
89/08/23	1130	WATER		.23	0.01	322	8	133	163	76.0	17	3.3	9.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4,DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 CADMIUM CD,DISS UG/L	01020 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1235	WATER		24.00	95.9	208	5K	100	1K	5K	5K	.5K	5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01090 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGANESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1235	WATER		1.0K	50K	50K	50.0K	50K	50K				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L	01042 COPPER CU,TOT UG/L	01042 COPPER CU,TOT UG/L	01045 IRON FE,TOT UG/L	01067 NICKEL NI,TOTAL UG/L	01092 ZINC ZN,TOT UG/L	31616 FEC COLI MFM-FCBR /100ML
89/01/24	0825	WATER											1K

Appendix 8f Water quality data collected at sites along the Animas and La Plata rivers, August, 1989 (New Mexico Department of the Environment 1990)

STORET RETRIEVAL DATE 89/12/20 PGM=NET
SJR404.003001 SJR404003001
36 49 35.0 108 00 11.0 5
ANIMAS R @ AZTEC @ HWY 550 BRIDGE
35045 NEW MEXICO SAN JUAN
COLORADO RIVER BASIN 110200
MIDDLE COLORADO RIVER /TYPA/AMBNT/STREAM/BIO
21NMEX 891021 14080105
0000 FEET DEPTH 1708 METERS ELEVATION
22G ARIZ

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1320	WATER		21.5	546	9.0	8.50	.010	.04K	.100K	.14	.180	.080
89/08/22	1020	WATER		17.5	546	9.0.	8.50	.010K	.04K	.100K	.14	.170	.070
89/08/22	1310	WATER		21.2	543	9.3	8.50	.010K	.04K	.100K	.14	.140	.040
89/08/23	1045	WATER		17.9	541	9.2	8.40	.010K	.04K	.100K	.14	.130	.030
89/08/23	1205	WATER		20.0	528	9.5	8.40	.010K	.04K	.100K	.14	.210	.110

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1320	WATER		.22	0.01	354	9	137	167	76.0	19	6.7	4.00
89/08/22	1020	WATER		.21	0.01	364	6	142	174	80.0	21	6.7	4.00
89/08/22	1310	WATER		.18	0.01	366	8						
89/08/23	1045	WATER		.17	0.01	368	5						
89/08/23	1205	WATER		.25	0.01	354	6	131	160	76.0	17	4.3	4.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1320	WATER		27.00	106.0	218	5K	200	1K	5K	5K	.5K	5K
89/08/22	1020	WATER		28.00	117.0	228							
89/08/23	1205	WATER		27.00	99.8	208							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1320	WATER		1.0K	50K	50K	50.0	50K	50K				

			SMK	01051	71900	01147	01077	01042	01042	01045	01067	01092	31616
[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

STORET RETRIEVAL DATE 89/12/20 PGM=RET
SJR402.001510 SJR402001510 09367500
36 44 23.0 108 14 51.0 4
LA PLATA RIVER NR FARMINGTON, NM
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080105023 0000.670 OM
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1550	WATER		31.0	1552	6.6	8.30	.010K	.11	.100K	.21K	.150	.050
89/08/22	1430	WATER		28.8	906	5.5	8.50	2.880	1.47	.160	1.63	11.800	11.640
89/08/22	1610	WATER		28.0	996	5.1	8.50	2.560	1.37	.180	1.55	6.800	6.620
89/08/23	0755	WATER		12.4	1402	8.2	8.30	.120	.64	.100K	.74	1.510	1.410
89/08/23	0915	WATER		15.8	1563	8.2	8.20	.110	.57	.100	.67	.410	.310

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UNI-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1550	WATER		.26	0.01	1218	.5	208	253	116.0	113	39.1	4.00
89/08/22	1430	WATER		13.27	0.03	806	8570	134	164	132.0	28	45.5	7.00
89/08/22	1610	WATER		8.17	0.03	834	3304						
89/08/23	0755	WATER		2.15	0.00	1198	160						
89/08/23	0915	WATER		.98	0.00	1212	125	204	249	140.0	90	47.9	6.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1520	WATER					5K	100K	1K	5K	5K	.5K	5K
89/08/21	1550	WATER		231.00	470.0	452							
89/08/22	1430	WATER		87.00	333.0	517							
89/08/23	0915	WATER		181.00	505.0	547							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1520	WATER		1.0K	50K	50K	150.0	50K	50K				

DATE FROM	TIME OF	SMK OR DEPTH	01051 LEAD PB,TOT	71900 MERCURY HG,TOTAL	01147 SELENIUM SE,TOT	01077 SILVER AG,TOT	01042 COPPER CU,TOT	01042 COPPER CU,TOT	01045 IRON FE,TOT	01067 NICKEL NI,TOTAL	01092 ZINC ZN,TOT	31616 FEC COLI MFM-FCBR
89/08/23	0920 WATER											1200

STORET RETRIEVAL DATE 89/12/20 PGM=RET
SJR403.002530 SJR403002530 NPDES0020168
36 49 24.0 107 59 24.0 5
CITY OF AZTEC MWTP OUTFALL PIPE
35045 NEW MEXICO SAN JUAN
COLORADO RIVER BASIN 110200
MIDDLE COLORADO RIVER BASIN /TYPA/MUN/TREAID/OUTFL/NONAMB/PIPE
21NMEX 891021 14080105
0000 FEET DEPTH 1703 METERS ELEVATION
22G ARIZ

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1450	WATER		22.0	949		7.40	8.450	21.30	.180	21.21	.670	.490
89/08/22	1000	WATER		21.6	940		7.50	7.450	21.60	.120	21.72	1.450	1.330
89/08/22	1325	WATER		22.3	949		7.30	7.960	22.00	.190	22.19	1.550	1.360
89/08/23	1030	WATER		21.5	958		7.20	7.570	21.10	.510	21.61	2.030	1.520
89/08/23	1215	WATER		21.9	961		7.20	8.000	20.30	.980	21.28	2.390	1.410

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UNI-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1450	WATER		21.70	0.00	668	7	95	116	86.0	85	11.3	13.00
89/08/22	1000	WATER		23.05	0.00	668	7	93	114	80.0	88	13.8	13.00
89/08/22	1325	WATER		23.55	0.00	676	6						
89/08/23	1030	WATER		23.13	0.00	668	5						
89/08/23	1215	WATER		22.69	0.01	644	7	113	138	80.0	88	18.7	14.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1450	WATER		96.00	149.0	262	5K	100K	1K	5K	5K	.5K	5K
89/08/22	1000	WATER		95.00	155.0	257							
89/08/23	1215	WATER		99.00	141.0	277							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1450	WATER		1.0K	50K	50K	50.0K	50K	50K				

DATE	TIME	SMK OR	01051 LEAD	71900 MERCURY	01147 SELENIUM	01077 SILVER	01042 COPPER	01042 COPPER	01045 IRON	01067 NICKEL	01092 ZINC	31616 FEC COLI
89 08 [illegible]	[illegible]	WATER										100

STORET RETRIEVAL DATE 89/12/20 PGM=RET
SJR403.002510 SJR403002510
36 45 16.0 108 08 28.0 4
ANIMAS RIVER ABOVE FARMINGTON NM
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM/BIO
21NMEX 850419 14080104001 0005.540 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1435	WATER		22.0	594	8.3	8.50	.010K	.10	.100K	.20	.190	.090
89/08/22	0815	WATER		16.5	608	7.0	8.20	.010K	.08	.100K	.18	.150	.050
89/08/22	1345	WATER		23.2	632	8.8	8.30	.010K	.08	.100K	.18	.220	.120
89/08/23	1005	WATER		17.2	635	8.4	8.20	.010K	.09	.100K	.19	.110	.010
89/08/23	1235	WATER		20.4	650	8.6	8.30	.010K	.09	.100K	.19	.140	.040

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1435	WATER		.29	0.01	412	4	134	164	88.0	18	16.2	4.00
89/08/22	0815	WATER		.23	0.00	442	5	166	202	96.0	19	18.7	4.00
89/08/22	1345	WATER		.30	0.01	386	4						
89/08/23	1005	WATER		.20	0.00	444	4						
89/08/23	1235	WATER		.23	0.01	416	4	140	171	92.0	16	13.8	4.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1435	WATER		34.00	142.0	287	5K	100	1K	5K	5K	.5K	5K
89/08/22	0815	WATER		36.00	157.0	317							
89/08/23	1235	WATER		35.00	134.0	287							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1435	WATER		1.0K	50K	50K	50.0	50K	50K				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L	01042 COPPER CU,TOT UG/L	01042 COPPER CU,TOT UG/L	01045 IRON FE,TOT UG/L	01067 NICKEL NI,TOTAL UG/L	01092 ZINC ZN,TOT UG/L	31616 FEC COLI MFM-FCBR [illegible]

STORET RETRIEVAL DATE 89/12/20 PGM=RET
AR100
36 43 13.0 108 12 07.0 4
ANIMAS R AT FARMINGTON
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER BASIN /TYPA/AMBNT/STREAM
21NMEX 14080104001 0001.090 OR
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1515	WATER		23.0	624	8.1	8.40	.010K	.11	.120	.23	.120	.000
89/08/22	0750	WATER		17.5	621	7.8	8.30	.010K	.10K	.100K	.20K	.100	.000
89/08/22	1410	WATER		24.8	653	8.3	8.40	.010K	.10	.100K	.20	.140	.040
89/08/23	0945	WATER		18.2	625	8.5	8.20	.010K	.10	.100K	.20	.100	.000
89/08/23	1300	WATER		21.4	654	8.3	8.20	.010K	.10	.100K	.20	.130	.030

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1515	WATER		.23	0.01	420	7	143	175	92.0	18	16.2	4.00
89/08/22	0750	WATER		.20	0.01	444	4	159	194	92.0	18	19.9	4.00
89/08/22	1410	WATER		.24	0.01	434	4						
89/08/23	0945	WATER		.20	0.01	444	5						
89/08/23	1300	WATER		.23	0.01	450	6	154	188	96.0	22	13.8	4.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1515	WATER		32.00	164.0	297	5K	100	1K	5K	5K	.5K	5K
89/08/22	0750	WATER		35.00	142.0	312							
89/08/23	1300	WATER		34.00	162.0	297							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1515	WATER		1.0K	50K	50K	50.0K	50K	50K	5K	100K	1K	5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT UG/L	01042 COPPER CU,TOT UG/L	01042 COPPER CU,TOT UG/L	01045 IRON FE,TOT UG/L	01067 NICKEL NI,TOTAL UG/L	01092 ZINC ZN,TOT UG/L	31616 FEC COLI MFM-FCBR /100ML
89/08/21	1515	WATER		5K	.5K	5K	1.0K	50K	50K	50K	50K	50K	200
89/08/24	0930	WATER											

STORET RETRIEVAL DATE 89/12/20 PGM=RET
RSJR402.001595 SJR402001595 USGS09366500
36 59 51.0 108 11 17.0 5
LA PLATA RIVER @ NM-COLORDO STATE LINE
35045 NEW MEXICO SAN JUAN
COLORADO RIVER BASIN 110200
MIDDLE COLORADO RIVER BASIN /TYPA/AMBNT/STREAM/BIO
21NNEX 891021 14080105
0000 FEET DEPTH 1822 METERS ELEVATION
22G ARIZ

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L	00605 ORG N N MG/L
89/08/21	1630	WATER		13.8	330	7.5	8.50	3.110	.60	.330	.93	11.800	11.470
89/08/22	1510	WATER		25.0	1300	7.7	8.40	.010	.23	.100K	.33	.560	.460
89/08/22	1530	WATER		25.2	1305	7.8	8.40	.010K	.23	.100K	.33	.190	.090
89/08/23	0825	WATER		12.3	1216	8.6	8.30	.010K	.30	.100K	.40	.140	.040
89/08/23	0840	WATER		12.5	1225	8.4	8.40	.020	.34	.100	.44	.200	.100

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L
89/08/21	1630	WATER		12.40	0.02	386	3504	136	165	84.0	6	26.0	4.00
89/08/22	1510	WATER		.79	0.01	1078	14	178	217	124.0	36	89.4	3.00
89/08/22	1530	WATER		.42	0.01	1074	12						
89/08/23	0825	WATER		.44	0.00	958	13						
89/08/23	0840	WATER		.54	0.01	1034	12	194	237	128.0	36	77.2	3.00

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00930 SODIUM NA,DISS MG/L	00946 SULFATE SO4-DISS MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L	01145 SELENIUM SE,DISS UG/L
89/08/21	1630	WATER		13.00	94.7	317	5K	100	1K	5K	5K	.5K	5K
89/08/22	1510	WATER		57.00	505.0	677							
89/08/23	0840	WATER		57.00	484.0	637							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01065 NICKEL NI,DISS UG/L	01090 ZINC ZN,DISS UG/L	01002 ARSENIC AS,TOT UG/L	01007 BARIUM BA,TOT UG/L	01027 CADMIUM CD,TOT UG/L	01034 CHROMIUM CR,TOT UG/L
89/08/21	1630	WATER		1.0K	50K	50K	50.0K	50K	50K				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01051 LEAD PB,TOT UG/L	71900 MERCURY HG,TOTAL UG/L	01147 SELENIUM SE,TOT UG/L	01077 SILVER AG,TOT	01042 COPPER CU,TOT	01042 COPPER CU,TOT	01045 IRON FE,TOT	01067 NICKEL NI,TOTAL	01092 ZINC ZN TOT	31616 FEC COLI MEM FCBR

Site 1 (SJR404.003095) Animas River at the Colorado-New Mexico state line.

mottled sculpin (Cottus bairdi)
white sucker (Catostomas commersoni)
speckled dace (Rhinichthys osculus)
bluehead sucker (Catostomus discobolus)

Site 4 (SJR403.002510) Animas River above Farmington.

mottled sculpin (Cottus bairdi)
white sucker (Catostomas commersoni)
speckled dace (Rhinichthys osculus)
bluehead sucker (Catostomus discobolus)

Site 6 (SJR402.001595) La Plata River at Colorado-New Mexico state line.

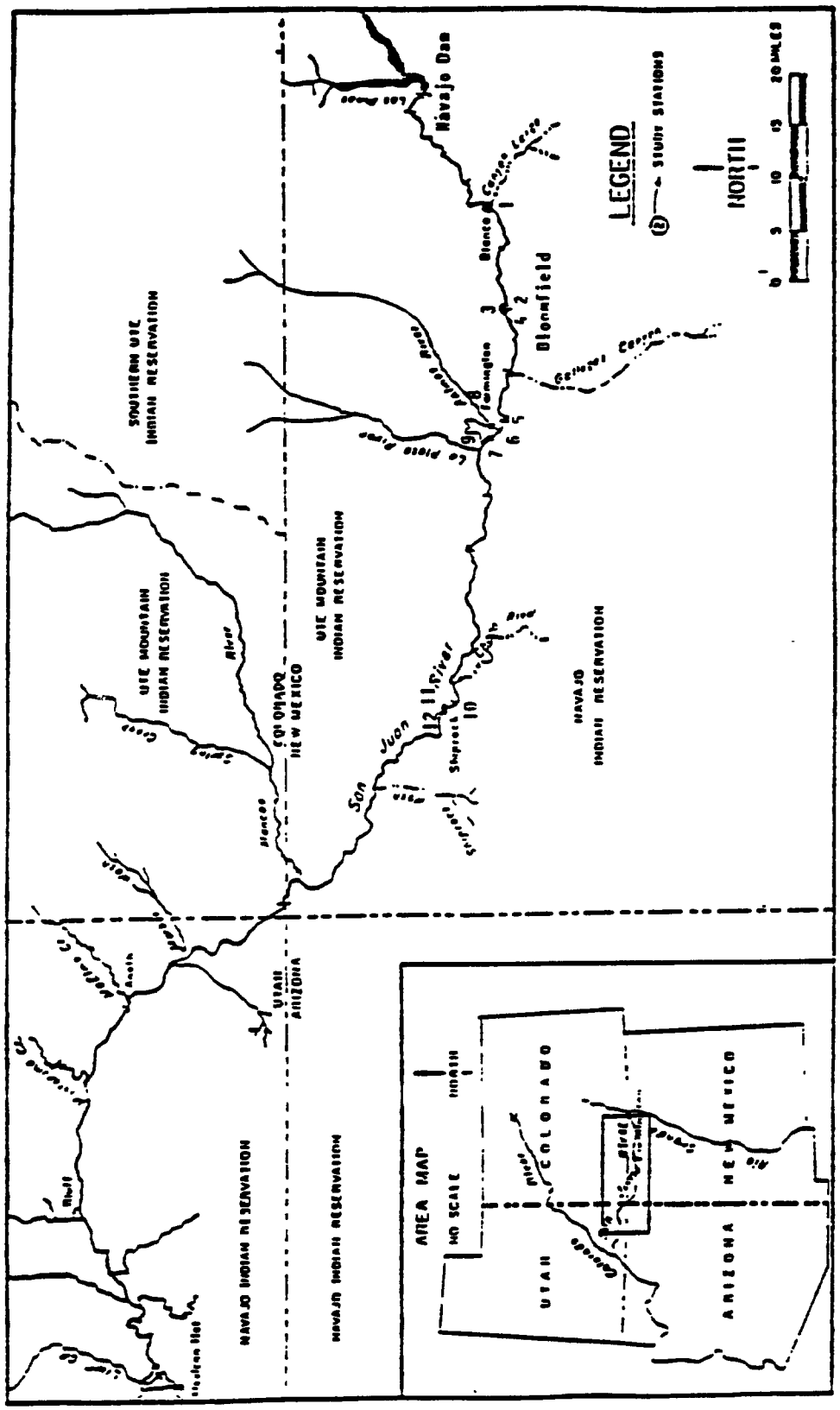
white sucker (Catostomas commersoni)
bluehead sucker (Catostomus discobolus)
speckled dace (Rhinichthys osculus)

Appendix 8g. Species of fish collected at sites on the Animas and La Plata rivers, August 22, 1989 (New Mexico Department of the Environment 1990)

Station	1 #/m2	4 #/m2	6 #/m2
Taxa			
PLECOPTERA - stoneflies			
Diura knowltoni	96	119	
Claassenia sabulosa	6		
EPHEMEROPTERA - mayflies			
Baetis tricaudatus	91	91	85
Baetis insignificans	215	108	125
Heptagenia	6	28	
Cinygmula		6	
Paraleptophlebia			6
Traverella		23	
Tricorythodes	17	17	23
TRICHOPTERA - caddisflies			
Hydropsyche venada	193	1230	221
Cheumatopsyche	11		
Arctopsyche	45	11	
Hydroptila	176	57	34
Psychoronia	6		
Brachycentrus americanus	584	153	
DIPTERA - true flies			
Tipula	6	6	
Simuliidae	272	23	17
Chironomidae A	17		57
Chironomidae B	28		11
Chironomidae C	119	91	
Chironomidae D	193	6	6
Procladius			6
Atherix pachypus		23	
Chelifera			17
Hemerodromia			6
ODONATA - damsel/dragonflies			
Gomphidae			6
HEMIPTERA - true bugs			
Veliidae		6	
COLEOPTERA - beetles			
Heterlimnius corpulentus	11	23	6
MOLLUSCA - snails/clams			
Physa	6		
Pelecypoda	6		
ANNELIDA - segmented worms			
Naididae	6		6
SUMMARY			
Standing Crop (#/m2)	2110	2021	632
Number of Taxa	22	18	16
CTQp	60	60	108
CTQa	78.8	68.2	96.6
CTQd	79.8	70.7	96.2
BCI	75.23	84.81	112.31
Diversity	3.35	2.31	2.92
Stream Gradient (% slope)	< 1.2	< 1.2	< 1.2
Substrate (composition)	SA/B/R/G	SA/B/R/G	SA/B
Sulfate (mg/l SO4)	106	144	361
Total Alk. (mg/l CaCO3)	139	147	169

B - Boulder, R - Rubble, G - Gravel, F - Fines, L - Leaf, SA - Sand, SI - Silt

Appendix 8h. Benthic macroinvertebrates in the La Plata and Animas rivers, San Juan County, New Mexico (New Mexico Department of the Environment 1990)



Appendix 9a. Location map and sampling sites of the study area (New Mexico Department of the Environment 1991)

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR104 SJR401004040
36 43 27.0 107 48 43.0 4
SAN JUAN RIVER AT BRIDGE NEAR BLANCO
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101006 0001.070 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1140	WATER		13.9	288	7.8	8.30	1.0	.050	.06	.100K	.16C	.370
90/08/07	0830	WATER		12.4	286	9.0	8.00	3.0	.150	.04K	.100K	.14C	.150
90/08/07	1530	WATER		17.8	299	7.9	8.10	2.0	.060	.04K	.100K	.14C	.280
90/08/08	0830	WATER		13.1	286	8.5	8.20	10.0	.080	.04K	.100K	.14C	.170
90/08/08	1515	WATER		18.5	319	8.1	8.20	8.0	.030	.04K	.100K	.14C	.100

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1140	WATER		.270C	.43C		202	5	91	112	35.0	5K	6.6
90/08/07	0830	WATER		.050C	.09C		202	15					
90/08/07	1530	WATER		.180C	.32C		202	17					
90/08/08	0830	WATER		.070C	.21C		196	14					
90/08/08	1515	WATER		.000C	.14C		208	10					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1140	WATER		3.00	19.00	40	115	5K	100K	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1140	WATER		5K	1.0K			.5K			
90/08/09	1110	WATER							1001		

Appendix 9b. Water quality data collected at sites along the San Juan River, August 6-9, 1990 (New Mexico Department of the Environment 1991)

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO S 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101005 0008.080 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1215	WATER		18.9	364	8.5	8.30		.050	.05	.100K	.15C	.290
90/08/07	0905	WATER		14.9	459	7.8	8.20		.540	.04K	.100	.14C	.450
90/08/07	1505	WATER		21.9	324	6.2	8.00		2.160	.19	.970	1.16C	25.400
90/08/08	0905	WATER		15.4	443	7.2	8.10		.750	.13	.100	.23C	6.120
90/08/08	1450	WATER		22.9	436	6.5	8.10		.020	.12	.100	.22C	3.980

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1215	WATER		.190C	.34C		296	103	105	128	48.0	5K	6.0
90/08/07	0905	WATER		.350C	.49C		322	142					
90/08/07	1505	WATER		24.430	25.59		598	11500					
90/08/08	0905	WATER		6.020C	6.25C		334	311					
90/08/08	1450	WATER		3.880C	4.10C		306	1190					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1215	WATER		3.00	32.00	107	145	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1215	WATER		5K	1.0K			.5K			
90/08/09	1055	WATER							236J		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
NM0020770 SJR401004025 SJR106.5
36 42 42.0 107 59 00.0 4
CITY OF BLOOMFIELD WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
SAN JUAN /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NMEX 830820 14080101005 0008.530 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1250	WATER		22.1	857	8.1	7.50		5.590	17.30	.280	17.58C	2.220

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1250	WATER		1.940C	19.52		686	4	89	109	80.0	14	17.0

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1250	WATER		14.00	82.00	232	270	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1250	WATER		5K	1.0K			.5K			

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR401.004020 SJR401004020 SJR107
36 41 60.0 108 00 00.0 4
SAN JUAN RIVER BELOW BLOOMFIELD WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080101005 0007.180 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1315	WATER		19.9	399	8.3	8.30		.000	.21	.100K	.31C	.370
90/08/07	0925	WATER		15.1	405	8.4	8.00		.410	.13	.100K	.23C	.300
90/08/07	1450	WATER		22.0	455	6.3	8.20		.950	.19	.660	.75C	8.900
90/08/08	0920	WATER		15.9	451	7.3	8.00		.970	.23	.100	.33C	8.640
90/08/08	1435	WATER		22.8	430	6.2	8.00		.020	.23	.180	.41C	4.870

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1315	WATER		.270C	.58C		286	121	100	122	46.0	2	7.2
90/08/07	0925	WATER		.200C	.43C		198	125					
90/08/07	1450	WATER		8.240C	8.99C		330	2150					
90/08/08	0920	WATER		8.540C	8.87C		322	298					
90/08/08	1435	WATER		4.690C	5.10C		300	1670					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1315	WATER		3.00	31.00	64	145	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1315	WATER		5K	1.0K			.5K			
90/08/09	1045	WATER							218J		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR401.004010 SJR401004010 SJR109
36 42 25.0 108 12 34.0 4
SAN JUAN R ABV THE ANIMAS RIVER IN FARMINGTON
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291 /TYPA/AMBNT/STREAM
MIDDLE COLORADO
21NMEX 850419 14080101001 0000.290 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1445	WATER		22.8	344	7.0	8.20		.160	.07	.100	.17C	.640
90/08/07	1010	WATER		18.4	488	7.4	8.10		.420	.04K	.100K	.14C	.490
90/08/07	1415	WATER		23.7	491	7.1	8.30		.120	.04K	.100K	.14C	.410
90/08/08	0955	WATER		19.0	650	7.0	7.90		2.260	.29	.920	1.21C	17.200
90/08/08	1400	WATER		23.1	623	7.2	8.00		1.930	.22	.150	.37C	9.300

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1445	WATER		.540C	.71C		448	392	132	161	65.0	16	10.9
90/08/07	1010	WATER		.390C	.53C		366	183					
90/08/07	1415	WATER		.310C	.45C		356	237					
90/08/08	0955	WATER		16.280C	17.49C		531	10000					
90/08/08	1400	WATER		9.150C	9.52C		446	6080					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1445	WATER		4.00	58.00	164	207	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1445	WATER		5K	1.0K			.5K			
90/08/09	1000	WATER							900J		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR112E SJR401002015
36 43 18.1 108 13 18.0 4
FARMINGTON EFFLUENT AT PIPE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN R MAIN STEM /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NNEX 14080105019 0000.950 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1530	WATER		26.9	1231		7.20		.650	8.25	9.370	17.62C	12.800

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1530	WATER		3.430C	21.05C		772	35	97	118	75.0	145	23.1

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1530	WATER		11.00	130.00	202	282	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1530	WATER		5K	1.0K			.5K			

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR113 SJR401002010 0936500
36 43 21.0 108 12 30.0 4
SAN JUAN RIVER AT BISTI BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 780414 HQ 14080104001 0001.100 OFF
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1545	WATER		25.1	649	7.4	7.52		.750	1.15	1.490	2.64C	2.190
90/08/07	1035	WATER		20.1	703	7.6	7.80		1.100	1.08	.700	1.78C	1.470
90/08/07	1355	WATER		24.4	698	7.5	7.80		.970	.57	2.640	3.21C	3.970
90/08/08	1020	WATER		20.1	780	6.7	7.80		2.270	1.46	1.750	3.21C	16.500
90/08/08	1340	WATER		24.0	734	6.0	7.80		2.010	1.71	2.420	4.13C	16.400

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1545	WATER		.700C	3.34C		494	140	134	162	82.0	35	14.6
90/08/07	1035	WATER		.770C	2.55C		494	107					
90/08/07	1355	WATER		1.330C	4.53		488	136					
90/08/08	1020	WATER		14.750C	17.96C		588	9490					
90/08/08	1340	WATER		13.980C	18.11C		576	6000					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1545	WATER		5.00	56.00	171	265	5K	200	1K	6	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1545	WATER		5K	1.0K			.5K			
90/08/09	0945	WATER							126J		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
AR100
36 43 13.0 108 12 07.0 4
ANIMAS R AT FARMINGTON
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER BASIN /TYPA/AMBNT/STREAM
21NWEX 14080104001 0001.090 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1510	WATER		26.9	750	7.8	8.20		.020	.04K	.100K	.14C	.160

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1510	WATER		.060C	.20C		504	3K	123	150	93.0	22	16.4

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1510	WATER		4.00	43.00	188	300	5K	200	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1510	WATER		5K	1.0K			.5K			
90/08/09	1005	WATER							180		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR402.001510 SJR402001510 09367500
36 44 23.0 108 14 51.0 4
LA PLATA RIVER NR FARMINGTON, NM
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080105023 0000.670 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1610	WATER		30.9	1544	6.1	7.90		.020	.04K	.100K	.14C	.240

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1610	WATER		.140C	.28C		1030	3K	160	195	96.0	133	37.7

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHRONIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1610	WATER		4.00	196.00	340	395	5K	200	1K	15	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1610	WATER		5K	1.0K			.5K			
90/08/09	0930	WATER							230		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR401.000125 SJR401000125 SJR121
36 47 24.0 108 43 38.0 4
SAN JUAN RIVER ABOVE SHIPROCK WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080105011 0000.410 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	62079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1730	WATER		28.9	811	8.3	8.40		.070	.05	.100K	.15C	.320
90/08/07	1140	WATER		23.5	814	8.1	8.20		.090	.08	.100K	.18C	.520
90/08/07	1300	WATER		26.0	804	9.0	8.10		.250	.04K	.100K	.14C	.270
90/08/08	1125	WATER		24.1	825	7.9	8.20		.100	.04	.100	.14C	.290
90/08/08	1245	WATER		26.1	804	8.0	8.20		.100	.04	.100	.14C	.270

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1730	WATER		.220C	.37C		572	13	138	169	84.0	19	23.1
90/08/07	1140	WATER		.420C	.60C		596	10					
90/08/07	1300	WATER		.170C	.31C		578	13					
90/08/08	1125	WATER		.190C	.33C		580	19					
90/08/08	1245	WATER		.170C	.31C		578	18					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1730	WATER		5.00	65.00	251	305	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1730	WATER		5K	1.0K			.5K			
90/08/09	0845	WATER							1800		

STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR401.000120 SJR401000120 NM0020621 SJR121.5
36 47 23.0 108 43 48.0 4
CITY OF SHIPROCK WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NMEX 850419 14080105011 0000.200 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1745	WATER		25.0	1180		7.70		5.960	.91	17.200	18.11C	21.100

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1745	WATER		3.900C	22.01C		743	24	119	145	88.0	48	20.7

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1745	WATER		11.00	110.00	281	305	5K	100	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1745	WATER		5K	1.0K			.5K			

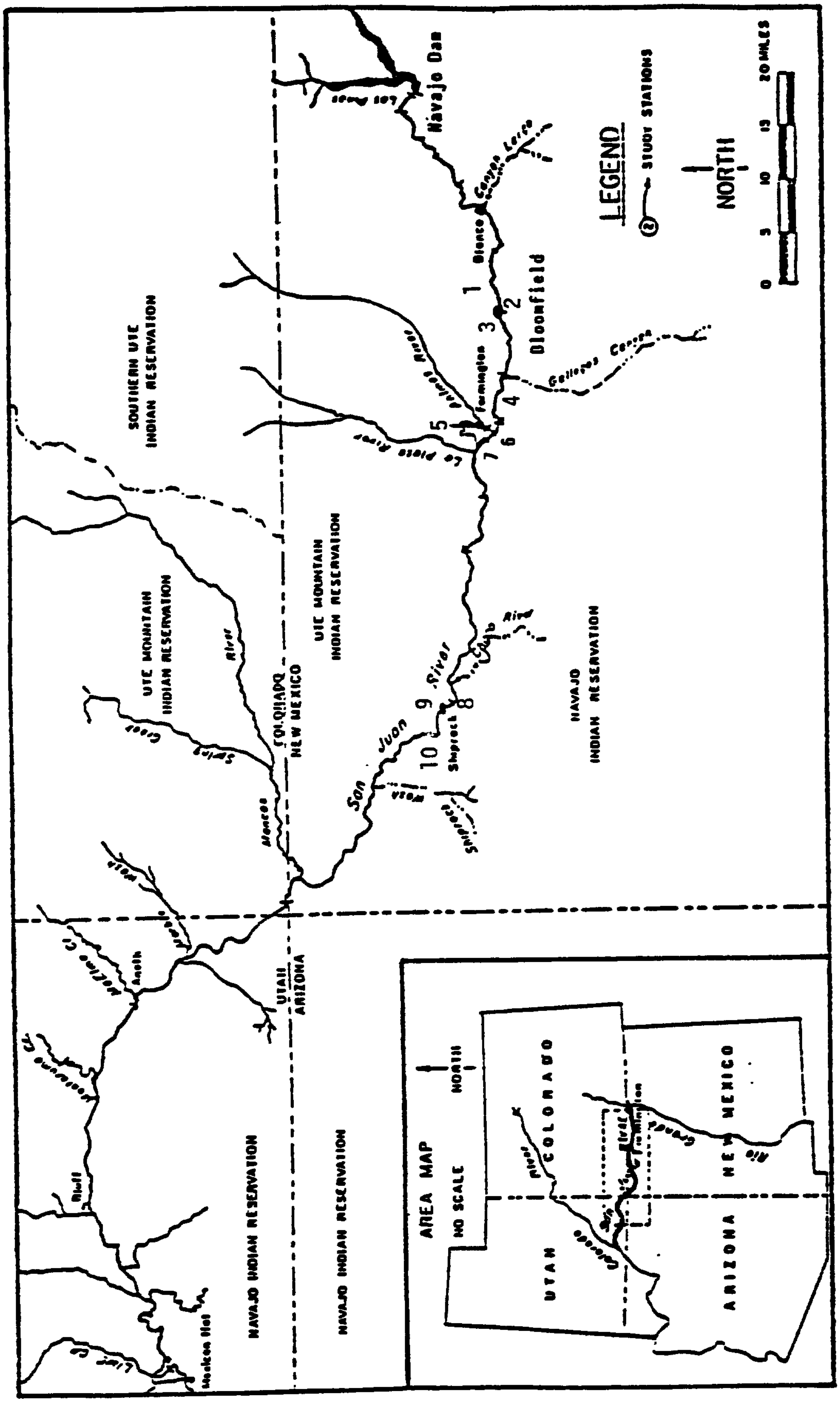
STORET RETRIEVAL DATE 91/01/09 PGM=RET
SJR122 SJR401000115
36 46 35.0 108 43 55.0 4
SAN JUAN RIVER BELOW SHIPROCK
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080105011 0000.100 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
90/08/06	1805	WATER		28.2	861	7.8	8.40		.280	.09	.810	.90C	1.260
90/08/07	1155	WATER		24.9	892	8.9	8.30		.260	.08	.680	.76C	1.140
90/08/07	1245	WATER		26.1	794	9.0	8.40		.120	.04	.660	.70C	.760
90/08/08	1140	WATER		24.0	857	9.0	8.30		.380	.10	.950	1.05C	1.310
90/08/08	1240	WATER		28.0	837	9.1	8.30		.130	.05	.320	.37C	.580

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00915 CALCIUM CA,DISS MG/L	00940 CHLORIDE TOTAL MG/L	00925 MGNSIUM MG,DISS MG/L
90/08/06	1805	WATER		.450C	1.35C		578	12	137	168	88.0	18	20.7
90/08/07	1155	WATER		.460C	1.22C		602	14					
90/08/07	1245	WATER		.100C	.80C		584	17					
90/08/08	1140	WATER		.360C	1.41C		608	19					
90/08/08	1240	WATER		.260C	.63C		592	16					

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00945 SULFATE SO4-TOT MG/L	00900 TOT HARD CACO3 MG/L	01000 ARSENIC AS,DISS UG/L	01005 BARIUM BA,DISS UG/L	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01049 LEAD PB,DISS UG/L	71890 MERCURY HG,DISS UG/L
90/08/06	1805	WATER		5.00	67.00	255	305	5K	200	1K	5K	5K	.5K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01145 SELENIUM SE,DISS UG/L	01075 SILVER AG,DISS UG/L	01046 IRON FE,DISS UG/L	01056 MANGNESE MN,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML	00061 STREAM FLOW, INST-CFS	00680 T ORG C C MG/L
90/08/06	1805	WATER		5K	1.0K			.5K			
90/08/09	0840	WATER							2500		



Appendix 10a. Location map and sampling sites of the study area (New Mexico Environment Department 1991)

Appendix 10b. New Mexico Department of the Environment intensive water quality stream surveys and lake water quality assessment surveys 1991 (New Mexico Department of the Environment 1992). Water quality data collected along the San Juan River, May-September 1991

Water quality data collected along the San Juan River, May-September, 1991.

STORET RETRIEVAL DATE 92/04/06 PGM=RET PAGE: 1
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO S 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101005 0008.080 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	0800	WATER		11.1	292	9.5	8.3	9	.05	.04K	.10K	.14	.16
91/05/30	0700	WATER		8.9	320	9.0	8.4	7	.07	.06	.12	.18C	.20
91/06/11	0725	WATER		11.6	360	8.8	8.4	9	.01K	.04K	.10K	.14K	.10K
91/06/12	1015	WATER		14.2	455	8.7	8.4	100K	.11	.17	.20	.27C	.56
91/06/12		WATER	QA REPLICATE						.36	.12	.10K	.22	.55
91/07/02	0720	WATER		13.2	368	8.4	8.3	12	.01K	.04K	.10K	.14C	.33
91/07/02	0720	WATER	QA REPLICATE						.01K	.04K	.10K	.14K	.50
91/07/03	1000	WATER		16.2	376	8.2	8.2	10	.01K	.04K	.10K	.14K	.20
91/07/03		WATER	QA REPLICATE						.01K	.04K	.10	.14C	.23
91/07/30	0720	WATER		13.9	364	8.2	8.3	100L	.74	.18	.18	.36	.54
91/07/30	0720	WATER	QA REPLICATE						.15	.11	.17	.27	.81
91/07/31	0945	WATER		16.0	348	8.2	8.2	100L	.10	.05	.18	.23	1.00
91/08/20	0735	WATER		14.7	219	8.1	8.2	51	.12	.10	.22	.32	.22
91/08/20	0735	WATER	QA REPLICATE						.25	.05	.16	.21	.31
91/08/21	0950	WATER		14.9	373	8.7	8.3	44	.17	.04K	.13	.17	.39
91/08/21	0950	WATER	QA REPLICATE						.20	.31	.13	.44C	.25
91/09/10	0730	WATER		13.2	350	8.3	8.0	222	.14	.09	.30	.39	.30
91/09/10	0730	WATER	QA REPLICATE						.10	.11	.25	.36	.76
91/09/11	0945	WATER		12.9	370	8.6	8.2	700	.40	.08	.33	.41	3.07
91/09/11	0945	WATER	QA REPLICATE						.36	.07	.18	.25C	3.04

STORET RETRIEVAL DATE 92/04/06 PGM=RET
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO S 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101005 0008.080 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	0800	WATER		.06K	.20K	.003	292	31	38.9	6.9	11.0	28.0	125.0
91/05/30	0700	WATER		.08C	.26C	.004	238	19	39.5	7.2	7.0	29.0	128.0
91/06/11	0725	WATER		.00	.14K	.006	254	15	44.2	7.4	4.0	30.0	140.8
91/06/12	1015	WATER		.36	.63	.012	324	229	54.4	8.0	5.0	41.0	168.7
91/06/12	1015	WATER	QA REPLICATE	.45	.67	.006	328	229	54.6	8.0	5.0	41.0	169.2
91/07/02	0720	WATER		.23K	.37K	.004	254	11	44.2	7.7	4.0	25.0	142.0
91/07/02	0720	WATER	QA REPLICATE	.40C	.54C	.004	250	13	44.5	7.7	4.0	25.0	143.0
91/07/03	1000	WATER		.10K	.24C	.004	272	12					
91/07/03	1000	WATER	QA REPLICATE	.13C	.27C	.004	268	9					
91/07/30	0720	WATER		.36	.72	.008	326	3852	44.3	6.8	4.0	23.0	138.0
91/07/30	0720	WATER	QA REPLICATE	.64	.91	.008	312	3396	42.7	6.7	4.0	23.0	134.0
91/07/31	0945	WATER		.78	1.01	.008	256	421					
91/08/20	0735	WATER		.00	.32	.008	266	209	44.6	7.1	4.0	29.0	141.0
91/08/20	0735	WATER	QA REPLICATE	.15	.36	.007	270	197	44.6	7.0	4.0	29.0	140.0
91/08/21	0950	WATER		.26	.43	.006	525	126					
91/08/21	0950	WATER	QA REPLICATE	.12C	.56C	.006	244	106					
91/09/10	0730	WATER		.00	.39	.016	248	509	41.9	6.5	4.0	26.0	131.0
91/09/10	0730	WATER	QA REPLICATE	.51	.86	.014	246	509	42.3	6.4	2.0	27.4	132.0
91/09/11	0945	WATER		2.74	3.15	.011	280	2330					
91/09/11	0945	WATER	QA REPLICATE	2.86C	3.11C	.006	280	2330					

STORET RETRIEVAL DATE 92/04/06 PGM=RET PAGE: 3
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO $ 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101005 0008.080 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00061 STREAM FLOW, INST-CFS	00310 BOD 5 DAY MG/L	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	0800	WATER		90.8	111.0	79.4	5K			100K	100K	1K	100K
91/05/30	0700	WATER		93.0	114.0	83.5	5K		2				
91/06/11	0725	WATER		92.6	113.0	95.6	5K			100K	100	1K	100K
91/06/12	1015	WATER		102.0	124.0	140.0	5K		7				
91/06/12	1015	WATER	QA REPLICATE	102.0	124.0	139.0	5K						
91/07/02	0720	WATER		95.8	117.0	91.6	5K			100K	100	1K	100K
91/07/02	0720	WATER	QA REPLICATE	95.2	116.0	92.7	5K			100K	100K	1K	100K
91/07/03	0720	WATER								100K	100	1K	100K
91/07/03	1000	WATER							1K				
91/07/30	0720	WATER		97.6	119.0	94.1	5K						
91/07/30	0720	WATER	QA REPLICATE	101.0	124.0	93.2	5K			100K	100K	1K	100K
91/07/31	0945	WATER							3K				
91/08/20	0735	WATER		96.9	118.0	91.2	5K			100K	100K	1K	100K
91/08/20	0735	WATER	QA REPLICATE	97.0	118.0	92.0	5K			100K	100K	1K	100K
91/08/21	0950	WATER							2				
91/09/10	0730	WATER		97.0	118.0	84.5	5			100	100K	1K	100K
91/09/10	0730	WATER	QA REPLICATE	95.8	117.0	86.8	5K			100K	100K	1K	100K
91/09/11	0945	WATER							2				

STORET RETRIEVAL DATE 92/04/06 PGM=RET PAGE: 4
SJR106 SJR401004030
36 41 57.0 107 59 10.0 4
SAN JUAN RIVER AT BLOOMFIELD BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO S 110291
AN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080101005 0008.080 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	0800	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3500
91/06/11	0725	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	200
91/07/02	0720	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4800
91/07/02	0720	WATER	QA REPLICATE	1K	5K	50K	100K	100K	5K	50K	100K	100K	4700
91/07/03	0720	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	700
91/07/30	0720	WATER	QA REPLICATE	1K	5K	50K	100K	100K	5K	50K	100K	100K	600
91/08/20	0735	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4300
91/08/20	0735	WATER	QA REPLICATE	1K	5K	50K	100K	100K	5K	50K	100K	100K	4300
91/09/10	0730	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4700
91/09/10	0730	WATER	QA REPLICATE	1K	5K	50K	100K	100K	5K	50K	100K	100K	4700

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	0800	WATER		100K	400	100K	10K	100K	5K	5K	.5K	
91/05/30	1200	WATER										16J
91/06/11	0725	WATER		100K	50	100K	10K	100K	5K	5K	.5K	
91/07/02	0720	WATER		100K	500	200	10K	100K	5K	5K	.5K	
91/07/02	0720	WATER	QA REPLICATE	100K	500	100K	10K		5K	5K	.5K	
91/07/03	0720	WATER		100K	100K	100	10K	100K	5K	5K	.5K	
91/07/30	0720	WATER	QA REPLICATE	100K	100K	100K	10K	100K	5K	5K	.5K	
91/08/20	0735	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/08/20	0735	WATER	QA REPLICATE	100K	500	100K	10K	100K	5K	5K	.5K	
91/09/10	0730	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/09/10	0730	WATER	QA REPLICATE	100K	500	100K	10K	100K	5K	5K	.5K	
91/09/11	0945	WATER										2400

NM0020770 SJR401004025 SJR106.5
36 42 42.0 107 59 00.0 4
CITY OF BLOOMFIELD WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
SAN JUAN /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NMEX 830820 14080101005 0008.530 OM
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	0830	WATER		14.5	647	7.6	7.2	8	7.31	11.80	.88	12.68C	3.10
91/05/30	0710	WATER		14.1	780	7.2	7.2	8	8.01	12.20	.33	12.53C	.38
91/06/11	0745	WATER		17.3	831		7.3		7.61	15.20	.20	15.40C	1.30
91/06/12	1005	WATER		18.9	875		7.3		6.77	18.60	.30	18.90C	2.00
91/07/02	0745	WATER		17.8	801		7.4		4.76	12.50	.12	12.62C	1.80
91/07/03	0955	WATER		19.4	834		7.2		4.83	13.70	.22	13.93C	2.10
91/07/30	0750	WATER		20.0	836		7.3		3.37	10.90	.15	11.05	1.60
91/07/31	0935	WATER		21.5	813		7.2		3.68	12.60	.13	12.73	2.66
91/08/20	0800	WATER		20.0	545		7.3		6.36	9.40	.41	9.71	1.43
91/08/21	0945	WATER		21.0	975		7.3		.52	10.32	.14	10.46	1.47
91/09/10	0800	WATER		19.6	742		7.2		6.02	11.40	.26	11.66	1.66
91/09/11	0940	WATER		20.0	768		7.0		4.94	13.40	.25	13.65	1.86

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	0830	WATER		2.22C	14.90C		690	14	74.3	11.6	15.0	79.0	233.0
91/05/30	0710	WATER		.05	12.58		578	10	71.0	11.2	19.0	79.0	223.0
91/06/11	0745	WATER		1.10C	16.50C		602	7	78.6	13.5	15.0	85.0	251.7
91/06/12	1005	WATER		1.70	20.60C		652	8	85.0	14.2	16.0	82.0	270.7
91/07/02	0745	WATER		1.68	14.30C		582	3	74.0	12.0	13.0	74.0	235.0
91/07/03	0955	WATER		1.88C	15.88		650	2					
91/07/30	0750	WATER		1.45	12.50		596	6	75.3	12.9	15.0	57.0	241.0
91/07/31	0935	WATER		2.53	15.26		602	8					
91/08/20	0800	WATER		1.02	10.73		539	9	64.5	10.3	12.0	70.0	203.0
91/08/21	0945	WATER		1.33	11.79		632	7					
91/09/10	0800	WATER		1.40	13.06		556	7	68.8	10.7	13.0	72.0	216.0
91/09/11	0940	WATER		1.61	15.26		566	3					

NM0020770 SJR401004025 SJR106.5
36 42 42.0 107 59 00.0 4
CITY OF BLOOMFIELD WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
SAN JUAN /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NMEX 830820 14080101005 0008.530 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day mg/l	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	0830	WATER		94.6	115.0	204.0	36		913507	100K	100K	1K	200
91/05/30	0710	WATER		95.2	116.0	192.0	38	5.0	913507				
91/05/30	1205	WATER							913507				
91/06/11	0725	WATER							913507	100K	100K	1K	200
91/06/11	0745	WATER		84.6	103.0	226.0	44		913507				
91/06/12	1005	WATER		70.4	85.9	241.0	43	3.0	913507				
91/07/02	0745	WATER		95.6	117.0	203.0	41		913507	100K	100K	1K	200
91/07/03	0955	WATER						5.0	913507				
91/07/30	0750	WATER		91.6	112.0	225.0	37		913507	100K	100K	1K	200
91/07/31	0935	WATER						5.0	913507				
91/08/20	0800	WATER		93.8	114.0	165.0	34		913507	100K	100K	1K	100K
91/08/21	0945	WATER						4.0	913507				
91/09/10	0800	WATER		87.0	106.0	196.0	39		913507				
91/09/11	0940	WATER						1.0	913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	0830	WATER		1K	5K	50K	100K	100K	7	160	100K	100K	7800
91/06/11	0725	WATER		1K	5K	50K	100K	100K	7	50K	100K	100K	300
91/07/02	0745	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	9600
91/07/30	0750	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	9500
91/08/20	0800	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	7100

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	0830	WATER		100K	1000	100K	10K	100K	5K	5K	.5K	
91/05/30	1205	WATER										230
91/06/11	0725	WATER		100K	1000	100K	10K	100K	5K	5K	.5K	
91/07/02	0745	WATER		100K	1000	100K	10K	100K	5K	5K	.5K	
91/07/30	0750	WATER		100K	900	100K	10K	100K	5K	5K	.5K	
91/08/20	0800	WATER		100K	700	100K	10K	100K	5K	5K	.5K	
91/09/11	0940	WATER										49

SJR401.004020 SJR401004020 SJR107
36 41 60.0 108 00 00.0 4
SAN JUAN RIVER BELOW BLOOMFIELD WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080101005 0007.180 OM
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	0900	WATER		8.0	308	9.6	8.4	10	.03	.11	.11	.22C	.17
91/05/30	0730	WATER		8.1	306	9.1	8.4	10	.02	.16	.10K	.26K	.19
91/06/11	0810	WATER		12.0	376	9.2	8.5	100K	.13	.16	.10K	.26K	.10K
91/06/12	0945	WATER		14.2	423	8.7	8.4	100K	.02	.15	.10	.22C	.58
91/07/02	0815	WATER		13.3	375	8.7	8.5	12	.17	.17	.10K	.27K	.17
91/07/03	0945	WATER		16.4	361	8.4	8.3	10	.10	.18	.10K	.28K	.35
91/07/30	0815	WATER		13.9	360	8.0	8.3	100L	.74	.17	.18	.35	1.35
91/07/31	0925	WATER		15.1	359	8.4	8.2	100L	.26	.21	.19	.40	.47
91/08/20	0815	WATER		14 9	313	8.2	8.0	51	.15	.15	.18	.33	.24
91/08/21	0910	WATER		14.6	376	8.5	8.6	50	.28	.17	.20	.37	.37
91/09/10	0820	WATER		13.4	352	8.2	8.0	252	.32	.27	.11	.38	.72
91/09/11	0930	WATER		12.0	340	8.7	8.2	710	.39	.40	.59	.99	2.05

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	0900	WATER		.06C	.28C	.004	236	36	41.2	7.3	11.0	[illegible]	132.0
91/05/30	0730	WATER		.08K	.34K	.003	222	15	38.9	6.8	8.0	26.0	120.0
91/06/11	0810	WATER		.00	.26K	.006	262	10	45 0	8.0	4.0	31 0	145.0
91/06/12	0945	WATER		.48C	.70C	.006	306	403	47.9	7.3	6.0	39.0	149.8
91/07/02	0815	WATER		.07C	.34C	.007	254	7	44.4	7.9	4.0	25.0	143.0
91/07/03	0945	WATER		.25C	.53C	.005	278	8					
91/07/30	0815	WATER		1.17	1.52	.008	280	2840	41.1	6.7	4.0	23.0	130.0
91/07/31	0925	WATER		.29	.68	.007	248	491					
91/08/20	0815	WATER		.06	.39	.004	276	143	44.6	7.3	4.0	30.0	142.0
91/08/21	0910	WATER		.17	.54	.019	256	98					
91/09/10	0820	WATER		.61	.99	.002	238	566	41.5	6.7	4.0	27.0	131.0
91/09/11	0930	WATER		1.46	2.45	.019	270	1780					

SJR401.004020 SJR401004020 SJR107
36 41 60.0 108 00 00.0 4
SAN JUAN RIVER BELOW BLOOMFIELD WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080101005 0007.180 OM
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day mg/l	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	0900	WATER		90.8	111.0	83.6	5		913507	100K	100K	1K	100K
91/05/30	0730	WATER		88.4	108.0	73.2	5K	1.0	913507				
91/05/30	1210	WATER							913507				
91/06/11	0810	WATER		91.6	112.0	99.4	5K		913507	100K	100K	1K	100K
91/06/12	0945	WATER		94.0	115.0	120.0	5K	1.0	913507				
91/07/02	0815	WATER		94.2	115.0	94.3	5K		913507	100K	200	1K	100K
91/07/03	0945	WATER						2.0	913507				
91/07/30	0815	WATER		94.2	115.0	94.0	5K		913507	100K	100K	1K	100K
91/07/31	0925	WATER						5.0	913507				
91/08/20	0815	WATER		94.8	116.0	95.6	5K		913507	100K	100K	1K	100K
91/08/21	0910	WATER						1.0	913507				
91/09/10	0820	WATER		92.0	112.0	86.8	5K		913507				
91/09/11	0930	WATER						1.0	913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	0900	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4500
91/06/11	0810	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	500
91/07/02	0815	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4800
91/07/30	0815	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	1000
91/08/20	0815	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4300

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	0900	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/05/30	1210	WATER										27
91/06/11	0810	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/07/02	0815	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/07/30	0815	WATER		100K	100K	100K	10K	100K	5K	5K	.5K	
91/08/20	0815	WATER		100K	400	100K	10K	100K	5K	5K	.5K	
91/09/11	0930	WATER										230

STORET RETRIEVAL DATE 92/03/16 PGM=RET PAGE: 9
SJR401.004010 SJR401004010 SJR109
36 42 25.0 108 12 34.0 4
SAN JUAN R ABV THE ANIMAS RIVER IN FARMINGTON
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NMEX 850419 14080101001 0000.290 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	0955	WATER		11.1	339	9.4	8.3	6	.07	.04K	.10K	.14K	.17
91/05/30	1130	WATER		13.0	336	9.1	8.4	12	.03	.04K	.11	.14K	.15
91/06/11	0910	WATER		13.8	416	8.8	8.6	20	.01K	.11	.10K	.21C	.10K
91/06/12	0850	WATER		15.1	437	8.8	8.5	31	.11	.04K	.10K	.14C	.10K
91/07/02	0900	WATER		15.7	444	8.3	8.5	18	.01	.45	.10	.55C	.63
91/07/03	0855	WATER		17.5	439	8.2	8.1	20	.01K	.11	.10K	.21K	.24
91/07/30	0900	WATER		17.0	415	7.4	8.4	100L	.22	.13	.32	.45	.52
91/07/31	0635	WATER		18.0	361	7.4	8.2	100L	.01K	.10	.53	.63	1.03
91/08/20	0900	WATER		18.0	386	8.0	8.1	59	.17	.07	.18	.25	.18
91/08/21	0840	WATER		17.8	449	7.6	8.3	53	.17	.07	.26	.33	.38
91/09/10	0905	WATER		15.5	393	7.7	8.3	384	.29	.15	.18	.33	.52
91/09/11	0840	WATER		15.1	443	8.2	8.3	300	.19	.14	.21	.35	1.13

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	0955	WATER		.07K	.21K	.003	240	26	40.9	7.5	4.0	25.0	132.0
91/05/30	1130	WATER		.04K	.18K	.006	238	36	41.2	7.3	11.0	29.0	132.8
91/06/11	0910	WATER		.00C	.21K	.009	282	26	49.2	8.8	4.0	32.0	159.0
91/06/12	0850	WATER		.00C	.14K	.008	296	46	50.3	8.4	4.0	35.0	160.3
91/07/02	0900	WATER		.53C	1.08C	.008	326	19	54.8	9.8	4.0	28.0	177.0
91/07/03	0855	WATER		.14C	.35C	.003	302	24					
91/07/30	0900	WATER		.20	.65	.023	300	576	54.0	9.2	4.0	19.0	173.0
91/07/31	0635	WATER		1.50	1.13	.027	320	848					
91/08/20	0900	WATER		.60	.25	.007	366	138	61.0	10.4	4.0	36.0	195.0
91/08/21	0840	WATER		.12	.45	.016	338	89					
91/09/10	0905	WATER		.34	.67	.009	374	627	49.4	7.7	3.0	30.0	155.0
91/09/11	0840	WATER		.82	1.17	.010	300	1004					

SJR401.004010 SJR401004010 SJR109
36 42 25.0 108 12 34.0 4
SAN JUAN R ABV THE ANIMAS RIVER IN FARMINGTON
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110291
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NNEX 850419 14080101001 0000 290 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 IL HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day MG/L	00116 INTHSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	0955	WATER		91.6	112.0	87.7	5		913507	100K	100K	1K	100K
91/05/30	1130	WATER		90.8	111.0	83.6	5	1.0	913507				
91/06/11	0910	WATER		95.8	117.0	114.0	5		913507	100K	100K	1K	100K
91/06/12	0650	WATER		95.8	117.0	121.0	5	k1.0	913507				
91/07/02	0900	WATER		101.0	123.0	122.0	5		913507	100K	200	1K	100K
91/07/03	0655	WATER						k1.0	913507				
91/07/30	0900	WATER		106.0	130.0	112.0	7		913507	100K	100K	1K	100K
91/07/31	0635	WATER						k3.0	913507				
91/08/20	0900	WATER		111.0	136.0	135.0	10		913507	100K	100K	1K	100K
91/08/21	0640	WATER						1.0	913507				
91/09/10	0905	WATER		103.0	125.0	105.0	6		913507				
91/09/11	0640	WATER						k1.0	913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	0955	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3700
91/06/11	0910	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4200
91/07/02	0900	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4200
91/07/30	0900	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3000
91/08/20	0900	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4000

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM FCBR /100ML
91/05/29	0955	WATER		100K	50K	100K	10K	100K	5K	5K	.5K	
91/05/30	1130	WATER										100J
91/06/11	0910	WATER		100K	600	100K	10K	100K	5K	5K	.5K	
91/07/02	0900	WATER		100K	700	100K	10K	100K	5K	5K	.5K	
91/07/30	0900	WATER		100K	1700	100K	10K	100K	5K	5K	.5K	
91/08/20	0900	WATER		100K	800	100K	10K	100K	5K	5K	.5K	

AR100
36 43 13.0 108 12 07.0 4
ANIMAS R AT FARMINGTON
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER BASIN /TYPA/AMBNT/STREAM
21NMEX 14080104001 0001.090 OW
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1020	WATER		9.5	208	8.1	8.2	55	.09	.10	.11	.21C	.28
91/05/30	1110	WATER		10.9	215	9.1	8.2	48	.25	.16	.10K	.26K	.19
91/06/11	0925	WATER		12.0	222	8.7	8.3	45	.27	.16	.10K	.26K	.10K
91/06/12	0545	WATER		13.3	220	8.6	8.4	50	.10	.12	.10K	.22K	.10K
91/07/02	0925	WATER		16.8	327	8.4	8.6	8	.01K	.08	.10K	.18K	.10K
91/07/03	0535	WATER		17.2	349	8.3	8.3	6	.01K	.08	.10K	.18K	.13
91/07/30	0920	WATER		19.1	593	9.0	8.7	15	.03	.08	.10K	.18K	.62
91/07/31	0505	WATER		20.0	594	7.2	8.2	14	.68	.04K	.10K	.14K	.38
91/08/20	0925	WATER		20.4	470	8.0	8.2	11	.05	.13	.14	.27	.31
91/08/21	0500	WATER		20.0	616	7.0	8.2	8	.08	.23	.10	.33	.17
91/09/10	0930	WATER		16.3	359	8.0	8.3	144	.12	.21	.13	.44	.27
91/09/11	0500	WATER		15.6	380	7.8	8.3	200	.17	.16	.18	.34	1.11

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1020	WATER		.17C	.38C	.003	152	101	32.9	4.3	6.0	9.0	99.7
91/05/30	1110	WATER		.09K	.35K	.003	152	92	34.7	4.5	3.0	7.0	105.2
91/06/11	0925	WATER		.00C	.26K	.004	138	66	36.1	4.8	8.0	11.0	109.7
91/06/12	0545	WATER		.00C	.22K	.005	144	64	35.7	4.6	3.0	7.0	107.8
91/07/02	0925	WATER		.00C	.18K	.011	230	10	48.0	6.6	4.0	12.0	147.0
91/07/03	0535	WATER		.03C	.21K	.006	240	7					
91/07/30	0920	WATER		.52	.70	.015	398	9	87.0	12.6	4.0	19.0	269.0
91/07/31	0505	WATER		.28	.42	.005	452	15					
91/08/20	0925	WATER		.17	.44	.008	420	6	75.9	14.3	4.0	40.0	248.0
91/08/21	0500	WATER		.07	.40	.005	406	3					
91/09/10	0930	WATER		.14	.58	.007	232	212	51.4	7.4	2.0	14.0	159.0
91/09/11	0500	WATER		.93	1.27	.009	246	28					

AR100
36 43 13.0 108 12 07.0 4
ANIMAS R AT FARMINGTON
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER BASIN /TYPA/AMBNT/STREAM
21NMEX 14080104001 0001.090 ON
0001 FLET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1020	WATER		64.2	78.3	37.2	5		913507	100K	100K	1K	100K
91/05/30	1110	WATER		65.0	79.3	40.7	5	2.0	913507				
91/06/11	0925	WATER		61.2	74.7	66.2	5K		913507	100K	100K	1K	100K
91/06/12	0545	WATER		60.2	73.4	45.0	5K	k1.0	913507				
91/07/02	0925	WATER		75.4	92.0	74.6	6		913507	100K	200	1K	100K
91/07/03	0535	WATER						k1.0	913507				
91/07/30	0920	WATER		149.0	182.0	142.0	18		913507	100K	100	1K	100K
91/07/31	0505	WATER						k3.0	913507				
91/08/20	0925	WATER		132.0	162.0	166.0	21		913507	100K	100K	1K	100K
91/08/21	0500	WATER						k1.0	913507				
91/09/10	0930	WATER		97.2	119.0	87.6	8		913507				
91/09/11	0500	WATER						1.0	913507				
91/09/11	0900	WATER							913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1020	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	1400
91/06/11	0925	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	700
91/07/02	0925	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2200
91/07/30	0920	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2900
91/08/20	0925	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2100

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1020	WATER		100K	300	100K	10K	100K	5K	5K	.5K	
91/05/30	1110	WATER										210
91/06/11	0925	WATER		100K	400	100K	10K	100K	5K	5K	.5K	
91/07/02	0925	WATER		100K	500	100K	10K	100K	5K	5K	.5K	
91/07/30	0920	WATER		100K	1000	100K	10K	100K	5K	5K	.5K	
91/08/20	0925	WATER		100K	1200	100K	10K	100K	5K	5K	.5K	
91/09/11	0900	WATER										460

AR100
36 43 13.0 108 12 07.0 4
ANIMAS R AT FARMINGTON
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER BASIN /TYPA/AMBNT/STREAM
21NMEX 14080104001 0001.090 OW
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39337 ALPHABHC TOTUG/L	39338 BETA BHC TOTUG/L	34259 DELTABHC TOTUG/L	39340 GAMMABHC LINDANE TOT.UG/L	39410 HEPTCHLR TOTUG/L	39330 ALDRIN TOT UG/L	39420 HPCHLREP TOTUG/L	39700 HCB TOT UG/L	39388 ENDOSULN WHL SMPL UG/L	39380 DIELDRIN TOTUG/L
91/06/12	0545	WATER		.05K	.05K	.05K	.05K	.05K	.05K	.05K	.08K	.05K	.1K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39365 DDE WHL SMPL UG/L	39390 ENDRIN TOT UG/L	82624 ENDOSLFN BETA TOT REC UG/L	39360 DDD WHL SMPL UG/L	82623 ENDOSLFN -SO4 TOT REC UG/L	00002 HSAMPLOC % FROM RT BANK	39370 DDT WHL SMPL UG/L	82622 ENDRIN ALDH TOT REC UG/L	39480 MTHXYCLR WHL SMPL UG/L	78008 ENDRIN KETONE UG/L
91/06/12	0545	WATER		.1K	.1K	.1K	.1K	.1K		.1K	.1K	.5K	.1K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39348 A-CHLRDN WHL SMPL UG/L	39810 G-CHLRDN WHL SMPL UG/L	39400 TOXAPHEN TOTUG/L	39492 PCB-1232 TOTUG/L	39496 PCB-1242 TOTUG/L	39500 PCB-1248 TOTUG/L	39504 PCB-1254 TOTUG/L	39508 PCB-1260 TOTUG/L	39117 PHTHLATE ESTERS MG/L	09501 RA-226 TOTAL PC/L
91/06/12	0545	WATER		.5K	.5K	1.0K	.5K	.5K	.5K	1.0K	1.0K		
91/08/20	0925	WATER											.03K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	09502 RA-226 ERROR PC/L	11501 RA-228 TOTAL PC/L	11502 RA-228 ERROR PC/L
91/08/20	0925	WATER		.08	03K	.8

SJR112E SJR401002015
36 43 18.1 108 13 18.0 4
FARMINGTON EFFLUENT AT PIPE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN R MAIN STEM /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE
21NMEX 14080105019 0000.950 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1050	WATER		20.0	1375	6.2	7.3	20	7.81	10.80	1.20	11.00C	7.80
91/05/30	1035	WATER		21.0	1334	6.1	7.4	17	8.41	10.00	2.70	13.70C	4.50
91/06/11	0950	WATER		21.2	1098		7.5		8.28	11.20	5.80	17.00C	7.00
91/06/12	0715	WATER		21.2	1060		7.3		1.60	10.20	5.00	15.20C	6.80
91/07/02	0945	WATER		23.0	1030		7.4		6.13	10.60	5.20	15.80C	8.70
91/07/03	0550	WATER		22.0	949		7.3		6.04	8.95	2.37	11.32C	4.51
91/07/30	0935	WATER		24.7	1001		7.5		1.72	8.75	2.65	11.40	4.96
91/07/31	0520	WATER		23.7	1041		7.3		4.12	9.45	2.05	11.50	4.10
91/08/20	0945	WATER		25.5	851		7.2		6.65	8.45	3.56	12.01	5.00
91/08/21	0525	WATER		24.0	1010		7.2		.60	1.87	1.78	3.65	3.02
91/09/10	1000	WATER		25.1	998		7.0		5.61	11.10	1.72	12.82	3.91
91/09/11	0515	WATER		24.5	1030		7.1		5.91	11.60	1.10	13.20	3.60

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1050	WATER		6.60C	17.60C		814	16	98.0	17.4	16.0	117.0	316.0
91/05/30	1035	WATER		1.80C	15.50C		740	14	91.7	16.4	16.0	114.0	296.0
91/06/11	0950	WATER		1.20C	18.20C		726	18	90.3	16.5	14.0	116.0	293.5
91/06/12	0715	WATER		1.80C	17.00C		700	22	89.2	15.3	15.0	110.0	285.6
91/07/02	0945	WATER		3.50C	19.30C		690	16	80.3	14.5	12.0	95.0	260.0
91/07/03	0550	WATER		2.14C	13.46C		676	12					
91/07/30	0935	WATER		2.31	13.71		662	15	77.6	14.1	11.0	70.0	252.0
91/07/31	0520	WATER		2.05	13.55		698	13					
91/08/20	0945	WATER		1.44	13.45		692	30	82.6	14.0	11.0	108.0	264.0
91/08/21	0525	WATER		1.24	4.89		658	11					
91/09/10	1000	WATER		2.19	15.01		710	18	81.3	14.0	12.0	102.0	261.0
91/09/11	0515	WATER		2.00	15.20		658	13					

STORET RETRIEVAL DATE 92/03/16 PGM=RET
SJR112E SJR401002015
36 43 18.1 108 13 18.0 4
FARMINGTON EFFLUENT AT PIPE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN R MAIN STEM /TYPA/MUN/TREATD/OUTFL/MONANB/PIPE
21NMEX 14080105019 0000.950 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1050	WATER		146.0	179.0	222.0	100		913507	100K	100K	1K	300
91/05/30	1035	WATER		146.0	178.0	218.0	99	7.0	913507				
91/06/11	0950	WATER		151.0	184.0	204.0	109		913507	100K	100K	1K	300
91/06/12	0715	WATER		138.0	168.0	200.0	108	12.0	913507				
91/07/02	0945	WATER		145.0	177.0	181.0	91		913507	100K	100K	1K	300
91/07/03	0550	WATER						14.0	913507				
91/07/30	0935	WATER		144.0	176.0	180.0	87		913507				
91/07/31	0520	WATER						31.0	913507				
91/08/20	0945	WATER		155.0	189.0	179.0	86		913507				
91/08/21	0525	WATER						8.0	913507				
91/09/10	1000	WATER		135.0	164.0	192.0	91		913507				
91/09/11	0515	WATER						8.0	913507				
91/09/11	1000	WATER							913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1050	WATER		1K	5K	50K	100K	100K	10	70	100K	100K	3100
91/06/11	0950	WATER		1K	5K	50K	100K	100K	9	80	100K	100K	200
91/07/02	0945	WATER		1K	5K	50K	100K	100K	5K	60	100K	100K	5300

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1050	WATER		100K	1200	200	10K	100K	5K	5K	.5K	
91/05/30	1035	WATER										30J
91/06/11	0950	WATER		100K	1200	100K	10K	100K	5K	5K	.5K	
91/07/02	0945	WATER		100K	1000	100K	10K	100K	5K	5K	.5K	
91/09/11	1000	WATER										5000

SJR113 SJR401002010 0936500
36 43 21.0 108 12 30.0 4
SAN JUAN RIVER AT BISTI BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NNEX 780414 HQ 14080104001 0001.100 OFF
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1120	WATER		11.1	257	9.2	8.1	54	.34	.30	.22	.52C	.61
91/05/30	1025	WATER		11.0	236	9.1	8.0	47	.39	.33	.24	.57C	.36
91/06/11	1015	WATER		14.2	282	8.7	8.3	39	.35	.39	.34	.73C	.48
91/06/12	0525	WATER		14.2	274	8.6	8.2	43	.26	.20	.11	.31C	.11
91/07/02	1000	WATER		17.5	374	8.3	8.4	19	.28	.54	.28	.92C	.58
91/07/03	0520	WATER		17.6	400	8.1	8.2	18	.25	.10	.15	.25C	.24
91/07/30	1000	WATER		19.9	573	8.1	8.4	50	.46	.82	.11	.93	.49
91/07/31	0535	WATER		20.0	572	7.0	8.1	100L	.29	.33	.31	.64	1.01
91/08/20	1005	WATER		20.9	458	7.6	7.9	30	.78	.84	.50	1.34	.73
91/08/21	0540	WATER		19.2	570	7.0	8.1	24	.11	.08	.10K	.18	.11
91/09/10	0530	WATER		15.6	390	8.0	8.2	320	.76	.35	.24	.59	1.38
91/09/10	1015	WATER		16.8	398	7.8	7.9	192	.30	.58	.21	.77	.49

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1120	WATER		.31C	.83C	.005	186	30	35.9	5.5	4.0	14.0	112.0
91/05/30	1025	WATER		.12C	.69C	.004	198	72	36.5	5.5	4.0	14.0	113.8
91/06/11	1015	WATER		.14C	.87C	.016	192	79	41.1	5.7	3.0	16.0	126.0
91/06/12	0525	WATER		.00C	.31C	.004	180	76	39.3	5.7	3.0	14.0	121.6
91/07/02	1000	WATER		.30C	1.22C	.021	262	12	50.5	7.2	3.0	17.0	155.0
91/07/03	0520	WATER		.09C	.34C	.007	258	11					
91/07/30	1000	WATER		.38	1.31	.009	410	135	81.0	12.5	5.0	24.0	254.0
91/07/31	0535	WATER		.70	1.34	.014	402	310					
91/08/20	1005	WATER		.23	1.57	.016	454	55	75.5	13.0	5.0	46.0	242.0
91/08/21	0540	WATER		.01	.19	.004	386	45					
91/09/10	0530	WATER		1.14	1.73	.010	298	860					
91/09/10	1015	WATER		1.26	2.03	.005	256	46	51.3	7.5	2.5	23.3	159.0

STORET RETRIEVAL DATE 92/03/16 PGM=RET
SJR113 SJR401002010 0936500
36 43 21.0 108 12 30.0 4
SAN JUAN RIVER AT BISTI BRIDGE
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 780414 HQ 14080104001 0001.100 OFF
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1120	WATER		73.2	89.3	53.1	7		913507	100K	100	1K	100K
91/05/30	1025	WATER		72.4	88.3	56.2	6	2.0	913507				
91/06/11	1015	WATER		71.0	86.6	64.8	6		913507	100K	100	1K	100K
91/06/12	0525	WATER		67.8	82.7	61.5	5K	k1.0	913507				
91/07/02	1000	WATER		81.8	99.8	85.4	10		913507	100K	100	1K	100K
91/07/03	0520	WATER						k1.0	913507				
91/07/30	1000	WATER		140.0	171.0	142.0	21		913507	100K	100K	1K	100K
91/07/31	0535	WATER						k3.0	913507				
91/08/20	1005	WATER		129.0	158.0	158.0	25		913507	100K	100	1K	100K
91/08/21	0540	WATER						k1.0	913507				
91/09/10	0530	WATER						k1.0	913507				
91/09/10	1015	WATER		99.0	121.0	87.2	10		913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1120	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2600
91/06/11	1015	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	600
91/07/02	1000	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2600
91/07/30	1000	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3400
91/08/20	1005	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3000

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1120	WATER		100K	400	200	10K	100K	5K	5K	.5K	
91/05/30	1025	WATER										380
91/06/11	1015	WATER		100K	400	200K	10K	100K	5K	5K	.5K	
91/07/02	1000	WATER		100K	600	100K	10K	100K	5K	5K	.5K	
91/07/30	1000	WATER		100K	900	100K	10K	100K	5K	5K	.5K	
91/08/20	1005	WATER		100K	1100	100K	10K	100K	5K	5K	.5K	

STORET RETRIEVAL DATE 92/03/16 PGM=RET
SJR401.000125 SJR401000125 SJR121
36 47 24.0 108 43 38.0 4
SAN JUAN RIVER ABOVE SHIPROCK WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NNEX 850419 14080105011 0000.410 OW
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1235	WATER		14.9	268	8.6	8.2	74	.31	.12	.16	.28C	.33
91/05/30	0900	WATER		13.1	279	8.6	8.2	70	.51	.19	.10K	.29C	.32
91/06/11	1135	WATER		16.3	297	8.2	8.2	70	.13	.18	.10K	.28K	.10K
91/06/12	0815	WATER		15.2	311	8.2	8.3	65	.18	.25	.10K	.35K	.10K
91/06/25	1756	WATER		22.0									
91/06/25	1802	WATER							.07	.22	.14		.32
91/06/25	1805	WATER					7.9						
91/07/02	1100	WATER		22.0	440	8.3	8.9	14	01K	.17	.10K	.27K	.14
91/07/03	0755	WATER		18.8	531	8.1	8.2	4	.01	.18	.10K	.28K	.27
91/07/30	1110	WATER		23.0	541	7.5	8.6	100L	.60	.26	.10K	.36K	.10K
91/07/31	0745	WATER		20.6	816	7.0	8.3	100L	.12	.56	.16	.72	.50
91/08/20	1110	WATER		22.4	652	7.3	8.3	210	.81	.35	.51	.86	6.68
91/08/21	0740	WATER		19.0	683	7.3	8.4	214	.69	.22	.28	.50	.40
91/09/10	1140	WATER		19.2	437	7.7	8.0	1760	.59	.54	.40	.94	.92
91/09/11	0755	WATER		17.0	433	7.9	8.3	920	.31	.46	.13	.59	1.50

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONIZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1235	WATER		.17C	.45C	.006	180	180	37.1	6.1	3.0	13.0	117.0
91/05/30	0900	WATER		.22K	.51K	.003	206	194	37.7	6.2	4.0	14.0	119.0
91/06/11	1135	WATER		.00C	.28C	.004	194	120	41.5	6.2	3.0	15.0	129.0
91/06/12	0815	WATER		.00C	.35K	.005	216	86	42.1	6.8	4.0	16.0	133.1
91/06/25	1801	WATER					272	29		7.7	4.0	21.0	159.0
91/07/02	1100	WATER		.04C	.31C	.026	310	10	56.1	10.0	4.0	23.0	181.0
91/07/03	0755	WATER		.17K	.45K	.005	344	2					
91/07/30	1110	WATER		.00	.36	.016	420	322	73.5	12.6	4.0	24.0	235.0
91/07/31	0745	WATER		.34	1.06	.012	558	247					
91/08/20	1110	WATER		6.17	7.03	.043	434	2136	74.3	12.6	5.0	60.0	237.0
91/08/21	0740	WATER		.12	.62	.014	478	926					
91/09/10	1140	WATER		.52	1.46	.012	280	1211	51.0	7.5	3.5	33.7	158.0
91/09/11	0755	WATER		1.37	1.96	.003	322	1432					

SJR401.000125 SJR401000125 SJR121
36 47 24.0 108 43 38.0 4
SAN JUAN RIVER ABOVE SHIPROCK WWTP
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/AMBNT/STREAM
21NNEX 850419 14080105011 0000.410 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	C0310 BOD 5-day MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1235	WATER		71.4	87.1	63.0	6		913507	100K	100K	1K	100K
91/05/30	0900	WATER		74.8	91.3	61.1	5K	1.0	913507				
91/06/11	1135	WATER		69.8	85.2	69.0	6		913507	100K	100K	1K	100K
91/06/12	0815	WATER		71.6	87.4	75.2	6	k1.0	913507				
91/06/25	1801	WATER		84.2	103.0		6						
91/06/25	1804	WATER								100K	100K	100K	100K
91/07/02	1100	WATER		92.6	113.0	116.0	8		913507	100K	100K	1K	100K
91/07/03	0755	WATER						k1.0	913507				
91/07/30	1110	WATER		130.0	158.0	144.0	12		913507				
91/07/30	1130	WATER						k3.0	913507	100K	100K	1K	100K
91/07/31	0745	WATER							913507				
91/08/20	1110	WATER		133.0	162.0	204.0	14		913507	100K	100K	1K	100K
91/08/21	0740	WATER						1.0	913507				
91/09/10	1140	WATER		97.6	119.0	112.0	8		913507				
91/09/11	0755	WATER						k1.0	913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1235	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2000
91/06/11	1135	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	400
91/06/25	1804	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3300
91/07/02	1100	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3000
91/07/30	1130	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	900
91/08/20	1110	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4300

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1235	WATER		100K	400	200	10K	100K	5K	5K	.5K	
91/05/30	0900	WATER										270
91/06/11	1135	WATER		100K	400	100K	10K	100K	5K	5K	.5K	
91/06/12	0815	WATER										9500
91/06/25	1803	WATER									.5K	
91/06/25	1804	WATER		100K	600	300	100K	100K	5K	5K		
91/07/02	1100	WATER		100K	700	100K	10K	100K	5K	5K	.5K	
91/07/30	1130	WATER		100K	100	100K	10K	100K	5K	5K	.5K	

STORET RETRIEVAL DATE 92/03/16 PGM=RET
SJR401.000120 SJR401000120 NN0020621 SJR121.5
36 47 23.0 108 43 48.0 4
CITY OF SHIPROCK WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/NUN/TREATD/OUTFL/NONAMB/PIPE
21NNEX 850419 14080105011 0000.200 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1245	WATER		20.5	1079	5.2	7.7	33	6.63	.47	4.80	5.27	27.00
91/05/30	0845	WATER		13.7	993	5.1	7.6	31	8.38	.10	20.00	20.10C	24.00
91/06/11	1115	WATER		19.3	991		7.3		6.64	.06	30.00	30.06	36.00
91/07/03	0815	WATER		19.2	1027		7.2		6.77	.58	20.20	20.78C	30.30
91/07/30	1100	WATER		20.9	985		7.9		3.48	4.50	.66	5.16	9.64
91/07/31	0735	WATER		21.8	1032		7.7		4.34	3.63	8.77	12.40	10.16
91/09/10	1115	WATER		20.5	986		7.7		3.33	3.05	8.91	11.96	14.20
91/09/11	0750	WATER		19.3	791		7.7		4.22	2.34	9.00	11.34	12.20

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR R DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1245	WATER		22.20	27.47		748	26	73.8	11.5	17.0	93.0	231.6
91/05/30	0845	WATER		4.00C	24.10C		638	29	68.9	17.1	23.0	96.0	242.3
91/06/11	1115	WATER		6.00C	36.06C		606	74	78.7	17.5	30.0	76.0	268.4
91/07/03	0815	WATER		10.10	30.88		704	18					
91/07/30	1100	WATER		8.98	14.14		688	15	92.3	18.1	10.0	65.0	305.0
91/07/31	0735	WATER		1.39	13.79		740	12					
91/09/10	1115	WATER		5.29	17.25		690	8	86.4	16.7	16.4	87.1	284.0
91/09/11	0750	WATER		2.20	13.54		630	11					

STORET RETRIEVAL DATE 92/03/16 PGM=RET
SJR401.000120 SJR401000120 NM0020621 SJR121.5
36 47 23.0 108 43 48.0 4
CITY OF SHIPROCK WWTP OUTFALL
35045 NEW MEXICO SAN JUAN
COLORADO RIVER 110200
MIDDLE COLORADO /TYPA/MUN/TREATD/OUTFL/MONAN8/PIPE
21NMEX 850419 14080105011 0000.200 ON
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-day MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1245	WATER		221.0	269.0	265.0	41		913507	100K	100K	1K	200
91/05/30	0845	WATER		228.0	278.0	215.0	43	38.0	913507				
91/06/11	1115	WATER		192.0	234.0	220.0	57		913507	100K	100K	1K	200
91/07/03	0815	WATER						41.0	913507				
91/07/30	1100	WATER		164.0	200.0	261.0	39		913507				
91/07/31	0735	WATER						4.0	913507				
91/09/10	1115	WATER		176.0	215.0	273.0	37		913507				
91/09/11	0750	WATER						20.0	913507				
91/09/11	1115	WATER							913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1245	WATER		1K	5K	50K	100K	100K	5K	130	100K	100K	4400
91/06/11	1115	WATER		1K	5K	50K	100K	100K	5K	120	100K	100K	2500

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1245	WATER		100K	900	100K	10K	100K	5K	5K	.5K	
91/05/30	0845	WATER										20000
91/06/11	1115	WATER		100K	900	100K	10K	100K	5K	5K	.5K	
91/09/11	1115	WATER										24000

STORET RETRIEVAL DATE 92/03/30 PGM=RET
SJR122 SJR401000115
36 46 35.0 108 43 55.0 4
SAN JUAN RIVER BELOW SHIPROCK
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NNEX 14080105011 0000.100 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00010 WATER TEMP CENT	00095 CNDUCTVY AT 25C MICROMHO	00300 DO MG/L	00400 PH SU	82079 TURBIDTY LAB NTU	00665 PHOS-TOT MG/L P	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3+NH4- N TOTAL MG/L	00640 T INORG. NITROGEN MG/L N	00625 TOT KJEL N MG/L
91/05/29	1320	WATER		15.1	266	8.6	8.2	74	.39	.13	.28	.41C	.65
91/05/29	1320	WATER	QA REPLICATE						.48	.17	.17	.34C	.27
91/05/30	0915	WATER		13.2	279	8.7	8.2	72	.39	.18	.19	.37C	.39
91/06/11	1155	WATER		16.3	291	8.3	8.3	69	.17	.16	.14	.30C	.16
91/06/12	0825	WATER		15.2	303	8.3	8.3	63	.20	.22	.10K	.32K	.16
91/06/25	1738	WATER		22.0					.13	.16	.26		.57
91/06/25	1740	WATER					8.1						
91/06/25	1743	WATER					8.8	15	.01K	.05	.10K	.15K	.10K
91/07/02	1120	WATER		21.4	420	8.4	8.2	5	.01	.06	.10K	.16K	.10K
91/07/03	0805	WATER		19.2	458	8.3	8.4	100L	.83	.52	.20	.72	.56
91/07/30	1125	WATER		22.2	597	7.0	8.3	100L	.32	.40	.44	.84	.64
91/07/31	0750	WATER		20.8	656	7.0	8.3	226	.54	.37	.34	.71	1.16
91/08/20	1130	WATER		22.4	726	7.7	7.3	221	.80	.25	.52	.77	.61
91/08/21	0750	WATER		19.0	706	7.3	8.0	1760	.54	.56	.59	1.15	1.70
91/09/10	1155	WATER		18.6	429	7.3	8.2	900	.46	.49	.40	.89	1.70
91/09/11	0810	WATER		16.9	459	7.8							

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00605 ORG N N MG/L	00600 TOTAL N N MG/L	00612 UN-IONZD NH3-N MG/L	70300 RESIDUE DISS-180 C MG/L	00530 RESIDUE TOT NFLT MG/L	00915 CALCIUM CA,DISS MG/L	00925 MGNSIUM MG,DISS MG/L	00935 PTSSIUM K,DISS MG/L	00930 SODIUM NA,DISS MG/L	00900 TOT HARD CACO3 MG/L
91/05/29	1320	WATER		.37C	.78C	.001	254	156	36.1	5.7	4.0	14.0	113.6
91/05/29	1320	WATER	QA REPLICATE	.44C	.78C	.006	202	173					
91/05/30	0915	WATER		.20C	.57C	.006	202	183	37.6	6.0	4.0	15.0	118 7
91/06/11	1155	WATER		.02C	.32C	.005	192	123	41.3	6.4	9.0	19.0	129.4
91/06/12	0825	WATER		.06C	.36K	.005							
91/06/25	1739	WATER						51		7.2	4.0	20.0	144.0
91/07/02	1120	WATER		.00C	.15K	.021	294	10	54.6	8.9	3.0	21.0	173.0
91/07/03	0805	WATER		.00C	.16K	.005	322	2					
91/07/30	1125	WATER		.36	1.08	.020	410	12	75.5	13.0	4.0	26.0	242.0
91/07/31	0750	WATER		.20	1.04	.034	474	205					
91/08/20	1130	WATER		.82	1.53	.029	494	2022	76.0	13.7	5.0	62.0	
91/08/21	0750	WATER		.09	.86	.003	488	928					
91/09/10	1155	WATER		1.11	2.26	.020	290	2614	50.0	7.0	2.9	30.1	154.0
91/09/11	0810	WATER		1.30	2.19	.010	300	298					

STORET RETRIEVAL DATE 92/03/30 PGM=RET
SJR122 SJR401000115
36 46 35.0 108 43 55.0 4
SAN JUAN RIVER BELOW SHIPROCK
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080105011 0000.100 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	00410 T ALK CACO3 MG/L	00440 HCO3 ION HCO3 MG/L	00946 SULFATE SO4-DISS MG/L	00940 CHLORIDE TOTAL MG/L	00310 BOD 5-dAY MG/L	00116 INTNSVE SURVEY IDENT	01106 ALUMINUM AL,DISS UG/L	01005 BARIUM BA,DISS UG/L	01010 BERYLIUM BE,DISS UG/L	01020 BORON B,DISS UG/L
91/05/29	1320	WATER		70.8	86.4	59.1	5K		913507	100K	100K	1K	100K
91/05/29	1320	WATER	QA REPLICATE							100K	100K	1K	100K
91/05/30	0915	WATER		74.4	90.8	61.7	6	2.0	913507				
91/06/11	1155	WATER		71.0	86.6	73.0	6		913507	100K	100K	1K	100K
91/06/12	0825	WATER						k1.0	913507				
91/06/25	1739	WATER		82.6	101.0		6						
91/06/25	1742	WATER								100K	100K	1K	100K
91/07/02	1120	WATER		92.0	112.0	111.0	7		913507	100K	100K	1K	100K
91/07/03	0805	WATER						k1.0	913507				
91/07/30	1125	WATER		130.0	159.0	153.0	14		913507	100K	100K	1K	100K
91/07/31	0750	WATER						k1.0	913507				
91/08/20	1130	WATER		135.0	165.0	216.0	14		913507	100K	100K	1K	100K
91/08/21	0750	WATER							913507				
91/09/10	1155	WATER		98.4	120.0	106.0	8		913507	100K	100K	1K	100K
91/09/11	0810	WATER						k1.0	913507				

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01025 CADMIUM CD,DISS UG/L	01030 CHROMIUM CR,DISS UG/L	01035 COBALT CO,DISS UG/L	01040 COPPER CU,DISS UG/L	01046 IRON FE,DISS UG/L	01049 LEAD PB,DISS UG/L	01056 MANGNESE MN,DISS UG/L	01060 MOLY MO,DISS UG/L	01065 NICKEL NI,DISS UG/L	01140 SILICON SI,DISS UG/L
91/05/29	1320	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	2600
91/05/29	1320	WATER	QA REPLICATE	1K	5K	50K	100K	100K	5K	50K	100K	100K	1900
91/06/11	1155	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	1500
91/06/25	1742	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3400
91/07/02	1120	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	3000
91/07/30	1125	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4100
91/08/20	1130	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4100
91/09/10	1155	WATER		1K	5K	50K	100K	100K	5K	50K	100K	100K	4100

STORET RETRIEVAL DATE 92/03/30 PGM=RET
SJR122 SJR401000115
36 46 35.0 108 43 55.0 4
SAN JUAN RIVER BELOW SHIPROCK
35045 NEW MEXICO SAN JUAN
MIDDLE COLORADO 110291
SAN JUAN RIVER MAIN STEM /TYPA/AMBNT/STREAM
21NMEX 14080105011 0000.100 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	01075 SILVER AG,DISS UG/L	01080 STRONTUM SR,DISS UG/L	01100 TIN SN,DISS UG/L	01085 VANADIUM V,DISS UG/L	01090 ZINC ZN,DISS UG/L	01000 ARSENIC AS,DISS UG/L	01145 SELENIUM SE,DISS UG/L	71900 MERCURY HG,TOTAL UG/L	31616 FEC COLI MFM-FCBR /100ML
91/05/29	1320	WATER		100K	400	100K	10K	100K	5K	5K	.5K	
91/05/29	1320	WATER	QA REPLICATE	100K	400	100K	10K	100K	5K	5	.5K	180
91/05/30	0915	WATER										
91/06/11	1155	WATER		100K	400	100K	10K	100K	5K	5K	.5K	9000
91/06/12	0825	WATER										
91/06/25	1741	WATER									.5K	
91/06/25	1742	WATER		100K	500	100K	100K	100K	5K	5K		
91/07/02	1120	WATER		100K	600	100K	10K	100K	5K	5K	.5K	
91/07/30	1125	WATER		100K	800	100K	10K	100K	5K	5K	.5K	
91/08/20	1130	WATER		100K	900	100K	10K	100K	5K	5K	.5K	
91/09/10	1155	WATER		100K	600	100K	10K	100K	5K	5K	.5K	

SAN JUAN RIVER BELOW SHIPROCK
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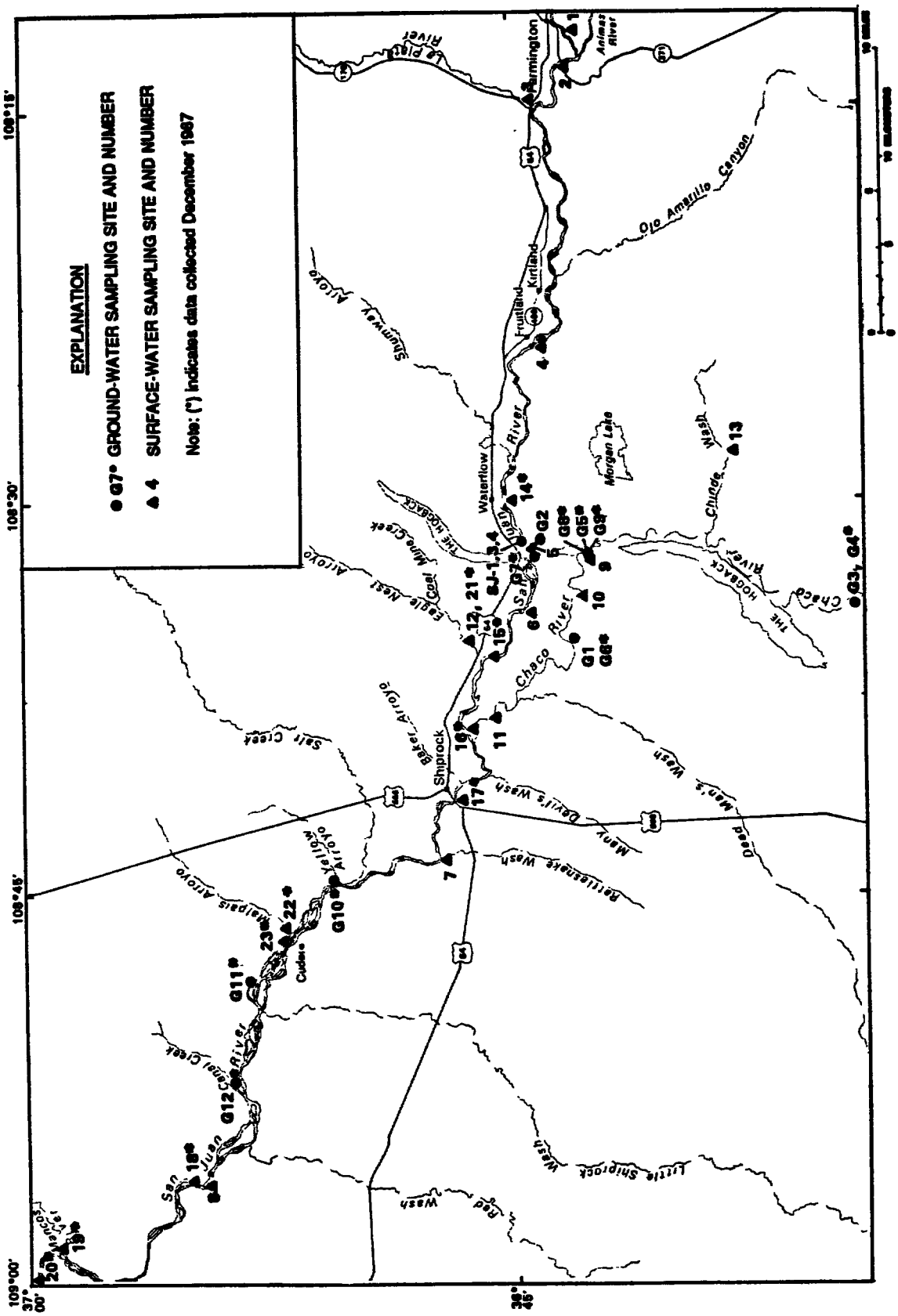
21NMEX 14080105011 0000.100 ON
0001 FEET DEPTH

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39337 ALPHABHC TOTUG/L	39338 BETA BHC TOTUG/L	34259 DELTABHC TOTUG/L	39340 GAMMABHC LINDANE TOT.UG/L	39410 HEPTCHLR TOTUG/L	39330 ALDRIN TOT UG/L	39420 HPCHLREP TOTUG/L	39700 HCB TOT UG/L	39388 ENDOSULN WHL SMPL UG/L	39380 DIELDRIN TOTUG/L
91/06/12	0825	WATER		.05K	.05K	.05K	.05K	.05K	.05K	.05K	.08K	.05K	.1K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39365 DDE WHL SMPL UG/L	39390 ENDRIN TOT UG/L	82624 ENDOSLFN BETA TOT REC UG/L	39360 DDD WHL SMPL UG/L	82623 ENDOSLFN -SO4 TOT REC UG/L	00002 HSAMPLOC % FROM RT BANK	39370 DDT WHL SMPL UG/L	82622 ENDRIN ALDH TOT REC UG/L	39480 MTHXYCLR WHL SMPL UG/L	78008 ENDRIN KETONE UG/L
91/06/12	0825	WATER		.1K	.1K	.1K	.1K	.1K		.1K	.1K	.5K	.1K

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	39348 A-CHLRDN WHL SMPL UG/L	39810 G-CHLRDN WHL SMPI UG/L	39400 TOXAPHEN TOTUG/L	39492 PCB-1232 TOTUG/L	39496 PCB-1242 TOTUG/L	39500 PCB-1248 TOTUG/L	39504 PCB-1254 TOTUG/L	39508 PCB-1260 TOTUG/L	39117 PHTHLATE ESTERS MG/L	09501 RA-226 TOTAL PC/L
91/06/12	0825	WATER		.5K	.5K	1.0K	.5K	.5K	.5K	1.0K	1.0K		
91/06/20	1130	WATER											2.0

DATE FROM TO	TIME OF DAY	MEDIUM	SMK OR DEPTH (FT)	09502 RA-226 ERROR PC/L	11501 RA-228 TOTAL PC/L	11502 RA-228 ERROR PC/L
91/06/20	1130	WATER		.1	3	1



Appendix 11a. Location of surface water and groundwater sampling sites, San Juan County, New Mexico (Thorn 1993)

--Chemical analyses of water samples collected from ground-water sites, San Juan County, New Mexico, October 1969 and June 1990-January 1991

[Site numbers are plotted in figures 2 and 11-13; uS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; mg/L, milligrams per liter; *, analysis from filtered (dissolved) samples; ug/L, micrograms per liter; 0/00, per mil; --, no data; <, less than]

Site number	Site name and identification number	Date sampled	Time	Specific conductance (uS/cm)	pH (units)	Temperature (°C)	Calcium (mg/L)*	Magnesium (mg/L)*	Sodium (mg/L)*	Potassium (mg/L)*
G1	Chaco River recorder well 364325108353001	06-12-90	0930	2,000	7.4	15.5	86	44	330	6.0
		08-02-90	1000	1,890	7.4	18.0	69	35	290	6.2
		10-16-90	1500	1,880	7.6	18.5	66	33	280	6.3
		11-29-90	1230	1,820	7.9	13.5	67	34	300	6.2
		01-31-91	1230	1,950	7.9	9.5	64	33	270	5.3
G2	San Juan River flowing well 364430108312501	06-12-90	1530	1,100	7.3	16.0	160	44	53	1.9
		08-01-90	1530	990	7.1	18.5	140	40	48	1.9
		10-17-90	1530	1,100	7.1	16.0	150	40	50	2.0
		11-29-90	1500	990	7.4	12.0	150	40	50	1.8
		01-31-91	1430	1,270	7.3	5.5	170	47	51	1.6
G3	Alluvial well on Chaco River 363458108342401	08-03-90	1100	1,200	7.5	24.0	67	7.5	220	4.8
		10-17-90	0930	1,300	7.8	16.5	66	5.5	210	4.3
		11-30-90	1000	1,000	7.8	12.5	66	5.6	200	3.3
		01-31-91	0930	1,000	7.7	7.0	60	4.9	170	2.8
SJ-1	Augered well near Waterflow 364500108312901	10-06-69	--	2,160	7.9	16.0	325	85	115	4.1
SJ-3	Augered well near Waterflow 364445108312701	10-06-69	--	3,200	8.0	19.0	425	175	239	7.8
SJ-4	Augered well near Waterflow 364453108312801	10-06-69	--	2,960	8.0	16.0	515	116	150	5.4

Appendix 11b. Chemical analyses of water samples collected from groundwater sites, San Juan County, New Mexico, October 1969 and June 1990-January 1991 (Thorn 1993)

--Chemical analyses of water samples collected from ground-water sites, San Juan County, New Mexico, October 1969 and June 1990-January 1991--Continued

Site number	Site name and identification number	Date sampled	Time	Alkalinity (mg/L)*	Sulfate (mg/L)*	Chloride (mg/L)*	Fluoride (mg/L)*	Bromide (mg/L)*	Iodide (mg/L)*	Dissolved solids, sum of constituents (mg/L)*	Nitrogen (mg/L)*
G1	Chaco River recorder well 364325108353001	06-12-90	0930	137	770	58	1.2	0.13	0.014	1,400	1.50
		08-02-90	1000	156	720	56	1.0	0.03	0.011	1,290	1.30
		10-16-90	1500	147	700	63	1.3	0.33	0.010	1,260	1.30
		11-29-90	1230	137	750	58	0.8	0.15	0.011	1,330	1.30
		01-31-91	1230	133	710	61	1.2	0.16	0.011	1,240	1.20
G2	San Juan River flowing well 364430108312501	06-12-90	1530	311	330	15	0.5	0.05	0.007	818	1.10
		08-01-90	1530	352	260	12	0.3	0.04	0.009	737	0.30
		10-17-90	1530	385	260	14	<0.1	0.05	0.012	770	0.60
		11-29-90	1500	372	--	27	0.4	0.04	0.006	561	0.80
		01-31-91	1430	358	370	35	0.7	0.06	0.007	909	1.60
G3	Alluvial well on Chaco River 363458108342401	08-03-90	1100	214	420	10	1.0	0.03	0.003	875	0.30
		10-17-90	0930	262	410	12	0.7	0.08	0.003	881	0.40
		11-30-90	1000	230	390	11	0.4	0.04	0.001	813	0.40
		01-31-91	0930	222	350	9.6	0.9	0.04	0.002	742	0.20
SJ-1	Augered well near Waterflow 364500108312901	10-06-69	--	--	1,140	29	0.6	--	--	1,860	--
SJ-3	Augered well near Waterflow 364445108312701	10-06-69	--	--	1,860	50	0.6	--	--	2,910	--
SJ-4	Augered well near Waterflow 364453108312801	10-06-69	--	--	1,700	28	0.6	--	--	2,710	--

--Chemical analyses of water samples collected from ground-water sites, San Juan County, New Mexico, October 1969 and June 1990-January 1991--Concluded

Site number	Site name and identification number	Date sampled	Time	Barium (ug/L)*	Boron (ug/L)*	Iron (ug/L)*	Manganese (ug/L)*	Selenium (ug/L)*	Strontium (ug/L)*	Zinc (ug/L)*	S-34/S-32 stable isotope ratio (0/00)*
G1	Chaco River recorder well 364325108353001	06-12-90	0930	32	1,000	5,100	550	<1	4,200	1,200	-6.80
		08-02-90	1000	23	1,100	4,100	420	<1	3,500	320	-6.00
		10-16-90	1500	24	1,100	8,100	440	<1	3,300	120	-4.70
		11-29-90	1230	24	1,100	9,000	490	<1	3,400	630	-4.70
		01-31-91	1230	20	850	7,400	420	<1	3,100	910	-3.90
G2	San Juan River flowing well 364430108312501	06-12-90	1530	33	100	13	1	3	1,600	9	--
		08-01-90	1530	32	110	23	8	2	1,400	4	-1.60
		10-17-90	1530	32	100	11	18	<1	1,500	4	-1.20
		11-29-90	1500	31	90	11	<1	2	1,500	9	-1.20
		01-31-91	1430	30	90	10	<1	2	1,600	10	-3.00
G3	Alluvial well on Chaco River 363458108342401	08-03-90	1100	45	90	110	900	<1	1,100	5	-6.50
		10-17-90	0930	28	80	63	100	<1	810	<3	-3.80
		11-30-90	1000	22	60	260	270	<1	790	3	-2.40
		01-31-91	0930	24	50	25	58	1	690	4	-1.20
SJ-1	Augered well near Waterflow 364500108312901	10-06-69	--	--	280	10	--	--	--	--	--
SJ-3	Augered well near Waterflow 364445108312701	10-06-69	--	--	370	0	--	--	--	--	--
SJ-4	Augered well near Waterflow 364453108312801	10-06-69	--	--	360	180	--	--	--	--	--

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987

[Data from C.L. Thomas, U.S. Geological Survey, written commun., 1987. Site numbers are plotted in figure 2; ft^3/s, cubic feet per second; uS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; mg/L, milligrams per liter; *, analysis from filtered (dissolved) samples; ug/L, micrograms per liter; 0/00, per mil; E, estimate; <, less than; --, no data]

Site number	Site name and identification number	Date sampled	Time	Discharge (ft^3/s)	Specific conductance (uS/cm)	pH (units)	Temperature (°C)	Calcium (mg/L)*	Magnesium (mg/L)*	Sodium (mg/L)*	Potassium (mg/L)*
	Surface-water sites										
14	San Juan River near Waterflow 364510108295010	12-01-87	0941	E941	610	8.5	1.5	75	15	44	2.4
15	Irrigation drain 364550108360310	12-01-87	1230	<10	3,100	8.1	6.5	350	160	220	9.1
16	San Juan River above Chaco River 364629108385910	12-01-87	1430	--	620	8.6	5.0	78	16	49	2.6
17	San Juan River at Highway 666 364650108412110	12-01-87	1615	E1,000	630	8.8	4.0	78	16	50	2.5
18	San Juan River below Red Wash 365515108560410	12-03-87	1115	E955	660	9.0	3.5	79	17	50	2.4
19	Mancos River at mouth 365856108584510	12-03-87	1420	E34	2,200	8.4	1.5	190	110	150	3.4
20	San Juan River at Four Corners 370020109020010	12-03-87	1515	989	730	8.5	4.0	85	21	52	2.5
21	Eagle Nest Arroyo 364628108353210	12-03-87	1255	<1	38,000	8.1	7.0	390	1,000	7,600	29
22	Irrigation drain 365211108461010	12-03-87	1017	<1	2,700	7.9	3.5	350	140	170	4.7
23	Unnamed creek 365248108472410	12-02-87	1618	<1	8,500	8.3	4.5	300	410	1,900	11

Appendix 11c. Chemical analyses of water samples collected from surface water and groundwater sites, San Juan County, New Mexico, December 1987 (Thorn 1993)

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987--Continued

Site number	Site name and identification number	Date sampled	Time	Discharge (ft^3/s)	Specific conductance (uS/cm)	pH (units)	Temperature (°C)	Calcium (mg/L)*	Magnesium (mg/L)*	Sodium (mg/L)*	Potassium (mg/L)*
				Ground-water sites							
G4	Alluvial well on Chaco River 363458108342401	12-02-87	1038	--	1,400	7.6	9.0	110	11	210	4.7
G5	Chaco River alluvial water on Hogback axis 364238108315201	12-01-87	1209	--	13,900	8.0	10.0	270	120	3,200	15
G6	Chaco River recorder well 364325108353001	12-01-87	1430	--	6,100	7.7	13.0	140	69	1,200	9.2
G7	San Juan River alluvial water at Hogback 364440108321201	12-03-87	1412	--	5,500	6.9	11.0	25	60	1,200	10
G8	Seep 364250108315201	12-04-87	1013	--	16,000	8.2	3.0	200	230	3,700	17
G9	Little Geyser Spring 364220108315201	12-04-87	1040	--	5,000	7.2	6.0	110	25	1,200	21
G10	Seep below Cudei diversion ditch 365048108444301	12-02-87	1120	--	2,740	7.3	9.0	300	96	270	3.9
G11	Alluvial well near Cudei 365301108481401	12-02-87	1319	--	15,000	7.8	10.0	390	740	3,100	18
G12	Canal Creek well near Cudei 365347108522601	12-02-87	1630	--	12,000	9.1	13.0	11.0	250	2,300	16

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987--Continued

Site number	Site name and identification number	Date sampled	Time	Alkalinity (mg/L)*	Sulfate (mg/L)*	Chloride (mg/L)*	Fluoride (mg/L)*	Bromide (mg/L)*	Dissolved solids, sum of constituents (mg/L)*
			Surface-water sites						
14	San Juan River near Waterflow 364510108295010	12-01-87	0941	130	180	15	0.30	0.028	420
15	Irrigation drain 364550108360310	12-01-87	1230	415	1,800	41	0.40	0.073	2,850
16	San Juan River above Chaco River 364629108385910	12-01-87	1430	--	190	15	0.30	0.040	361
17	San Juan River at Highway 666 364650108412110	12-01-87	1615	135	190	15	0.30	0.039	443
18	San Juan River below Red Wash 365515108560410	12-03-87	1115	144	200	14	0.30	0.033	459
19	Mancos River at mouth 365856108584510	12-03-87	1420	240	1,100	22	0.30	0.076	1,860
20	San Juan River at Four Corners 370020109020010	12-03-87	1515	140	250	15	0.40	0.032	519
21	Eagle Nest Arroyo 364628108353210	12-03-87	1255	420	13,000	7,100	0.30	9.8	29,400
22	Irrigation drain 365211108461010	12-03-87	1017	286	1,600	37	0.60	0.14	2,500
23	Unnamed creek 365248108472410	12-02-87	1618	313	6,200	200	0.30	0.22	9,230

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987--Continued

Site number	Site name and identification number	Date sampled	Time	Alkalinity (mg/L)*	Sulfate (mg/L)*	Chloride (mg/L)*	Fluoride (mg/L)*	Bromide (mg/L)*	Dissolved solids, sum of constituents (mg/L)*
			Ground-water sites						
G4	Alluvial well on Chaco River 363458108342401	12-02-87	1038	164	610	15	0.80	0.022	1,070
G5	Chaco River alluvial water on Hogback axis 364238108315201	12-01-87	1209	540	6,600	1,300	0.70	1.5	11,900
G6	Chaco River recorder well 364325108353001	12-01-87	1430	490	2,500	540	1.70	0.94	4,780
G7	San Juan River alluvial water at Hogback 364440108321201	12-03-87	1412	170	1,700	820	0.30	1.0	3,940
G8	Seep 364250108315201	12-04-87	1013	432	9,800	750	2.70	1.0	15,000
G9	Little Geyser Spring 364220108315201	12-04-87	1040	326	3,100	180	2.90	0.32	4,850
G10	Seep below Cudei diversion ditch 365048108444301	12-02-87	1120	365	1,400	38	0.20	0.066	2,340
G11	Alluvial well near Cudei 365301108481401	12-02-87	1319	472	11,000	590	0.30	0.41	16,200
G12	Canal Creek well near Cudei 365347108522601	12-02-87	1630	740	5,000	620	0.50	0.80	8,650

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987--Continued

Site number	Site name and identification number	Date sampled	Time	Barium (ug/L)*	Boron (ug/L)*	Iron (ug/L)*	Manganese (ug/L)*	Selenium (ug/L)*	Strontium (ug/L)*	S-34/S-32 stable isotope ratio (0/00)*
				Surface-water sites						
14	San Juan River near Waterflow 364510108295010	12-01-87	0941	66	50	10	40	<1	870	0.40
15	Irrigation drain 364550108360310	12-01-87	1230	<100	480	20	620	22	5,000	-16.70
16	San Juan River above Chaco River 364629108385910	12-01-87	1430	7	50	13	41	1	910	-0.7
17	San Juan River at Highway 666 364650108412110	12-01-87	1615	66	40	8	40	1	910	-0.90
18	San Juan River below Red Wash 365515108560410	12-03-87	1115	69	50	4	19	1	930	-1.90
19	Mancos River at mouth 365856108584510	12-03-87	1420	100	110	20	80	14	2,200	-17.60
20	San Juan River at Four Corners 370020109020010	12-03-87	1515	70	70	7	8	1	980	-4.20
21	Eagle Nest Arroyo 364628108353210	12-03-87	1255	<100	900	120	50	160	12,000	-18.00
22	Irrigation drain 365211108461010	12-03-87	1017	<100	380	20	100	20	4,900	-18.50
23	Unnamed creek 365248108472410	12-02-87	1618	<100	580	40	10	340	4,600	-21.20

--Chemical analyses of water samples collected from surface-water and ground-water sites, San Juan County, New Mexico, December 1987--Concluded

Site number	Site name and identification number	Date sampled	Time	Barium (ug/L)*	Boron (ug/L)*	Iron (ug/L)*	Manganese (ug/L)*	Selenium (ug/L)*	Strontium (ug/L)*	S-34/S-32 stable isotope ratio (0/00)*
				Ground-water sites						
G4	Alluvial well on Chaco River 363458108342401	12-02-87	1038	64	60	610	2	<1	2	-12.80
G5	Chaco River alluvial water on Hogback axis 364238108315201	12-01-87	1209	100	650	40	10	<1	7,300	9.40
G6	Chaco River recorder well 364325108353001	12-01-87	1430	100	1,500	360	1,800	<1	4,000	-6.60
G7	San Juan River alluvial water at Hogback 364440108321201	12-03-87	1412	<100	320	14,000	1,200	<1	530	19.60
G8	Seep 364250108315201	12-04-87	1013	<100	1,300	60	30	<1	8,200	10.50
G9	Little Geyser Spring 364220108315201	12-04-87	1040	<100	460	520	70	<1	5,000	12.50
G10	Seep below Cudei diversion ditch 365048108444301	12-02-87	1120	<100	380	20	1,200	17	3,600	-14.50
G11	Alluvial well near Cudei 365301108481401	12-02-87	1319	<100	480	70	30	1,300	9,300	-21.70
G12	Canal Creek well near Cudei 365347108522601	12-02-87	1630	<100	570	70	50	<1	320	-19.40

--Statistical summary of selected water-quality constituents in surface-water and ground-water samples, San Juan County, New Mexico, June 1990-February 1991

[Site numbers are plotted in figure 2. Selenium, micrograms per liter; all other constituents are in milligrams per liter; <, less than]

Site number	Site name and water-quality constituent	Number of samples	Minimum	Maximum	Median
1	Animas River at Farmington				
	Calcium	5	58	98	92
	Magnesium	5	7.9	15	14
	Sodium	5	19	43	34
	Sulfate	5	97	210	170
	Chloride	5	13	26	23
	Bromide	5	0.02	0.05	0.04
	Iodide	5	0.001	0.003	0.002
	Dissolved solids	5	267	500	434
	Selenium	5	<1	<1	<1
2	San Juan River at Farmington				
	Calcium	5	55	62	58
	Magnesium	5	8.4	10	9
	Sodium	5	28	43	35
	Sulfate	5	110	150	140
	Chloride	5	9.2	10	10
	Bromide	5	0.01	0.03	0.02
	Iodide	5	0.003	0.004	0.003
	Dissolved solids	5	290	357	336
	Selenium	5	<1	<1	<1
3	La Plata River near Farmington				
	Calcium	5	55	320	120
	Magnesium	5	19	120	29
	Sodium	5	99	430	180
	Sulfate	5	230	1,700	350
	Chloride	5	18	180	75
	Bromide	5	0.08	0.76	0.20
	Iodide	5	0.002	0.01	0.006
	Dissolved solids	5	576	2,920	957
	Selenium	5	<1	2	<1

Appendix 11d Statistical summary of selected water quality constituents in surface water and groundwater samples, San Juan County, New Mexico, June 1990-February 1991 (Thorn 1993)

--Statistical summary of selected water-quality constituents in surface-water and ground-water samples, San Juan County, New Mexico, June 1990-February 1991--Continued

Site number	Site name and water-quality constituent	Number of samples	Minimum	Maximum	Median
5	San Juan River above Hogback				
	Calcium	2	68	70	69
	Magnesium	2	12	12	12
	Sodium	2	44	49	46.5
	Sulfate	2	180	190	185
	Chloride	2	12	13	12.5
	Bromide	2	0.030	0.040	0.035
	Iodide	2	0.003	0.004	0.0035
	Dissolved solids	2	415	418	416.5
	Selenium	2	<1	<1	<1
6	San Juan River below Hogback				
	Calcium	2	68	77	72.5
	Magnesium	2	11	12	11.5
	Sodium	2	43	87	65
	Sulfate	2	190	270	230
	Chloride	2	13	16	14.5
	Bromide	2	0.040	0.080	0.060
	Iodide	2	0.003	0.005	0.004
	Dissolved solids	2	415	575	495
	Selenium	2	<1	<1	<1
7	San Juan River at Shiprock				
	Calcium	2	72	86	79
	Magnesium	2	14	20	17
	Sodium	2	49	67	58
	Sulfate	2	210	270	240
	Chloride	2	14	21	17.5
	Bromide	2	0.040	0.040	0.040
	Iodide	2	0.003	0.004	0.0035
	Dissolved solids	2	447	563	505
	Selenium	2	1	1	1

--Statistical summary of selected water-quality constituents in surface-water and ground-water samples, San Juan County, New Mexico, June 1990-February 1991--Continued

Site number	Site name and water-quality constituent	Number of samples	Minimum	Maximum	Median
8	San Juan River below Shiprock				
	Calcium	3	70	87	72
	Magnesium	3	13	23	14
	Sodium	3	41	71	50
	Sulfate	3	170	310	210
	Chloride	3	10	22	15
	Bromide	3	0.020	0.041	0.040
	Iodide	3	0.003	0.004	0.003
	Dissolved solids	3	400	606	441
	Selenium	3	1	2	1
9	Chaco River at Hogback				
	Calcium	5	89	300	110
	Magnesium	5	48	720	59
	Sodium	5	160	1,800	190
	Sulfate	5	580	7,400	680
	Chloride	5	48	500	57
	Bromide	5	0.11	0.89	0.12
	Iodide	5	0.009	0.034	0.009
	Dissolved solids	5	1,030	10,900	1,210
	Selenium	5	2	4	3
10	Chaco River below Hogback				
	Calcium	5	96	260	100
	Magnesium	5	46	370	55
	Sodium	5	160	1,000	180
	Sulfate	5	560	3,600	650
	Chloride	5	48	310	55
	Bromide	5	0.11	0.69	0.12
	Iodide	5	0.008	0.024	0.009
	Dissolved solids	5	1,010	5,690	1,140
	Selenium	5	2	15	2

--Statistical summary of selected water-quality constituents in surface-water and ground-water samples, San Juan County, New Mexico, June 1990-February 1991--Continued

Site number	Site name and water-quality constituent	Number of samples	Minimum	Maximum	Median
11	Chaco River above mouth				
	Calcium	5	90	190	110
	Magnesium	5	49	130	55
	Sodium	5	180	640	210
	Sulfate	5	620	2,000	660
	Chloride	5	53	180	58
	Bromide	5	0.11	0.29	0.12
	Iodide	5	0.007	0.13	0.008
	Dissolved solids	5	1,090	3,230	1,180
	Selenium	5	2	9	2
13	Chinde Wash near Fruitland				
	Calcium	3	59	120	67
	Magnesium	3	14	30	15
	Sodium	3	220	410	230
	Sulfate	3	480	900	500
	Chloride	3	47	150	56
	Bromide	3	0.08	0.25	0.09
	Iodide	3	0.005	0.008	0.005
	Dissolved solids	3	914	1,700	934
	Selenium	3	3	10	4
G1	Chaco River recorder well				
	Calcium	5	64	86	67
	Magnesium	5	33	44	34
	Sodium	5	270	330	290
	Sulfate	5	700	770	720
	Chloride	5	56	63	58
	Bromide	5	0.03	0.33	0.15
	Iodide	5	0.010	0.014	0.011
	Dissolved solids	5	1,240	1,400	1,290
	Selenium	5	<1	<1	<1

--Statistical summary of selected water-quality constituents in surface-water and ground-water samples, San Juan County, New Mexico, June 1990-February 1991--Concluded

Site number	Site name and water-quality constituent	Number of samples	Minimum	Maximum	Median
G2	San Juan River flowing well				
	Calcium	5	140	170	150
	Magnesium	5	40	47	40
	Sodium	5	48	53	50
	Sulfate	4	260	370	295
	Chloride	5	12	35	15
	Bromide	5	0.04	0.06	0.05
	Iodide	5	0.006	0.012	0.007
	Dissolved solids	5	561	909	770
	Selenium	5	<1	3	2
G3	Alluvial well on Chaco River				
	Calcium	4	60	67	66
	Magnesium	4	4.9	7.5	5.55
	Sodium	4	170	220	205
	Sulfate	4	350	420	400
	Chloride	4	9.6	12	10.5
	Bromide	4	0.030	0.080	0.040
	Iodide	4	0.001	0.003	0.002
	Dissolved solids	4	742	881	844
	Selenium	4	<1	1	<1

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 60. 09352900 Vallecito Creek near Bayfield, Colo., water years 1963 through 1983.									
October	4,389	240	40	.254	.053	.045	.409	.018	.220
November	2,326	142	45	.256	.053	.047	.410	.017	.218
December	1,517	99	48	.256	.054	.048	.409	.017	.218
January	1,169	80	50	.256	.054	.048	.408	.017	.218
February	984	68	51	.256	.054	.048	.407	.017	.219
March	1,737	110	47	.256	.053	.047	.406	.018	.220
April	5,891	307	38	.258	.055	.044	.400	.020	.224
May	23,770	1,040	32	.259	.054	.041	.394	.025	.228
June	31,240	1,290	30	.260	.054	.043	.400	.021	.222
July	15,370	704	34	.258	.054	.045	.400	.019	.223
August	7,855	400	37	.259	.053	.044	.403	.021	.220
September	6,665	339	37	.256	.053	.043	.407	.020	.221
Site 61. 09355500 San Juan River near Archuleta, N. Mex., water years 1956 through 1961.									
October	37,340	11,520	227	.188	.035	.127	.295	.029	.327
November	28,720	9,203	236	.186	.033	.133	.298	.028	.322
December	18,210	6,610	267	.181	.031	.139	.285	.030	.333
January	14,470	5,890	299	.179	.031	.142	.275	.032	.342
February	24,540	10,180	305	.186	.036	.124	.277	.029	.348
March	60,660	22,620	274	.188	.040	.109	.261	.033	.369
April	144,300	34,250	175	.199	.043	.107	.324	.023	.303
May	211,000	33,340	116	.194	.042	.119	.373	.020	.253
June	198,500	27,110	100	.190	.040	.126	.389	.019	.235
July	78,020	15,700	148	.186	.042	.125	.340	.022	.285
August	57,170	15,350	197	.190	.039	.120	.313	.024	.314
September	34,680	9,156	194	.182	.033	.140	.315	.028	.301
Site 61. 09355500 San Juan River near Archuleta, N. Mex., water years 1964 through 1983.									
October	58,260	12,300	155	.205	.037	.106	.316	.018	.319
November	53,560	11,350	156	.205	.037	.107	.315	.018	.319
December	66,710	14,250	157	.204	.037	.107	.319	.018	.315
January	70,900	15,400	160	.203	.037	.108	.318	.018	.316
February	65,750	14,650	164	.203	.038	.107	.317	.018	.317
March	65,470	15,220	171	.199	.038	.110	.308	.018	.327
April	74,890	18,230	179	.195	.039	.111	.301	.018	.336
May	87,450	20,860	176	.196	.039	.111	.304	.018	.332
June	83,960	19,180	168	.197	.039	.110	.309	.018	.327
July	81,310	18,470	167	.197	.039	.111	.311	.018	.324
August	67,270	15,270	167	.200	.038	.110	.310	.018	.325
September	57,920	12,840	163	.202	.037	.108	.312	.018	.323

Appendix 12a. Estimates of mean monthly dissolved-solids loads and concentrations of major dissolved constituents at selected streamflow gaging stations in the Upper Colorado River basin (Nordlund and Liebermann 1990)

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 62. 09364500 Animas River at Farmington, N. Mex., water years 1955 through 1983.									
October	23,880	13,770	424	0.208	0.031	0.094	0.204	0.052	0.410
November	20,120	12,760	466	.206	.031	.097	.196	.053	.418
December	17,870	12,230	503	.205	.031	.098	.192	.053	.421
January	16,350	11,590	521	.202	.030	.100	.187	.055	.426
February	15,780	10,970	511	.202	.031	.100	.189	.055	.423
March	25,600	15,270	439	.207	.031	.095	.202	.050	.414
April	52,830	20,360	283	.225	.032	.081	.236	.042	.384
May	130,600	33,060	186	.242	.031	.066	.274	.033	.353
June	163,400	34,490	155	.248	.032	.061	.286	.031	.342
July	66,430	19,440	215	.233	.032	.073	.251	.038	.373
August	28,400	13,700	355	.217	.031	.087	.217	.046	.402
September	23,350	11,660	367	.214	.031	.089	.214	.048	.404
Site 63. 09365000 San Juan River at Farmington, N. Mex., water years 1962 through 1982.									
October	78,650	32,900	308	.187	.026	.120	.216	.027	.424
November	68,250	27,750	299	.187	.027	.119	.215	.028	.425
December	79,950	31,150	287	.190	.028	.116	.220	.027	.420
January	84,190	33,380	292	.188	.027	.118	.219	.027	.420
February	80,380	32,040	293	.189	.027	.118	.220	.027	.419
March	88,300	37,830	315	.185	.026	.123	.215	.027	.425
April	120,500	41,360	252	.198	.027	.110	.238	.025	.402
May	207,100	56,680	201	.210	.030	.099	.264	.025	.374
June	228,600	57,170	184	.214	.031	.095	.272	.025	.363
July	131,000	41,950	236	.199	.029	.110	.240	.026	.396
August	84,680	39,720	345	.175	.024	.135	.203	.023	.439
September	75,540	30,060	293	.190	.027	.117	.220	.027	.420
Site 64. 09367950 Chaco River near Waterflow, N. Mex., water years 1977 through 1983.									
October	2,330	2,858	902	.108	.028	.183	.076	.069	.537
November	2,087	2,413	850	.100	.026	.192	.079	.063	.540
December	1,242	1,907	1,129	.106	.029	.180	.060	.066	.558
January	2,691	2,290	626	.098	.025	.191	.104	.061	.521
February	3,315	2,757	612	.095	.023	.201	.107	.060	.514
March	1,996	2,548	939	.103	.026	.188	.073	.065	.545
April	1,451	2,117	1,073	.103	.028	.185	.064	.066	.553
May	2,155	2,692	918	.104	.026	.186	.076	.064	.544
June	771	1,488	1,420	.109	.032	.171	.048	.069	.571

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
July	2,218	3,170	1,051	.123	.027	.168	.063	.069	.551
August	5,682	5,415	701	.134	.024	.163	.091	.071	.518
September	2,663	3,143	868	.108	.025	.183	.079	.065	.540
Site 65. 09368000 San Juan River at Shiprock, N. Mex., water years 1958 through 1961.									
October	70,180	45,200	474	.163	.027	.139	.164	.043	.464
November	56,610	40,720	529	.159	.027	.142	.154	.045	.473
December	39,880	35,810	660	.149	.027	.150	.135	.047	.492
January	32,980	31,940	712	.145	.027	.153	.128	.049	.499
February	34,950	32,210	678	.148	.027	.151	.133	.048	.494
March	170,500	102,600	442	.169	.020	.144	.198	.035	.435
April	245,500	79,460	238	.193	.029	.111	.237	.035	.395
May	307,700	78,800	188	.203	.032	.100	.257	.034	.374
June	312,400	68,110	160	.208	.035	.093	.268	.034	.362
July	62,190	34,150	404	.168	.032	.130	.168	.045	.458
August	47,140	39,540	617	.153	.024	.152	.151	.043	.477
September	17,510	18,320	769	.139	.031	.151	.113	.054	.512
Site 65. 09368000 San Juan River at Shiprock, N. Mex., water years 1964 through 1983.									
October	80,180	46,060	422	.164	.030	.134	.174	.031	.468
November	73,040	40,230	405	.167	.031	.129	.171	.033	.469
December	88,210	44,510	371	.170	.031	.126	.181	.032	.460
January	93,740	44,510	349	.174	.032	.123	.186	.032	.453
February	88,880	43,560	360	.172	.032	.124	.184	.032	.456
March	98,940	52,250	388	.168	.031	.129	.180	.031	.462
April	118,400	54,060	336	.173	.031	.125	.194	.030	.447
May	198,600	63,860	237	.190	.033	.107	.232	.028	.410
June	228,700	63,650	205	.196	.034	.101	.247	.027	.395
July	141,500	55,760	290	.176	.031	.121	.206	.028	.438
August	91,220	55,960	451	.154	.025	.151	.171	.028	.471
September	76,080	42,490	411	.163	.029	.134	.175	.031	.468
Site 66. 09370800 Mancos River near Cortez, Colo., water years 1977 through 1982.									
October	1,018	1,926	1,391	.126	.073	.086	.071	.012	.633
November	910	2,090	1,689	.122	.074	.086	.064	.012	.642
December	771	1,899	1,812	.120	.075	.086	.061	.011	.647
January	844	2,109	1,837	.120	.075	.086	.061	.012	.647
February	1,204	2,823	1,724	.123	.073	.087	.062	.012	.643
March	3,472	6,512	1,379	.128	.071	.086	.077	.012	.625
April	8,757	5,855	492	.154	.063	.086	.123	.012	.563
May	13,590	5,457	295	.167	.058	.083	.158	.011	.523
June	8,387	3,940	345	.161	.060	.084	.143	.011	.541
July	2,838	3,807	986	.131	.069	.092	.079	.014	.616
August	1,647	2,164	966	.133	.070	.087	.082	.012	.615
September	1,531	2,135	1,026	.134	.071	.086	.085	.012	.613

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 67. 09372000 McElmo Creek near Colorado-Utah State line, Colo., water years 1978 through 1981.									
October	1,575	5,345	2,495	0.119	0.075	0.088	0.063	0.021	0.633
November	1,901	6,412	2,480	.119	.076	.088	.063	.021	.634
December	2,123	6,778	2,347	.121	.076	.087	.065	.021	.632
January	2,247	7,288	2,385	.121	.076	.087	.065	.021	.631
February	3,473	9,855	2,087	.127	.076	.084	.069	.021	.623
March	6,281	17,130	2,005	.129	.076	.082	.070	.021	.622
April	3,933	11,350	2,122	.126	.076	.083	.068	.021	.625
May	3,236	9,727	2,210	.124	.076	.085	.067	.021	.628
June	3,372	10,310	2,249	.124	.076	.085	.066	.021	.628
July	3,784	11,140	2,164	.126	.076	.084	.068	.021	.625
August	2,325	7,468	2,362	.121	.076	.086	.065	.021	.631
September	2,400	7,386	2,263	.123	.076	.086	.067	.021	.628
Site 68. 09379500 San Juan River near Bluff, Utah, water years 1930 through 1961.									
October	91,730	76,070	610	.159	.037	.131	.156	.029	.488
November	56,230	51,840	678	.152	.038	.130	.136	.033	.511
December	43,550	45,410	767	.146	.038	.133	.123	.035	.525
January	41,250	45,320	808	.144	.038	.134	.121	.035	.528
February	60,790	56,750	687	.152	.037	.132	.137	.032	.510
March	99,940	80,620	593	.159	.037	.127	.154	.030	.493
April	238,900	115,600	356	.184	.038	.113	.216	.026	.423
May	385,800	150,400	287	.194	.037	.106	.246	.024	.392
June	389,500	129,300	244	.200	.037	.100	.262	.024	.377
July	149,600	75,700	372	.178	.038	.115	.198	.028	.443
August	110,000	83,790	560	.160	.036	.127	.160	.028	.489
September	85,320	66,120	570	.158	.037	.129	.156	.029	.490
Site 68. 09379500 San Juan River near Bluff, Utah, water years 1964 through 1983.									
October	102,200	78,630	566	.147	.038	.132	.154	.034	.494
November	84,280	62,340	544	.148	.042	.127	.152	.035	.495
December	93,050	64,860	513	.151	.042	.125	.158	.035	.489
January	97,770	66,260	498	.152	.043	.122	.162	.034	.487
February	100,800	71,710	523	.149	.042	.123	.167	.035	.483
March	118,700	92,990	576	.143	.041	.128	.164	.036	.488
April	147,800	99,570	496	.147	.042	.123	.185	.036	.467
May	215,800	111,500	380	.160	.042	.112	.206	.033	.447
June	233,600	108,000	340	.165	.042	.109	.212	.032	.440

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
July	148,000	81,370	404	.157	.043	.120	.188	.035	.457
August	108,900	76,620	518	.149	.040	.129	.164	.033	.485
September	92,890	67,200	532	.150	.040	.127	.161	.033	.488
Site 69. 09380000 Colorado River at Lees Ferry, Ariz., water years 1942 through 1962.									
October	495,100	618,300	918	.126	.044	.152	.115	.103	.460
November	456,400	594,000	957	.126	.044	.152	.114	.104	.460
December	372,300	510,300	1,008	.120	.045	.156	.108	.111	.460
January	338,700	477,300	1,036	.118	.045	.157	.105	.114	.461
February	376,300	486,000	950	.124	.045	.154	.115	.109	.453
March	537,400	639,000	874	.130	.045	.151	.126	.101	.447
April	1184,000	869,200	540	.151	.046	.136	.176	.083	.408
May	2457,000	1151,000	344	.173	.046	.118	.244	.065	.354
June	3035,000	1202,000	291	.180	.045	.111	.272	.059	.332
July	1293,000	745,600	424	.158	.047	.129	.205	.080	.381
August	603,400	639,000	779	.133	.045	.148	.134	.098	.441
September	368,800	513,500	1,024	.124	.043	.154	.112	.107	.460
Site 69. 09380000 Colorado River at Lees Ferry, Ariz., water years 1966 through 1980.									
October	587,800	407,900	510	.134	.046	.145	.150	.092	.434
November	611,000	429,700	517	.133	.046	.145	.148	.092	.435
December	684,400	496,500	533	.133	.046	.146	.146	.093	.436
January	756,600	563,900	548	.132	.046	.146	.144	.094	.438
February	536,200	416,400	571	.132	.046	.147	.141	.096	.439
March	593,100	499,800	620	.131	.046	.147	.136	.098	.442
April	755,900	657,000	639	.130	.046	.147	.134	.099	.443
May	793,000	663,000	615	.131	.046	.147	.137	.098	.442
June	833,200	660,600	583	.131	.046	.147	.140	.096	.439
July	904,700	684,900	557	.132	.046	.147	.143	.095	.437
August	916,600	671,900	539	.132	.046	.147	.145	.094	.435
September	779,800	545,900	515	.134	.046	.145	.149	.092	.434
Site 69. 09380000 Colorado River at Lees Ferry, Ariz., water years 1981 through 1983.									
October	726,000	505,500	512	.128	.048	.150	.148	.092	.434
November	831,800	579,100	512	.129	.048	.150	.148	.093	.432
December	859,800	588,300	503	.129	.048	.149	.150	.092	.432
January	850,400	590,600	511	.129	.048	.149	.149	.093	.432
February	726,000	524,500	531	.128	.047	.149	.146	.096	.434
March	543,900	404,900	547	.127	.047	.149	.143	.096	.439
April	679,200	505,600	547	.128	.047	.148	.144	.097	.436
May	809,300	587,100	533	.128	.047	.148	.147	.096	.434
June	1492,000	1051,000	518	.130	.048	.147	.152	.098	.426
July	1671,000	1163,000	512	.130	.048	.147	.153	.096	.426
August	1218,000	870,800	526	.129	.047	.149	.149	.097	.430
September	962,600	670,900	512	.129	.048	.149	.148	.094	.432

Water Year	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 57. 09328500 San Rafael River near Green River, Utah, water years 1947 through 1983--Continued									
1974	36,910	144,900	2,890	0.085	0.055	0.153	0.056	0.019	0.632
1975	91,580	213,800	1,720	.092	.057	.147	.075	.017	.612
1976	24,920	99,690	2,940	.095	.053	.140	.057	.019	.636
1977	15,170	61,390	2,980	.094	.053	.140	.057	.020	.635
1978	42,530	129,000	2,230	.097	.054	.135	.066	.019	.628
1979	79,050	208,400	1,940	.082	.061	.155	.089	.020	.593
1980	146,100	304,500	1,530	.092	.059	.148	.118	.021	.563
1981	42,370	137,200	2,380	.087	.057	.151	.065	.021	.619
1982	98,120	189,000	1,420	.095	.062	.144	.093	.020	.586
1983	340,600	328,100	708	.113	.064	.128	.162	.018	.515
Site 58. 09333500 Dirty Devil River above Poison Springs Wash, near Hanksville, Utah, water years 1969 through 1976.									
1969	70,390	116,100	1,210	.159	.034	.118	.072	.093	.524
1970	58,450	105,600	1,330	.158	.035	.118	.067	.091	.531
1971	46,360	81,240	1,290	.155	.035	.122	.069	.098	.520
1972	41,960	73,280	1,280	.143	.036	.140	.072	.114	.495
1973	--	--	--	--	--	--	--	--	--
1974	58,450	43,230	544	.171	.034	.081	.139	.056	.519
1975	67,190	97,990	1,070	.161	.036	.117	.087	.105	.494
1976	53,920	80,510	1,100	.161	.035	.118	.085	.104	.496
Site 59. 09335000 Colorado River at Hite, Utah, water years 1951 through 1956.									
1951	8,784,000	7,277,000	609	.133	.050	.144	.155	.098	.421
1952	14,790,000	8,668,000	431	.146	.049	.133	.195	.085	.391
1953	7,767,000	6,915,000	655	.131	.049	.145	.145	.099	.431
1954	5,015,000	5,577,000	818	.123	.048	.152	.121	.111	.444
1955	6,237,000	5,526,000	651	.131	.047	.148	.137	.108	.429
1956	7,694,000	5,734,000	548	.134	.047	.145	.150	.105	.419
Site 60. 09352900 Vallecito Creek near Bayfield, Colo., water years 1963 through 1983.									
1963	78,190	4,451	42	.262	.049	.027	.358	.048	.255
1964	69,600	3,930	42	.262	.050	.027	.356	.049	.257
1965	141,400	7,010	36	.243	.072	.042	.375	.018	.250
1966	105,400	4,642	32	.246	.075	.038	.391	.022	.228

Appendix 12b. Estimates of annual dissolved-solids loads and concentrations and major dissolved constituents at selected streamflow gaging stations in the Upper Colorado River basin (Nordlund and Liebermann 1990)

Water Year	Streamflow (acre-ft)	Dissolved solids Load (tons)	Dissolved solids Concentration (mg/L)	Mass fraction of major dissolved constituents Ca	Mg	NaK	HCO_3	Cl	SO_4
1967	79,020	3,797	35	.268	.050	.035	.412	.030	.206
1968	113,500	5,053	33	.279	.043	.032	.410	.036	.199
1969	122,000	5,430	33	.279	.044	.032	.414	.039	.192
1970	120,000	5,798	36	.247	.049	.042	.430	.016	.216
1971	80,380	4,309	39	.253	.050	.043	.420	.015	.218
1972	83,730	4,535	40	.250	.049	.046	.424	.016	.214
1973	163,600	7,603	34	.247	.048	.046	.407	.020	.232
1974	61,320	3,212	38	.256	.048	.052	.412	.019	.213
1975	131,300	5,559	31	.258	.049	.051	.390	.017	.234
1976	90,960	4,037	33	.261	.051	.051	.385	.014	.237
1977	45,840	2,214	36	.258	.054	.044	.361	.015	.269
1978	87,070	3,824	32	.266	.054	.043	.342	.017	.278
1979	144,300	5,916	30	.270	.055	.048	.372	.014	.241
1980	122,800	5,022	30	.268	.059	.054	.404	.013	.202
1981	80,070	3,753	34	.257	.059	.054	.427	.011	.192
1982	123,200	5,597	33	.255	.059	.052	.471	.008	.155
1983	117,600	5,490	34	.247	.053	.054	.418	.010	.218

Site 61. 09355500 San Juan River near Archuleta, N. Mex., water years 1956 through 1983.

1956	557,900	121,800	161	.171	.038	.145	.324	.030	.291
1957	1,501,000	292,800	144	.184	.047	.115	.346	.021	.287
1958	1,455,000	330,900	167	.185	.049	.111	.330	.020	.305
1959	374,500	102,900	202	.194	.030	.131	.309	.022	.314
1960	1,090,000	240,200	162	.203	.035	.111	.307	.028	.315
1961	702,200	171,600	180	.197	.030	.125	.305	.029	.315
1962	933,400	192,100	151	.205	.031	.123	.336	.029	.277
1963	202,800	56,990	207	.194	.027	.130	.291	.027	.330
1964	427,300	112,500	194	.196	.031	.124	.296	.022	.331
1965	1,104,000	263,600	176	.199	.034	.117	.296	.021	.332
1966	1,285,000	277,400	159	.206	.034	.112	.309	.018	.321
1967	501,300	124,500	183	.193	.032	.126	.287	.019	.343
1968	373,500	97,230	191	.191	.035	.117	.291	.017	.349
1969	917,700	203,700	163	.205	.043	.092	.327	.015	.318
1970	752,200	152,900	149	.211	.038	.101	.337	.016	.297
1971	841,100	171,100	150	.210	.038	.103	.339	.017	.294
1972	594,300	141,400	175	.199	.036	.108	.323	.020	.314
1973	1,307,000	326,400	184	.195	.039	.112	.323	.021	.310
1974	863,200	182,700	156	.206	.039	.103	.321	.019	.311
1975	910,200	222,600	180	.196	.040	.109	.300	.018	.338
1976	779,900	167,800	158	.201	.039	.107	.316	.018	.319
1977	474,600	105,400	163	.202	.038	.108	.306	.018	.328
1978	376,500	89,100	174	.201	.036	.113	.296	.019	.335
1979	1,624,000	372,800	169	.191	.041	.115	.286	.017	.350
1980	1,022,000	207,600	149	.199	.039	.108	.307	.016	.330
1981	690,800	157,400	168	.197	.038	.107	.295	.018	.345
1982	744,100	157,600	156	.202	.039	.103	.317	.018	.321
1983	1,114,000	235,100	155	.201	.041	.101	.338	.014	.305

Water Year	Streamflow (acre-ft)	Dissolved solids Load (tons)	Dissolved solids Concentration (mg/L)	Mass fraction of major dissolved constituents Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 62. 09364500 Animas River at Farmington, N. Mex., water years 1955 through 1983.									
1955	412,500	182,300	325	0.209	0.029	0.098	0.197	0.053	0.414
1956	365,100	152,100	306	.208	.029	.099	.197	.052	.415
1957	969,600	292,100	222	.224	.028	.087	.232	.049	.379
1958	913,000	309,700	249	.226	.029	.087	.226	.053	.379
1959	277,600	153,300	406	.194	.025	.113	.173	.065	.430
1960	609,300	225,100	272	.222	.028	.091	.221	.052	.386
1961	489,000	206,600	311	.217	.027	.096	.208	.059	.394
1962	577,800	213,100	271	.228	.023	.091	.218	.059	.382
1963	376,000	180,400	353	.215	.026	.097	.200	.059	.402
1964	305,900	142,500	343	.217	.027	.091	.201	.048	.417
1965	850,800	254,500	220	.239	.027	.073	.252	.036	.373
1966	540,400	208,900	284	.230	.029	.078	.233	.039	.391
1967	315,300	150,700	351	.217	.033	.089	.219	.044	.399
1968	545,700	187,700	253	.235	.032	.071	.251	.033	.378
1969	611,400	205,800	248	.236	.032	.072	.255	.032	.373
1970	608,300	205,200	248	.236	.032	.071	.254	.032	.375
1971	487,900	190,500	287	.224	.033	.080	.237	.038	.389
1972	391,300	158,900	299	.220	.033	.077	.236	.040	.393
1973	1,176,000	361,500	226	.229	.034	.067	.267	.035	.367
1974	308,100	141,500	338	.216	.034	.082	.227	.045	.395
1975	876,800	236,100	198	.229	.034	.073	.255	.037	.373
1976	449,500	190,900	312	.220	.032	.084	.224	.042	.398
1977	172,900	103,200	439	.213	.031	.088	.194	.048	.426
1978	580,700	188,600	239	.231	.035	.074	.233	.039	.387
1979	1,043,000	293,200	207	.235	.038	.069	.257	.034	.366
1980	841,200	276,900	242	.225	.038	.076	.247	.036	.378
1981	322,500	150,700	344	.213	.034	.083	.219	.044	.406
1982	717,300	244,000	250	.222	.034	.073	.265	.036	.371
1983	820,100	263,300	236	.220	.033	.076	.263	.033	.375
Site 63. 09365000 San Juan River at Farmington, N. Mex., water years 1962 through 1982.									
1962	1,469,000	428,900	215	.213	.022	.101	.244	.030	.390
1963	527,100	283,600	396	.183	.021	.126	.189	.033	.448
1964	705,000	327,900	342	.191	.022	.121	.205	.029	.431
1965	1,922,000	587,100	225	.205	.024	.105	.253	.023	.390
1966	1,790,000	551,000	226	.201	.025	.105	.251	.024	.395
1967	789,300	391,400	365	.174	.023	.130	.195	.025	.452
1968	911,800	375,500	303	.192	.022	.114	.219	.023	.428
1969	1,518,000	519,600	252	.204	.026	.103	.243	.020	.403
1970	1,357,000	477,400	259	.199	.026	.109	.239	.021	.406

Month	Streamflow (acre-ft)	Dissolved solids		Mass fraction of major dissolved constituents					
		Load (tons)	Concentration (mg/L)	Ca	Mg	NaK	HCO_3	Cl	SO_4
1971	1,267,000	445,500	259	.197	.028	.108	.236	.024	.408
1972	944,900	391,600	305	.187	.028	.119	.224	.026	.416
1973	2,408,000	801,300	245	.200	.031	.108	.262	.025	.374
1974	1,075,000	386,700	265	.191	.032	.116	.232	.027	.402
1975	1,737,000	605,800	256	.192	.030	.116	.237	.025	.399
1976	1,152,000	422,800	270	.189	.030	.119	.229	.026	.407
1977	621,700	303,300	359	.169	.026	.145	.189	.028	.442
1978	943,000	381,600	298	.181	.028	.129	.202	.028	.433
1979	2,587,000	755,400	215	.198	.031	.110	.239	.026	.396
1980	1,796,000	516,500	211	.196	.033	.108	.239	.027	.395
1981	924,100	305,400	243	.191	.031	.112	.225	.031	.409
1982	1,424,000	443,500	229	.198	.033	.106	.236	.030	.396
Site 64. 09367950 Chaco River near Waterflow, N. Mex., water years 1977 through 1983.									
1977	27,090	45,680	1,240	.135	.028	.152	.051	.070	.563
1978	25,070	38,260	1,120	.110	.027	.174	.055	.064	.571
1979	61,640	42,070	502	.080	.015	.232	.130	.049	.495
1980	18,270	21,920	882	.093	.024	.203	.083	.064	.533
1981	15,060	20,600	1,010	.099	.028	.192	.075	.068	.538
1982	37,080	33,860	671	.112	.028	.178	.103	.075	.503
1983	30,320	31,250	758	.115	.033	.168	.087	.071	.527
Site 65. 09368000 San Juan River at Shiprock, N. Mex., water years 1960 through 1983.									
1960	1,697,000	675,100	293	.179	.027	.125	.208	.038	.423
1961	1,183,000	592,500	368	.168	.027	.136	.180	.041	.449
1962	1,442,000	563,400	287	.178	.029	.121	.198	.041	.433
1963	508,500	402,500	582	.154	.026	.144	.140	.042	.494
1964	694,400	471,700	499	.164	.024	.138	.159	.034	.481
1965	1,934,000	789,100	300	.182	.026	.122	.207	.028	.435
1966	1,751,000	707,300	297	.183	.030	.120	.203	.030	.435
1967	810,200	567,600	515	.151	.024	.158	.155	.029	.483
1968	888,500	487,000	403	.168	.028	.131	.176	.028	.469
1969	1,534,000	650,000	312	.182	.029	.115	.207	.024	.443
1970	1,366,000	622,600	335	.174	.029	.123	.198	.025	.450
1971	1,225,000	545,800	328	.178	.031	.118	.189	.030	.454
1972	879,300	461,500	386	.166	.033	.127	.175	.031	.468
1973	2,480,000	963,600	286	.178	.031	.119	.222	.028	.421
1974	1,019,000	459,000	331	.176	.034	.120	.195	.033	.443
1975	1,745,000	742,300	313	.171	.031	.128	.196	.030	.445
1976	999,800	439,900	324	.173	.035	.121	.184	.035	.452
1977	566,700	377,500	490	.155	.030	.137	.150	.036	.492
1978	858,300	436,800	374	.169	.033	.127	.168	.036	.468
1979	2,683,000	1,045,000	286	.170	.031	.131	.194	.030	.445
1980	1,879,000	680,500	266	.176	.034	.118	.206	.031	.435
1981	947,600	465,100	361	.166	.035	.124	.179	.033	.462
1982	1,404,000	551,700	289	.180	.035	.113	.217	.030	.425
1983	1,917,000	676,900	260	.186	.035	.105	.241	.029	.405

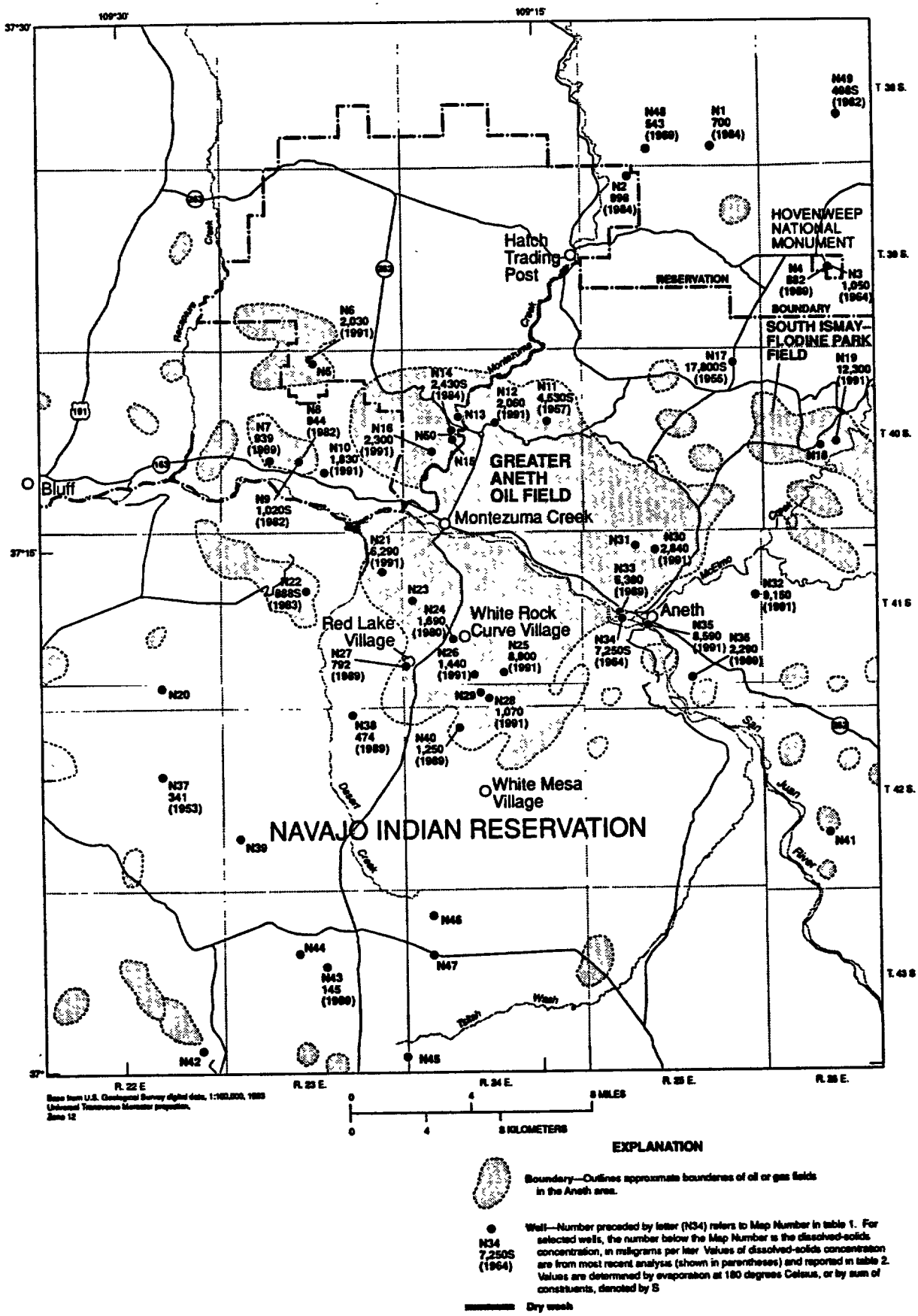
Water Year	Streamflow (acre-ft)	Dissolved solids Load (tons)	Dissolved solids Concentration (mg/L)	Mass fraction of major dissolved constituents Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 66. 09370800 Mancos River near Cortez, Colo., water years 1977 through 1982.									
1977	4,939	12,050	1,790	0.127	0.074	0.083	0.065	0.010	0.641
1978	33,090	29,940	665	.146	.066	.081	.098	.011	.596
1979	91,060	66,090	534	.144	.066	.085	.109	.012	.584
1980	80,990	63,500	577	.143	.066	.086	.105	.012	.588
1981	15,620	32,390	1,530	.118	.073	.091	.061	.014	.642
1982	44,120	40,320	672	.141	.068	.087	.107	.012	.584
Site 67. 09372000 McElmo Creek near Colorado-Utah State line, Colo., water years 1978 through 1981.									
1978	17,950	61,550	2,520	.119	.076	.088	.063	.020	.634
1979	52,920	151,300	2,100	.127	.076	.083	.068	.021	.625
1980	48,910	141,800	2,130	.126	.076	.084	.069	.021	.624
1981	26,820	86,070	2,360	.121	.075	.087	.065	.021	.631
Site 68. 09379500 San Juan River near Bluff, Utah, water years 1930 through 1983.									
1930	1,724,000	1,030,000	440	.170	.039	.123	.179	.026	.463
1931	887,600	659,700	547	.162	.038	.123	.154	.028	.496
1932	2,948,000	1,422,000	355	.178	.036	.119	.200	.023	.443
1933	1,242,000	823,100	487	.165	.037	.124	.164	.026	.483
1934	661,900	535,700	595	.158	.036	.132	.142	.029	.503
1935	2,183,000	1,083,000	365	.181	.037	.116	.212	.024	.429
1936	1,631,000	965,800	436	.175	.037	.122	.188	.025	.454
1937	2,336,000	1,213,000	382	.181	.038	.116	.209	.022	.434
1938	2,466,000	1,260,000	376	.181	.039	.114	.213	.023	.429
1939	1,239,000	771,700	458	.168	.038	.124	.175	.026	.470
1940	997,900	725,800	535	.157	.037	.134	.156	.028	.488
1941	4,242,000	2,325,000	403	.176	.039	.123	.207	.024	.432
1942	3,078,000	1,707,000	408	.177	.039	.120	.205	.025	.434
1943	1,445,000	921,300	469	.167	.042	.114	.174	.031	.472
1944	2,289,000	1,090,000	350	.183	.040	.105	.221	.030	.421
1945	1,620,000	948,200	431	.172	.041	.113	.192	.031	.451
1946	864,700	674,500	574	.157	.041	.121	.152	.032	.497
1947	1,489,000	953,000	471	.171	.037	.117	.174	.028	.473
1948	2,318,000	1,081,000	343	.181	.038	.109	.206	.026	.440
1949	2,523,000	1,196,000	349	.181	.040	.105	.212	.027	.436
1950	902,400	611,300	498	.161	.042	.116	.158	.032	.491
1951	668,300	488,300	537	.155	.041	.119	.146	.034	.504
1952	2,542,000	1,087,000	315	.181	.039	.105	.222	.028	.425

Water Year	Streamflow (acre-ft)	Dissolved solids Load (tons)	Dissolved solids Concentration (mg/L)	Mass fraction of major dissolved constituents Ca	Mg	NaK	HCO_3	Cl	SO_4
1953	945,500	649,200	505	.158	.038	.124	.154	.033	.493
1954	984,800	781,600	584	.157	.036	.129	.149	.031	.499
1955	988,600	696,300	518	.161	.036	.125	.158	.032	.489
1956	861,600	530,500	453	.161	.035	.128	.158	.036	.482
1957	2,603,000	1,230,000	347	.180	.030	.118	.206	.029	.438
1958	2,551,000	1,188,000	343	.178	.030	.120	.201	.032	.439
1959	618,100	503,100	599	.145	.037	.141	.130	.043	.504
1960	1,690,000	841,300	366	.168	.032	.123	.185	.036	.456
1961	1,188,000	745,900	462	.158	.033	.133	.159	.039	.477
1962	1,511,000	854,800	416	.170	.031	.125	.181	.039	.454
1963	625,400	644,800	758	.153	.036	.133	.151	.036	.491
1964	792,300	715,800	664	.145	.043	.127	.144	.036	.505
1965	2,028,000	1,136,000	412	.160	.042	.118	.180	.031	.470
1966	1,970,000	1,120,000	418	.158	.042	.118	.177	.031	.474
1967	918,900	790,100	632	.143	.042	.128	.139	.033	.515
1968	1,017,000	821,800	594	.147	.042	.124	.149	.033	.505
1969	1,653,000	1,169,000	520	.156	.043	.119	.169	.033	.479
1970	1,531,000	1,002,000	481	.157	.042	.121	.174	.033	.474
1971	1,340,000	863,800	474	.156	.041	.129	.162	.034	.478
1972	985,100	724,900	541	.147	.039	.134	.137	.034	.508
1973	3,024,000	1,891,000	460	.152	.035	.131	.173	.034	.475
1974	1,065,000	713,600	492	.152	.043	.127	.152	.037	.490
1975	1,910,000	991,800	382	.159	.042	.118	.185	.033	.464
1976	1,131,000	708,600	461	.158	.041	.119	.170	.032	.479
1977	611,200	487,000	586	.144	.038	.131	.147	.036	.504
1978	934,700	702,600	553	.144	.037	.125	.175	.035	.484
1979	3,065,000	1,694,000	406	.147	.042	.109	.226	.033	.443
1980	2,142,000	1,378,000	473	.143	.043	.113	.202	.035	.464
1981	926,500	672,800	534	.150	.046	.139	.168	.043	.454
1982	1,561,000	868,600	409	.159	.044	.119	.185	.035	.457
1983	2,293,000	1,168,000	375	.158	.047	.122	.200	.039	.434

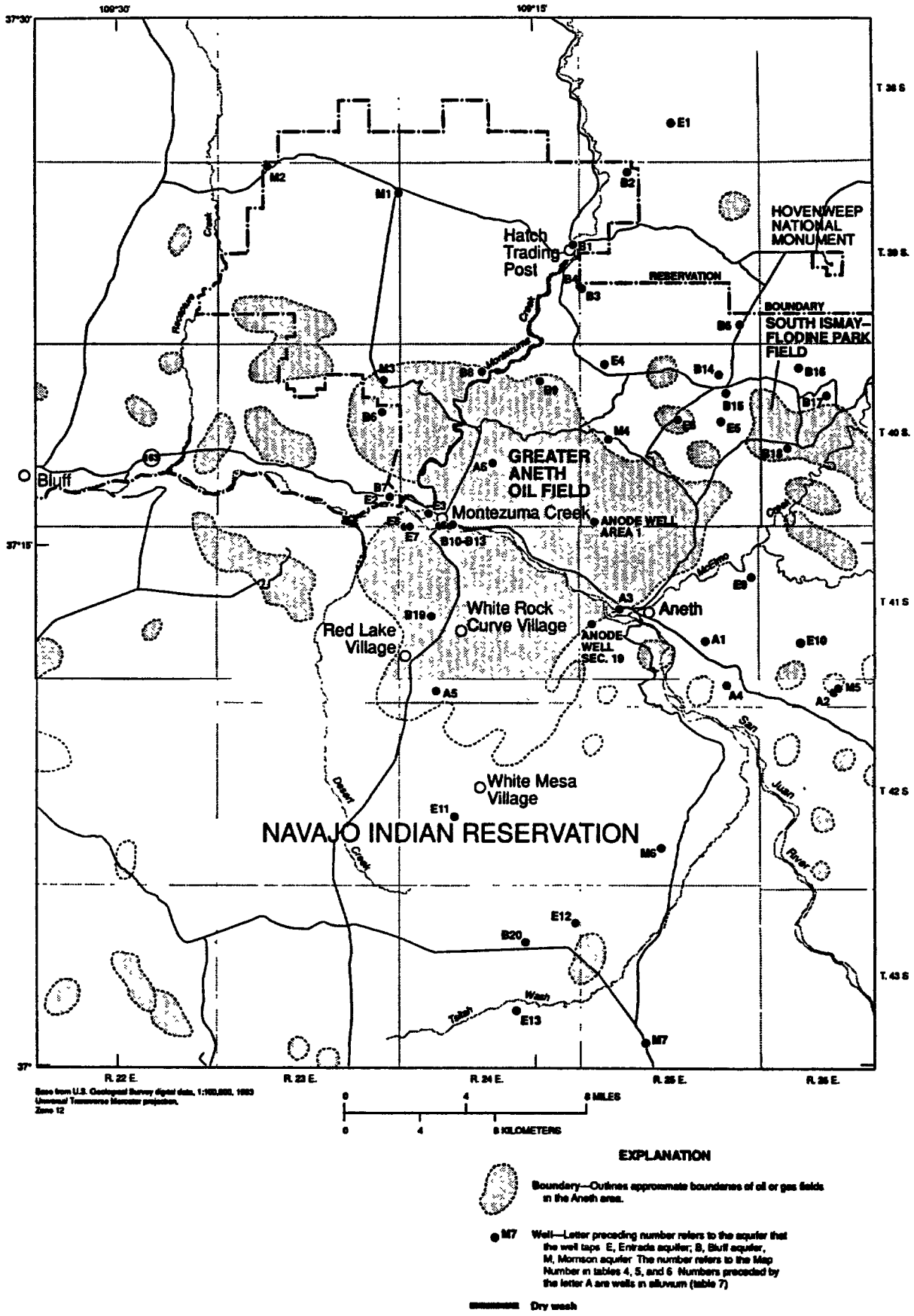
Site 69. 09380000 Colorado River at Lees Ferry, Ariz., water years 1926 through 1983.

1926	13,980,000	9,006,000	474	.139	.045	.147	.162	.084	.423
1927	16,540,000	9,494,000	422	.143	.045	.144	.174	.081	.413
1928	15,310,000	10,820,000	520	.141	.046	.144	.159	.079	.430
1929	19,190,000	12,100,000	464	.148	.047	.137	.172	.072	.424
1930	13,050,000	10,400,000	586	.138	.047	.144	.150	.081	.440
1931	6,376,000	7,000,000	807	.121	.047	.154	.122	.100	.457
1942	17,010,000	9,130,000	395	.137	.051	.136	.171	.084	.421
1943	11,240,000	8,046,000	526	.128	.050	.147	.145	.093	.438
1944	13,200,000	8,427,000	469	.130	.049	.145	.158	.090	.427
1945	11,530,000	8,237,000	525	.128	.049	.149	.148	.092	.433
1946	8,722,000	8,511,000	718	.121	.046	.150	.149	.094	.440
1947	13,490,000	9,049,000	493	.148	.046	.132	.183	.082	.408
1948	13,670,000	8,972,000	483	.148	.047	.134	.182	.084	.406
1949	14,340,000	9,606,000	493	.147	.047	.135	.177	.083	.411
1950	11,040,000	8,364,000	557	.140	.048	.138	.164	.089	.420
1951	9,817,000	7,658,000	574	.139	.048	.140	.161	.090	.422
1952	17,960,000	11,320,000	464	.151	.047	.132	.190	.077	.403
1953	8,787,000	7,439,000	623	.135	.046	.145	.150	.093	.430
1954	6,101,000	6,388,000	770	.130	.045	.150	.133	.100	.441

Water Year	Streamflow (acre-ft)	Dissolved solids Load (tons)	Dissolved solids Concentration (mg/L)	Mass fraction of major dissolved constituents Ca	Mg	NaK	HCO_3	Cl	SO_4
Site 57. 09328500 San Rafael River near Green River, Utah, water years 1947 through 1983--Continued									
1974	36,910	144,900	2,890	0.085	0.055	0.153	0.056	0.019	0.632
1975	91,580	213,800	1,720	.092	.057	.147	.075	.017	.612
1976	24,920	99,690	2,940	.095	.053	.140	.057	.019	.636
1977	15,170	61,390	2,980	.094	.053	.140	.057	.020	.635
1978	42,530	129,000	2,230	.097	.054	.135	.066	.019	.628
1979	79,050	208,400	1,940	.082	.061	.155	.089	.020	.593
1980	146,100	304,500	1,530	.092	.059	.148	.118	.021	.563
1981	42,370	137,200	2,380	.087	.057	.151	.065	.021	.619
1982	98,120	189,000	1,420	.095	.062	.144	.093	.020	.586
1983	340,600	328,100	708	.113	.064	.128	.162	.018	.515
Site 58. 09333500 Dirty Devil River above Poison Springs Wash, near Hanksville, Utah, water years 1969 through 1976.									
1969	70,390	116,100	1,210	.159	.034	.118	.072	.093	.524
1970	58,450	105,600	1,330	.158	.035	.118	.067	.091	.531
1971	46,360	81,240	1,290	.155	.035	.122	.069	.098	.520
1972	41,960	73,280	1,280	.143	.036	.140	.072	.114	.495
1973	--	--	--	--	--	--	--	--	--
1974	58,450	43,230	544	.171	.034	.081	.139	.056	.519
1975	67,190	97,990	1,070	.161	.036	.117	.087	.105	.494
1976	53,920	80,510	1,100	.161	.035	.118	.085	.104	.496
Site 59. 09335000 Colorado River at Hite, Utah, water years 1951 through 1956.									
1951	8,784,000	7,277,000	609	.133	.050	.144	.155	.098	.421
1952	14,790,000	8,668,000	431	.146	.049	.133	.195	.085	.391
1953	7,767,000	6,915,000	655	.131	.049	.145	.145	.099	.431
1954	5,015,000	5,577,000	818	.123	.048	.152	.121	.111	.444
1955	6,237,000	5,526,000	651	.131	.047	.148	.137	.108	.429
1956	7,694,000	5,734,000	548	.134	.047	.145	.150	.105	.419
Site 60. 09352900 Vallecito Creek near Bayfield, Colo., water years 1963 through 1983.									
1963	78,190	4,451	42	.262	.049	.027	.358	.048	.255
1964	69,600	3,930	42	.262	.050	.027	.356	.049	.257
1965	141,400	7,010	36	.243	.072	.042	.375	.018	.250
1966	105,400	4,642	32	.246	.075	.038	.391	.022	.228



Appendix 13a. Location of selected wells in the Navajo aquifer and dissolved-solids concentration in groundwater (Spangler 1992)



Appendix 13b. Location of selected wells completed in the Bluff. Entrada, Morrison, and alluvial aquifers (Spangler 1992)

Map number	Well number	Date sampled	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Density (g/ml at 20 °C)	Carbon dioxide, dissolved (mg/L as CO_2)	Hardness, total (mg/L as $CaCO_3$)	Alkalinity, field (mg/L as $CaCO_3$)	Alkalinity, lab (mg/L as $CaCO_3$)	Solids, sum of constituents, dissolved (mg/L)
		10-11-89	12,300	8.3	18.0	1.005	—	190	—	403	8,860
		07-31-91	13,000	8.3	17.5	—	—	170	—	389	8,910
N26	(D-41-24)28cdb-1	07-31-91	2,400	8.5	17.0	—	—	19	—	518	1,400
N27	(D-41-24)30cba-1	06-16-89	1,410	8.6	19.5	—	—	10	—	475	818
N28	(D-41-24)33dad-1	10-06-89	1,690	8.7	19.0	0.998	—	12	—	471	1,060
		07-18-90	1,780	8.6	19.5	—	—	11	—	380	980
		07-31-91	1,770	8.6	18.0	—	—	11	—	479	1,050
N30	(D-41-25) 4cad-1	04-15-83	4,890	7.6	20.0	—	—	140	—	868	3,090
		10-25-84	—	7.6	19.0	—	—	—	—	839	3,030
		07-19-90	4,550	7.5	19.0	—	—	110	—	813	2,810
		07-31-91	4,660	7.5	19.0	—	—	100	—	845	2,780
N32	(D-41-25)13aax-1	10-10-89	14,600	7.3	19.0	1.005	—	510	—	650	9,110
		08-01-91	13,900	7.3	20.0	—	—	530	—	671	8,820
N33	(D-41-25)17cac-1	10-12-64	11,100	7.9	—	—	11	380	448	—	7,080
		08-25-89	11,200	9.9	16.0	—	—	15	—	405	6,220
N34	(D-41-25)17cdb-1	03-18-64	11,200	7.7	—	—	20	470	521	—	7,460
		10-12-64	11,500	7.8	—	1.003	15	450	487	—	7,250
N35	(D-41-25)21bba-1	03-10-55	12,000	7.9	18.5	—	14	570	558	—	8,620
		08-23-89	14,400	7.1	18.5	—	—	430	—	556	8,730
		07-19-90	14,500	7.0	18.5	—	—	430	—	611	8,450
		07-31-91	14,200	7.0	18.0	—	—	470	—	561	8,440
N36	(D-41-25)27dca-1	10-09-89	3,290	8.4	17.0	.999	-	28	—	631	2,290
N37	(D-42-22)14bbc-1	12-03-53	565	—	16.0	—	—	7	193	—	341
N38	(D-42-23) 2bdb-1	03-11-55	846	9.0	16.5	—	0.7	6	355	—	499
		06-19-89	840	9.0	18.0	—	—	4	—	352	473
N40	(D-42-24) 5dac-1	10-06-89	1,940	8.7	17.5	.998	—	15	—	413	1,290
N43	(D-43-23)15cab-1	01-20-54	—	—	16.5	—	—	23	337	—	—
		03-11-55	274	7 5	15.0	—	7.6	51	124	—	—
		08-24-89	250	7.8	20.0	—	—	51	—	105	150
					Paradox Formation						
Aneth brine sample		06-22-89	105,000	7.1	36.0	1.054	—	20,000	—	72	78,800
Ismay brine sample		10-09-89	171,000	6.8	24.0	1.116	—	26,000	—	75	174,000

Appendix 13c. Selected properties and chemical constituents in water from wells in the Navajo aquifer and in brine from the Paradox Formation (Spangler 1992)

Map number	Well number	Date sampled	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Density (g/ml at 20 °C)	Carbon dioxide, dissolved (mg/L as CO_2)	Hardness, total (mg/L as $CaCO_3$)	Alkalinity, field (mg/L as $CaCO_3$)	Alkalinity, lab (mg/L as $CaCO_3$)	Solids, sum of constituents, dissolved (mg/L)
					Navajo aquifer						
N48	(D-38-25)33bdc-1	08-06-69	—	8.5	17.0	—	—	50	—	—	—
N1	(D-38-25)35bdd-1	06-10-82	1,550	8 4	15.5	—	—	41	—	617	926
		06-20-84	1,140	8 0	18.5	—	—	29	494	484	704
N49	(D-38-26)28acd-1	08-07-69	—	8 2	18.0	—	—	66	—	—	—
		06-09-82	560	8.2	18.0	—	—	28	—	253	363
		09-21-82	850	7.6	18.0	—	—	41	—	344	498
N2	(D-39-25) 5aca-2	07-19-52	1,290	8.2	—	—	6.5	110	529	—	791
		07-31-52	1,270	—	—	—	—	74	541	—	804
		08-12-53	1,200	8 3	—	—	—	50	—	—	780
		06-19-84	1,980	8.0	19 5	—	—	44	504	507	1,010
N3	(D-39-26)21bdb-1	06-14-63	2,040	7.5	—	—	22	490	359	—	1,460
		06-25-63	1,450	8.7	—	—	2.3	32	580	—	960
		07-00-63	1,200	8.5	—	—	3.3	44	539	—	756
		08-20-63	1,150	—	—	—	—	—	—	—	—
		08-26-63	1,170	—	—	—	—	620	—	—	—
		09-07-63	1,740	8.1	18.5	—	8.9	63	577	—	1,140
		09-07-63	1,820	7.9	21.0	—	15	75	619	—	1,200
		03-10-64	1,630	8 4	21 0	—	4.3	63	553	—	1,070
N4	(D-39-26)21bdb-2	10-07-89	1,460	7.8	19.0	0.998	—	84	—	503	907
N6	(D-40-23) 4ada-1	07-30-91	3,180	7.7	17.0	—	—	270	—	287	2,030
N7	(D-40-23)20dbc-1	10-03-89	1,560	8 0	19.0	.998	—	32	—	529	946
N8	(D-40-23)21dbc-1	01-19-78	—	8.0	—	—	9 9	46	505	502	914
		01-31-82	—	8.1	—	—	8.0	46	505	505	928
N9	(D-40-23)21dbc-2	01-19-78	—	8 1	—	—	7.9	41	512	504	954
		01-14-82	—	8 1	—	—	8.0	53	512	512	1,020
N10	(D-40-23)27baa-1	07-15-60	3,110	7.8	—	—	21	96	690	690	2,940
		06-14-82	3,070	7.8	17.0	—	—	120	—	766	1,860
		06-16-83	3,000	7.6	20.0	—	—	110	—	823	1,900
		03-08-84	2,900	9.5	14.0	—	—	—	—	—	—
		09-02-86	3,120	7.7	21.0	—	—	91	—	763	1,820

Solids, residue at 180 °C, dissolved, (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)	Sodium+ potassium, dissolved (mg/L as Na)	Bicarbonate, field (mg/L as HCO_3)	Carbonate, field (mg/L as CO_3)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Iodide, dissolved (mg/L as I)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, nitrate, dissolved (mg/L as N)
						Navajo aquifer								
543	16	2 6	180	19	—	—	—	52	16	—	—	—	9.0	—
—	11	3 3	350	16	—	—	—	67	100	1.0	—	—	7.5	—
700	6 7	2.7	260	13	—	—	—	62	57	1.1	0.09	—	8.8	—
408	21	3 3	110	18	—	—	—	44	12	—	—	—	9.2	—
—	6 8	2 6	130	9 7	—	—	—	44	8 2	0 70	—	—	8 8	—
—	9.7	4 1	170	13	—	—	—	55	30	.60	—	—	8 5	—
794	28	10	260	17	—	620	12	99	45	1.7	—	—	9 3	0 020
—	21	5 2	—	—	290	660	0	96	48	1.8	—	—	13	.110
756	12	4 9	270	21	—	650	16	100	21	1.9	—	—	11	—
998	11	4 0	360	16	—	—	—	110	190	1.7	.55	—	10	—
1,460	120	48	—	—	310	440	0	730	33	—	—	—	7 8	.090
952	13	0 0	—	—	350	650	26	180	26	—	—	—	18	.270
758	10	4 6	—	—	290	610	21	110	12	—	—	—	9.9	.230
—	—	—	—	—	—	—	—	—	44	—	—	—	—	—
—	100	89	—	—	—	—	—	170	38	—	—	—	18	.320
1,130	17	5 1	—	—	410	700	0	310	46	—	—	—	9.9	.200
1,200	18	7 3	420	22	—	760	0	300	56	1.2	—	—	10	.160
1,050	13	7.5	—	—	390	640	15	300	28	—	—	—	9 7	.050
882	19	8 2	290	24	—	—	—	230	20	1.2	.11	0.006	9 4	—
2,030	56	31	570	21	—	—	—	780	390	.50	.29	—	—	—
939	8 1	2 7	350	5 7	—	—	—	88	160	1.3	.54	.021	11	—
564	10	5 0	340	6 0	—	610	5	92	140	.80	—	—	11	.200
944	7 0	7.0	330	7 0	—	620	0	100	150	1.7	—	—	12	—
940	13	2.0	340	7.0	—	600	12	110	160	1.6	—	—	11	.130
—	13	5 0	390	9.0	—	620	0	120	160	1.7	—	—	13	.040
1,740	28	6 4	630	20	—	830	3	210	410	1,200	—	—	9.2	—
—	27	12	670	14	—	—	—	190	480	1.4	—	—	11	—
—	24	11	680	15	—	—	—	210	450	1.5	1.1	.038	11	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	20	10	660	13	—	—	—	170	470	1.3	—	—	11	—

Map number	Well number	Date sampled	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Density (g/ml at 20 °C)	Carbon dioxide, dissolved (mg/L as CO_2)	Hardness, total (mg/L as $CaCO_3$)	Alkalinity, field (mg/L as $CaCO_3$)	Alkalinity, lab (mg/L as $CaCO_3$)	Solids, sum of constituents, dissolved (mg/L)
N10	(D-40-23)27baa-1	03-03-86	3,100	—	18.5	—	—	—	—	—	—
		03-09-87	3,000	7.4	15.0	—	—	—	—	—	—
		03-01-88	3,000	7.4	19.0	—	—	—	—	—	—
		09-07-88	3,000	7.6	19.0	—	—	—	—	—	—
		03-02-89	3,000	7.5	19.0	—	—	97	—	766	1,810
		09-07-89	3,000	7.5	20.0	—	—	—	—	—	—
		03-07-90	3,000	7.5	18.5	—	—	—	—	—	—
		09-06-90	2,850	7.8	22.5	—	—	—	—	—	—
		07-18-90	3,100	7.4	19.5	—	—	97	—	760	1,810
		08-26-91	3,030	7.5	19.0	—	—	—	—	—	—
		07-30-91	3,120	7.4	19.0	—	—	92	—	764	1,760
N11	(D-40-24)14adb-1	04-00-57	—	7.1	—	—	165	420	1,060	—	4,530
N12	(D-40-24)15bcc-1	06-20-89	3,650	7.4	19.5	—	—	100	—	946	2,170
		07-18-90	3,520	7.4	19.5	—	—	95	—	958	2,060
		07-30-91	3,620	7.4	19.0	—	—	100	—	970	2,050
N14	(D-40-24)17dbd-1	05-00-56	—	7.5	—	—	51	150	824	—	2,390
		06-10-82	3,990	7.5	20.0	—	—	130	—	800	2,550
		06-06-84	4,150	7.6	15.5	—	—	120	805	766	2,430
		10-25-84	—	—	—	—	—	110	—	754	2,430
N16	(D-40-24)19ada-1	10-09-89	3,680	7.5	19.0	0.999	—	100	—	936	2,230
		07-30-91	3,920	7.4	19.0	—	—	100	—	992	2,230
N17	(D-40-25) 1bcc-1	08-17-52	5,390	—	21.5	—	—	220	1,890	—	3,550
		12-09-53	14,300	—	—	1.006	—	650	1,210	—	10,100
		03-10-55	23,400	7.7	16.0	1.011	14	1,400	357	—	17,800
N19	(D-40-26)21abb-1	06-20-89	11,100	7.8	18.5	—	—	460	—	423	7,050
		07-19-90	18,400	7.5	19 0	—	—	550	—	398	11,100
		08-01-91	18,300	7.7	18.5	—	—	570	—	411	12,200
N21	(D-41-23)12bda-1	12-00-56	—	6.0	13.0	—	1,040	430	531	—	6,850
		06-21-89	9,460	7.3	18.5	—	—	290	—	503	6,350
		07-18-90	9,260	7.3	18.5	—	—	290	—	610	6,300
		07-30-91	9,300	7.3	18.0	—	—	300	—	504	6,240
N22	(D-41-23)16aaa-1	03-10-83	1,440	8.8	16.5	—	—	11	—	539	888
N24	(D-41-24)20dba-1	05-07-58	—	8.6	—	—	2.7	38	546	—	2,160
		08-25-80	—	8.7	—	—	2.0	24	461	461	1,660
N25	(D-41-24)27cac-1	05-00-57	—	—	—	—	—	140	484	—	3,890

Solids, residue at 180 °C, dissolved (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)	Sodium+ potassium, dissolved (mg/L as Na)	Bicarbonate, field (mg/L as HCO_3)	Carbonate, field (mg/L as CO_3)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Iodide, dissolved (mg/L as I)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, nitrate, dissolved (mg/L as N)
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	23	9.5	650	12	—	—	—	210	430	1.4	—	—	13	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,850	23	8.9	650	16	—	—	—	200	450	—	0.82	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,830	21	9.0	660	12	—	—	—	180	410	1.3	1.1	—	—	—
—	89	48	—	—	1,300	1,300	0	950	820	—	—	—	—	—
2,130	24	9.9	820	19	—	—	—	240	470	1.6	.82	0.038	12	—
2,120	22	9.0	750	18	—	—	—	230	450	—	.84	—	—	—
2,060	23	9.6	780	18	—	—	—	220	410	1.4	.79	—	—	—
—	8.0	32	—	—	1,100	1,010	0	620	710	—	—	—	—	—
—	32	12	950	19	—	—	—	290	750	1.4	—	—	11	—
2,450	28	11	880	17	—	—	—	300	720	1.3	1.9	—	6.7	—
—	27	10	850	18	—	—	—	300	760	1.3	.65	—	10	—
2,310	25	9.2	830	23	—	—	—	240	520	1.4	.85	.041	12	—
2,300	24	9.2	840	20	—	—	—	230	510	1.4	1.0	—	—	—
—	54	20	—	—	1,300	2,300	0	290	690	0.40	—	—	16	0.930
—	130	77	3,400	56	—	1,140	166	2,700	3,000	.40	—	—	10	—
—	330	130	5,700	65	—	440	0	5,800	5,500	.90	—	—	11	2.30
6,740	100	48	2,300	17	—	—	—	1,700	2,600	1.3	1.4	.210	11	—
11,900	86	76	3,600	29	—	—	—	2,800	4,200	—	2.4	—	—	—
12,300	90	79	4,000	35	—	—	—	3,000	4,700	2.3	1.5	—	—	—
—	80	56	—	—	2,100	650	—	2,600	1,400	—	—	—	—	—
6,380	49	37	2,000	34	—	—	—	2,600	1,300	.70	.97	.160	10	—
6,270	50	38	2,000	32	—	—	—	2,500	1,300	—	1.0	—	—	—
6,290	52	38	2,000	34	—	—	—	2,600	1,200	1.1	1.0	—	—	—
—	3.1	0.90	340	4.3	—	—	—	150	52	4.7	.17	.011	9.3	—
—	7.0	5.0	—	—	700	520	72	560	300	—	—	—	—	—
1,690	8.0	1.0	580	9.0	—	530	16	520	260	4.0	—	—	10	.300
—	23	20	—	—	1,200	570	12	1,600	730	—	—	—	—	—

Solids, residue at 180 °C, dissolved (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)	Sodium+ potassium, dissolved (mg/L as Na)	Bicarbonate, field (mg/L as HCO_3)	Carbonate, field (mg/L as CO_3)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Iodide, dissolved (mg/L as I)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, nitrate, dissolved (mg/L as N)
8,410	33	24	2,900	18	—	—	—	3,600	2,000	1.0	14	2.7	9.2	—
8,800	26	22	2,900	17	—	—	—	3,500	2,200	1.6	1.1	—	—	—
1,440	5.0	1.4	520	3.1	—	—	—	400	150	4.4	0.19	—	—	—
792	2.5	0.95	310	2.8	—	—	—	150	53	2.9	.20	0.015	10	—
1,060	3 2	.81	380	2.2	—	—	—	280	97	3.5	.15	.010	9.2	—
1,060	3.2	.78	390	2.0	—	—	—	260	96	—	.16	—	—	—
1,070	3.0	.79	400	2.0	—	—	—	260	95	3.6	.16	—	—	—
—	35	13	1,100	15	—	—	—	710	680	0.80	.51	.075	12	—
—	30	13	1,000	16	—	—	—	690	760	—	.33	—	10	—
2,840	26	9 6	1,000	15	—	—	—	600	670	—	.63	—	—	—
2,840	23	9.3	1,000	15	—	—	—	610	610	1.0	.55	—	—	—
9,010	97	62	3,000	32	—	—	—	2,000	3,500	.50	1.0	.190	10	—
9,150	99	63	2,900	35	—	—	—	1,800	3,500	.90	1.5	—	—	—
—	85	41	—	—	2,500	550	0	1,400	2,800	.30	—	—	10	—
6,380	2.1	1.9	2,300	21	—	—	—	950	2,700	.40	3.0	.400	1.0	—
7,330	110	46	—	—	2,600	640	0	1,300	3,100	—	—	—	5.3	0.020
—	110	41	—	—	2,600	590	0	1,300	3,000	.40	—	—	9.7	.050
8,640	100	74	2,900	28	—	680	0	1,600	3,500	.10	—	—	10	.560
8,710	97	42	2,900	27	—	—	—	1,600	3,700	.40	3.4	.360	11	—
8,870	92	43	2,900	27	—	—	—	1,400	3,600	—	3.2	—	—	—
8,590	110	42	2,900	31	—	—	—	1,400	3,600	1 1	2.4	—	—	—
2,290	5 5	3.3	780	4.5	—	—	—	1,000	100	3.7	.11	.011	8.6	—
341	2.0	.50	130	1.9	—	180	29	50	26	.80	—	—	14	.090
500	1.3	.70	200	0.80	—	340	45	52	21	.80	—	—	14	.110
474	1.0	.31	190	0.90	—	—	—	47	20	1.1	.12	.022	1 1	—
1,250	3.9	1.2	480	2 4	—	—	—	410	130	2.8	.21	.015	11	—
480	5.5	2.2	—	—	180	370	22	51	10	1.6	—	—	29	.250
171	8 7	7.2	—	—	43	150	0	12	5.0	.60	—	—	19	.320
145	10	6.1	38	1 6	—	—	—	10	3.8	.30	.05	.003	17	—
						Paradox Formation								
84,700	5,700	1,300	22,000	430	—	—	—	830	48,000	1.6	280	17	25	—
184,000	7,700	1,600	52,000	1,100	—	—	—	1,10	110,000	.90	400	47	5	—

Map number	Well number	Date sampled	Arsenic, total (µg/L as As)	Barium, dis-solved (µg/L as Ba)	Boron, dis-solved (µg/L as B)	Iron, dis-solved (µg/L as Fe)	Lithium, dis-solved (µg/L as Li)	Manga-nese, dis-solved (µg/L as Mn)
			Navajo aquifer					
N48	(D-38-25)33bdc-1	08-06-69	—	—	—	—	—	—
N1	(D-38-25)35bdd-1	06-10-82	—	—	—	—	—	—
		06-20-84	—	64	850	42	480	8
N49	(D-38-26)28acd-1	08-07-69	—	—	—	—	—	—
		06-09-82	—	—	—	—	—	—
		09-21-82	13	100 T	—	150 T	340	10 T
N2	(D-39-25) 5aca-2	07-19-52	—	—	30	90	—	—
		07-31-52	—	—	—	—	—	—
		08-12-53	—	—	30	50	—	0
		06-19-84	14 D	38	650	86	560	8
N3	(D-39-26)21bdb-1	06-14-63	—	—	—	—	—	—
		06-25-63	—	—	—	—	—	—
		07-00-63	—	—	—	—	—	—
		08-20-63	—	—	—	—	—	—
		08-26-63	—	—	—	—	—	—
		09-07-63	—	—	—	—	—	—
		09-07-63	—	—	230	130	—	—
		03-10-64	—	—	—	—	—	—
N4	(D-39-26)21bdb-2	10-07-89	—	27	280	900	—	—
N6	(D-40-23) 4ada-1	07-30-91	—	—	—	—	—	—
N7	(D-40-23)20dbc-1	10-03-89	—	34	680	160	—	—
N8	(D-40-23)21dbc-1	01-19-78	5 D	70	600	740	—	77
		01-31-82	27	—	1,200	—	—	15 T
N9	(D-40-23)21dbc-2	01-19-78	—	40	700	67	—	48
		01-14-82	24	—	1,200	310 T	—	20 T
N10	(D-40-23)27baa-1	07-15-60	50	—	1,400	570	—	0
		06-14-82	20	—	—	—	—	—
		06-16-83	18	100 T	—	960 T	970 T	20 T
		03-08-84	—	—	—	—	—	—
		09-02-86	—	—	1,500	4,400	—	150

Appendix 13d. Selected trace elements in water from the Navajo aquifer and in brine from the Paradox Formation (Spangler 1992)

Strontium, dissolved (µg/L as Sr)	Vanadium, dissolved (µg/L as V)	Zinc, dissolved (µg/L as Zn)	Carbon 14 percent modern	C-13 / C-12 stable isotope ratio (permil)	H-2 / H-1 stable isotope ratio (permil)	O-18 / O-16 stable isotope ratio (permil)	S-34 / S-32 stable isotope ratio (permil)	Sr-87/ Sr-86 stable isotope ratio	Tritium, total (pCi/L)
				Navajo aquifer					
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
620	—	5	1.8	-6.00	-114.0	-15.40	-0.2	—	3.0
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
700 T	—	10 T	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2	—	54	1.6	-5.70	-112.0	-15.00	0	—	<1.0
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2,300	<1	—	—	—	-113.0	-15.10	7.50	.71041	—
5,000	—	—	—	—	—	—	—	—	—
750	2	—	—	—	—	—	6.20	.71021	—
—	—	9	—	—	—	—	—	—	—
—	—	30 T	—	—	—	—	—	—	—
—	—	10	—	—	—	—	—	—	—
—	—	80 T	—	—	—	—	—	—	—
—	—	0	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2,100 T	—	10 T	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

Map number	Well number	Date sampled	Arsenic, total (µg/L as As)	Barium, dis-solved (µg/L as Ba)	Boron, dis-solved (µg/L as B)	Iron, dis-solved (µg/L as Fe)	Lithium, dis-solved (µg/L as Li)	Manga-nese, dis-solved (µg/L as Mn)
		03-03-86	—	—	—	—	—	—
		03-09-87	—	—	—	—	—	—
		03-01-88	—	—	—	—	—	—
		09-07-88	—	—	—	—	—	—
		03-02-89	—	—	1,400	830	—	20
		09-07-89	—	—	—	—	—	—
		03-07-90	—	—	—	—	—	—
		09-06-90	—	—	—	—	—	—
		07-18-90	—	—	—	—	—	—
		08-26-91	—	—	—	—	—	—
		07-30-91	—	—	—	—	—	—
N11	(D-40-24)14adb-1	04-00-57	—	—	—	—	—	—
N12	(D-40-24)15bcc-1	06-20-89	—	100	1,600	380	—	—
		07-18-90	—	—	—	—	—	—
		07-30-91	—	—	—	—	—	—
N14	(D-40-24)17dbd-1	05-00-56	—	—	—	0	—	—
		06-10-82	—	—	—	—	—	—
		06-06-84	29	D <100	1,400	470	1,100	20
		10-25-84	—	—	—	80	—	20
N16	(D-40-24)19ada-1	10-09-89	—	<100	1,700	260	—	—
		07-30-91	—	—	—	—	—	—
N17	(D-40-25) 1bcc-1	08-17-52	—	—	—	—	—	—
		12-09-53	—	—	—	—	—	—
		03-10-55	—	—	—	40	42,000	20
N19	(D-40-26)21abb-1	06-20-89	—	100	2,800	100	—	—
		07-19-90	—	—	—	—	—	—
		08-01-91	—	—	—	—	—	—
N21	(D-41-23)12bda-1	12-00-56	—	—	—	0	—	—
		06-21-89	—	100	310	2,500	—	—
		07-18-90	—	—	—	—	—	—
		07-30-91	—	—	—	—	—	—
N22	(D-41-23)16aaa-1	03-10-83	23	—	—	—	—	—
N24	(D-41-24)20dba-1	05-07-58	—	—	—	—	—	—
		08-25-80	—	—	210	240 T	—	—
N25	(D-41-24)27cac-1	05-00-57	—	—	—	1,000	—	—

Strontium, dissolved (µg/L as Sr)	Vanadium, dissolved (µg/L as V)	Zinc, dissolved (µg/L as Zn)	Carbon 14 percent modern	C-13 / C-12 stable isotope ratio (permil)	H-2 / H-1 stable isotope ratio (permil)	O-18 / O-16 stable isotope ratio (permil)	S-34 / S-32 stable isotope ratio (permil)	Sr-87/ Sr-86 stable isotope ratio	Tritium, total (pCi/L)
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2,400	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2,600	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2,600	10	—	—	—	-109.5	-14.60	7.60	.71040	—
2,400	—	—	—	—	—	—	—	—	—
2,700	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3,100	—	20	—	-4.90	-110.0	-14.60	9.70	—	2.0
2,800	—	—	0.90	—	—	—	—	—	—
2,700	9	—	—	—	-107.0	-14.60	—	.71044	—
2,700	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	70	—	—	—	—	—	—	—
11,000	20	—	—	—	-97.9	-12.29	9.80	.70976	—
20,000	—	—	—	—	—	—	—	—	—
20,000	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
10,000	38	—	—	—	-93.5	-12.15	9.70	.70998	—
11,000	—	—	—	—	—	—	—	—	—
10,000	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

Map number	Well number	Date sampled	Arsenic, total (µg/L as As)	Barium, dis-solved (µg/L as Ba)	Boron, dis-solved (µg/L as B)	Iron, dis-solved (µg/L as Fe)	Lithium, dis-solved (µg/L as Li)	Manga-nese, dis-solved (µg/L as Mn)
		10-11-89	—	<100	1,000	40	—	—
		07-31-91	—	—	—	—	—	—
N26	(D-41-24)28cdb-1	07-31-91	—	—	—	—	—	—
N27	(D-41-24)30cba-1	06-16-89	—	3	890	180	—	—
N28	(D-41-24)33dad-1	10-06-89	—	13	1,100	69	—	—
		07-18-90	—	—	—	—	—	—
		07-31-91	—	—	—	—	—	—
N30	(D-41-25) 4cad-1	04-15-83	40	—	—	—	—	—
		10-25-84	—	100	160	1,600	820	50
		07-19-90	—	—	—	—	—	—
		07-31-91	—	—	—	—	—	—
N32	(D-41-25)13aax-1	10-10-89	—	<100	230	11,000	—	—
		08-01-91	—	—	—	—	—	—
N33	(D-41-25)17cac-1	10-12-64	—	—	—	—	—	—
		08-25-89	—	100	200	30	—	—
N34	(D-41-25)17cdb-1	03-18-64	—	—	—	—	—	—
		10-12-64	—	—	—	—	—	—
N35	(D-41-25)21bba-1	03-10-55	—	—	—	130 T	—	—
		08-23-89	—	100	430	1,400	—	—
		07-19-90	—	—	—	—	—	—
		07-31-91	—	—	—	—	—	—
N36	(D-41-25)27dca-1	10-09-89	—	<100	400	30	—	—
N37	(D-42-22)14bbc-1	12-03-53	—	—	—	—	—	—
N38	(D-42-23) 2bdb-1	03-11-55	—	—	—	10 T	—	—
		06-19-89	—	6	200	30	—	—
N40	(D-42-24) 5dac-1	10-06-89	—	<100	1,200	360	—	—
N43	(D-43-23)15cab-1	01-20-54	—	—	—	—	—	—
		03-11-55	—	—	—	—	—	—
		08-24-89	—	31	50	110	—	—
		Paradox Formation						
Aneth brine sample		06-22-89	—	1,100	32,000	850	—	—
Ismay brine sample		10-09-89	—	1,000	120,000	1,400	—	—

Strontium, dissolved (µg/L as Sr)	Vanadium, dissolved (µg/L as V)	Zinc, dissolved (µg/L as Zn)	Carbon 14 percent modern	C-13 / C-12 stable isotope ratio (permil)	H-2 / H-1 stable isotope ratio (permil)	O-18 / O-16 stable isotope ratio (permil)	S-34 / S-32 stable isotope ratio (permil)	Sr-87/ Sr-86 stable isotope ratio	Tritium, total (pCi/L)
11,000	11	—	—	—	-93.5	-11.65	9.50	.70929	—
9,300	—	—	—	—	—	—	—	—	—
540	—	—	—	—	—	—	—	—	—
240	<1	—	—	—	-105.5	-13.70	1.60	—	—
250	<1	—	—	—	-105.5	-14.20	4.70	—	—
250	—	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3,800	—	40	0.80	-5.40	-104.0	-13.30	6.10	—	<1
3,600	—	—	—	—	—	—	—	—	—
3,700	—	—	—	—	—	—	—	—	—
8,500	12	—	—	—	-95.4	-12.25	10.10	.70965	—
19,000	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1,200	47	—	—	—	-99.5	-12.80	21.80	.70962	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
12,000	37	—	—	—	-96.0	-12.55	9.80	.70954	—
18,000	—	—	—	—	—	—	—	—	—
17,000	—	—	—	—	—	—	—	—	—
910	1	—	—	—	-97.0	-13.70	—	.70912	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
53	<1	—	—	—	-120.0	-15.35	2.30	—	—
400	1	—	—	—	-105.5	-13.65	6.60	.70926	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
450	17	—	—	—	-78.0	-9.50	2.60	.70849	—
				Paradox Formation					
180,000	340	—	—	—	-79.0	-6.70	19.00	.70862	—
200,000	2,400	—	—	—	-42.0	+2.19	7.80	.70845	—

Discharge: gal/min, gallons per minute; <, less than; e, estimated.

Map number	Date measured	Water temperature (degrees Celsius)	Specific conductance (µS/cm)	pH (standard units)	Discharge (gal/min)
E6	05-10-89	21.0	880	—	1
N30	05-11-89	19.0	4,780	7.5	7.5
A1	05-12-89	17.0	670	7.6	<10
N21	05-13-89	18.5	9,100	—	2
N40	05-13-89	17.0	2,500	—	1
N28	05-13-89	19.0	1,760	8.9	3
N29	05-13-89	17.5	2,400	8.5	6
N14	05-15-89	19.5	4,120	7.4	5
N12	05-15-89	19.5	3,620	7.4	7.5
N8/9	05-16-89	21.5	1,570	8.0	—
N5	05-16-89	19.0	570	8.3	7.5
N6	05-16-89	17.0	3,150	7.7	2
N10	05-16-89	19.5	3,100	7.4	20 e
B8	05-16-89	19.0	1,980	7.7	5
E9	05-16-89	18.0	3,280	8.4	<1
A2	05-17-89	16.0	870	—	<5
N13	05-17-89	17.0	650	7.7	1.5
N16	05-17-89	19.0	3,860	7.4	3
B1	06-15-89	18.0	580	7.5	<5
B2	06-15-89	17.5	870	—	2
N2	06-15-89	19.0	1,520	—	3
N48	06-15-89	18.0	890	—	2.5
B3	06-15-89	19.0	670	7.4	10
B4	06-15-89	40.0	640	—	2
N27	06-16-89	19.5	1,410	8.6	2
N50	06-16-89	25.5	3,840	—	1
N15	06-16-89	17.0	2,220	7.4	1
N38	06-19-89	18.0	840	9.0	<1
N19	06-20-89	18.5	11,100	7.8	20 e
N12	06-20-89	19.5	3,650	7.4	7.5

Appendix 13e. Temperature, specific conductance, pH, and discharge of water from selected wells in the Navajo, Bluff, Entrada, Morrison, and alluvial aquifers, 1989-91 (Spangler 1992)

Map number	Date measured	Water temperature (degrees Celsius)	Specific conductance (µS/cm)	pH (standard units)	Discharge (gal/min)
N7	06-20-89	19.0	1,620	7.9	7.5
A3	06-21-89	17.0	830	—	—
E10	06-21-89	18.5	3,250	—	1
N21	06-21-89	18.5	9,460	7.3	2
N35	08-23-89	18.5	14,400	7.1	10 e
N41	08-23-89	20.0	4,220	—	3 e
A4	08-23-89	23.0	640	—	<10
A5	08-24-89	24.0	580	—	<10
N22	08-24-89	19.5	1,420	8.4	<1
N43	08-24-89	20.0	250	7.8	5
N49	08-24-89	21.5	225	—	—
N31	08-25-89	26.0	18,600	8.2	<1
N33	08-25-89	16.0	11,200	9.9	—
Anode Sec 19[1]	08-25-89	17.0	4,610	—	1
N46	08-26-89	24.0	2,500	—	—
Anode Area 1[2]	08-28-89	19.0	1,770	—	1
N34	08-28-89	20.0	12,300	—	—
A6	10-03-89	22.5	670	—	<10
N7	10-03-89	19.0	1,560	8.0	7.5
N28	10-06-89	19.0	1,690	8.7	3
N40	10-06-89	17.5	1,940	8.7	1
N4	10-07-89	19.0	1,460	7.8	—
N36	10-09-89	17.0	3,290	8.4	<1
N16	10-09-89	19.0	3,680	7.5	3
B16	10-09-89	18.0	600	—	2
E5	10-09-89	18.5	1,260	—	2
B5	10-10-89	18.0	1,520	—	—
E4	10-10-89	20.0	840	—	—
N32	10-10-89	19.0	14,600	7.3	<1
N34	10-10-89	21.5	12,800	8.8	—
N25	10-11-89	18.0	12,300	8.3	20 e

Map number	Date measured	Water temperature (degrees Celsius)	Specific conductance (µS/cm)	pH (standard units)	Discharge (gal/min)
N46	10-11-89	19.0	1,800	—	—
B20	10-11-89	17.5	1,360	—	—
E12	10-11-89	20.0	4,540	—	—
M6	10-11-89	20.0	2,090	—	2
N47	10-11-89	17.5	830	—	—
N10	07-18-90	19.5	3,100	7.4	20 e
N12	07-18-90	19.5	3,520	7.4	7.5
N21	07-18-90	18.5	9,260	7.3	2
N28	07-18-90	19.5	1,780	8.6	3
B8	07-18-90	19.0	2,070	7.7	5
N30	07-19-90	19.0	4,550	7.5	7.5
N19	07-19-90	19.0	18,400	7.5	20 e
N35	07-19-90	18.5	14,500	7.0	15 e
N6	07-30-91	17.0	3,180	7.7	2
N10	07-30-91	19.0	3,120	7.4	20 e
N16	07-30-91	19.0	3,920	7.4	3
N14	07-30-91	19.0	4,160	7.4	5
N12	07-30-91	19.0	3,620	7.4	7.5
N21	07-30-91	18.0	9,300	7.3	2
N28	07-31-91	18.0	1,770	8.6	3
N26	07-31-91	16.5	2,400	8.5	3
N29	07-31-91	19.5	2,540	8.5	5
N25	07-31-91	17.5	13,000	8.3	20 e
N35	07-31-91	18.0	14,200	7.0	15 e
N30	07-31-91	19.0	4,660	7.5	7.5
N19	08-01-91	18.5	18,300	7.7	20 e
N32	08-01-91	20.0	13,900	7.3	<1
N36	08-01-91	22.0	3,420	8.3	<1
N7	08-01-91	19.0	1,620	8.0	7.5

[1]Anode well Sec. 19; Mobil cathodic protection well, (D-41-25)19bad
[2]Anode well Area 1; Mobil cathodic protection well, (D-40-25)31cdd

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEOLOGIC UNIT	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE
1	370040107164900	NB03200416ODD	JOE ENRIQUEZ	17	16	75-10-28	111ALFP	14.0	7.0	700
2	370148107362100	NB03200709DAA	DRILL HOLE 1, LINE 5, LOS PINOS	15	3	75-06-06	111ALFP	11.0	7.3	860
3	370214107115200	NB03200308ABC	FELIX GOMEZ	95	12	75-08-21	111ALFP	14.0	7.7	900
4	370217107114600	NB03200308ABB	PAGOSA JUNCTION WATER TANK	15	5	75-08-20	111ALFP	12.0	6.4	1000
5	370357107242900	NB03300532AAD	ALLEN SMITH	36	10	75-03-19	111ALFP	11.0	7.2	860
6	370520107030600	NB03300222DBA	HARVEY MC FATRIDGE	12	2	75-10-22	111ALFP	14.0	7.2	1225
7	370537107233600	NB03300521ACA	JOE PENA	50	7	75-03-27	111ALFP	5.0	7.7	480
8	370639107023800	NB03300214BBB	P W BIRDSALL	28	9	75-10-21	111ALFP	14.5	7.7	575
9	370744107214000	NB03300502CDA	JOHN GALLEGOS JR. 2	21	19	75-05-13	111ALFP	10.0	8.2	675
10	370750107465900	NB03300901CBD	HOLLEY BARNES	12	2	75-08-23	111ALFP	13.0	7.2	950
11	371021107344100	NB03400723CDA	DRILL HOLE 1, LINE 2, LOS PINOS	16	4	75-06-05	111AVFP	14.0	8.6	460
12	371211107350600	NB03400711UCBC	DRILL HOLE 1, LINE 1, LOS PINOS	33	11	75-06-07	111AVFP	13.0	7.7	345
13	370148107122700	NB03200307DAD1	SOPHIA MARTINEZ 1	28	27	75-08-22	111AVMT	13.0	8.1	1025
14	370534108100200	NB03301220ADB	WAYNE HARRIS	20	8	75-11-12	111AVMT	11.5	6.3	1150
15	370638108072800	NB03301214BBA	LA PLATA COUNTY MARVEL	80	36	75-11-12	111AVMT	12.0	6.6	555
16	370703107515600	NB03300907DBB	WILLIAM A SHORT	80	63	75-11-25	111AVMT	10.0	6.4	760
17	370730107524000	NB03301012AAB2	MARY MC CULLOCH 2	50	35	75-11-25	111AVMT	12.0	6.6	925
18	370757107380000	NB03300705CAA	U.S. BUREAU INDIAN AFFAIRS, AGENCY 2	35	9	74-05-06	111AVMT	8.0	7.5	1040
19	370757107380300	NB03300705CAB	U.S. BUREAU INDIAN AFFAIRS, AGENCY 1	70	7	73-08-09	111AVMT	13.0	7.4	951
19			U.S. BUREAU INDIAN AFFAIRS, AGENCY 1			74-05-06	111AVMT	9.0	7.5	917
20	370810107511200	NB03300905BDB	JACK KRDEGER	100	66	75-11-25	111AVMT	11.5	6.5	610
21	370841107511800	NB03400932CBD	A L CANNON	74	50	75-11-24	111AVMT	10.0	6.5	575
22	370842107444300	NB03400832CBD	RONALD REA	12	7	75-06-12	111AVMT	14.5	8.7	1350
22			RONALD REA			75-08-23	111AVMT	17.0	7.2	1290
23	370845108071300	NB03401235CAD	FORT LEWIS SCHOOL	170	104	75-07-24	111AVMT	17.0	7.7	645
24	370926107451500	NB03400830DDB	LA PLATA AIRPORT SPRING	--	--	75-08-27	111AVMT	16.0	7.2	950
25	371001107493400	NB03400928ABD	WALTER WALKER	167	128	75-03-26	111AVMT	11.0	7.2	615
26	371005107351400	NB03400727AAA	SAM BEAN PLACE	130	12	75-05-02	111AVMT	10.0	8.3	540
27	371010107470000	NB03400924CCD	ARLENE MILLICH	258	62	74-06-10	111AVMT	12.0	7.6	1030
28	371011107481400	NB03400923CCC	ANTONIO PICCOLI	127	84	75-03-24	111AVMT	11.0	7.2	585
29	371039107495500	NB03400921BDD	VESTA JO SITTNER	195	162	75-03-25	111AVMT	12.0	7.1	530
30	371043108030100	NB03401121BDB	J J KIKEL	122	46	75-11-14	111AVMT	11.0	5.7	320
31	371045107470700	NB03400924BCB	RAYMOND ANDREWS	110	31	75-08-23	111AVMT	15.0	7.1	790
32	371058107452300	NB03400819ABA	WAYNE LUNT SPRING	--	--	75-05-14	111AVMT	12.5	8.3	675
33	371101107490200	NB03400922BAB	STEVEN SIMON	137	99	75-03-25	111AVMT	11.5	7.0	460
34	371123107451700	NB03400818UDBA	SPRING HIGHWAY 172	--	--	74-05-01	111AVMT	--	7.3	719
35	371126107471100	NB03400914DAA	RALPH COLESCOTT	90	59	75-05-14	111AVMT	12.0	7.9	650
36	371133107473200	NB03400914ACD	GLEN BAKER	83	42	75-03-24	111AVMT	6.0	7.3	600
37	371146108042000	NB03401117BBB	ART ISGAR 1	76	--	75-11-14	111AVMT	10.0	6.2	600
38	371206107474400	NB03400911UCDA	RAY BELGER	114	31	75-03-26	111AVMT	10.0	7.4	460

Appendix 14a Chemical analyses of groundwater samples (Hutchinson and Brogden 1976)

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 500	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) NONE	SODIUM AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
75-10-28	--	442	305	31	59	303	210	<0	64	12	94	2.8	3.1	3.5
75-06-06	--	415	4064	23	340	371	235	0	76	10	115	3.2	1.5	36
75-08-21	--	600	301	--	9.6	247	280	33	96	9.7	108	2.8	.7	3.5
75-08-20	--	699	318	ND	202	261	415	154	112	32	75	1.6	2.7	24
75-03-19	--	706	286	8	31	248	440	206	138	23	45	.9	2.3	14
75-10-22	--	913	225	26	28	229	570	341	124	63	80	1.4	4.6	10
75-03-27	--	334	198	12	7.1	175	225	70	76	8.5	18	.5	1.1	15
75-10-21	--	310	234	21	8.9	229	190	<0	60	9.7	62	1.9	3.1	12
75-05-13	--	538	227	48	3.3	267	320	53	96	19	24	.6	39	47
75-08-23	--	550	352	28	41	332	365	33	88	35	84	1.9	.3	7.0
75-06-05	--	206	216	15	1.0	203	210	7	78	3.6	16	.5	1.5	16
75-06-07	--	148	165	9	5.9	151	151	ND	56	2.4	13	.4	1.5	4.6
75-08-22	--	727	275	36	4.4	285	320	35	100	17	124	3.0	3.9	30
75-11-12	--	870	460	<0	369	377	605	228	152	54	52	.9	.3	35
75-11-12	--	355	190	24	96	196	255	59	74	17	30	.8	1.5	19
75-11-25	--	308	456	<0	291	374	355	ND	106	21	52	1.2	1.9	24
75-11-25	--	562	455	<0	183	373	450	77	130	30	52	1.0	14	39
74-05-06	642	--	485	0	25	398	330	0	100	19	110	2.6	1.0	36
73-08-09	608	--	508	0	32	417	280	0	89	14	120	3.1	1.2	25
74-05-06	540	--	462	0	23	379	270	0	85	15	100	2.6	1.2	25
75-11-25	--	297	356	<0	180	292	290	<0	96	12	32	.8	1.9	26
75-11-24	--	360	329	<0	166	270	285	15	96	10	27	.7	3.9	28
75-06-12	--	756	273	21	1.0	260	150	ND	40	12	237	8.4	.3	249
75-08-23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-07-24	--	412	192	36	8.5	219	315	96	104	13	20	.5	4.3	9.5
75-08-27	--	508	381	29	44	360	295	ND	104	8.5	111	2.8	1.5	76
75-03-26	--	398	244	9	27	216	310	110	100	14	21	.5	1.1	26
75-05-02	--	422	247	--	2.0	248	130	ND	40	7.3	75	2.9	1.1	14
74-06-10	552	--	228	0	9.2	187	350	160	110	18	62	1.4	1.4	170
75-03-24	--	404	266	ND	27	218	275	57	90	12	29	.8	.7	26
75-03-25	--	348	295	17	42	271	280	38	84	17	15	.4	1.1	21
75-11-14	--	205	164	<0	522	134	135	0	40	8.5	13	.5	1.1	7.0
75-08-23	--	468	299	268	107	289	310	21	100	14	58	1.4	1.1	79
75-05-14	--	362	265	48	3.1	314	290	ND	96	12	34	.8	1.1	7.0
75-03-25	--	295	232	19	43	223	235	45	78	9.7	12	.4	1.1	14
74-05-01	416	--	399	0	32	327	310	0	100	14	32	.8	.6	16
75-05-14	--	389	275	51	7.6	310	280	0	92	12	33	.8	1.1	10
75-03-24	--	358	317	14	28	285	295	35	76	25	27	.7	.7	24
75-11-14	--	388	264	19	305	248	255	7	80	13	34	.9	1.9	15
75-03-26	--	293	249	14	18	228	195	ND	70	.4	29	1.0	.7	3.5

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) 10	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) 10
75-10-28	105	.3	--	--	3.1	--	20	--	<0	1	--	3	--
75-06-06	62	.5	--	--	.62	--	0	--	120	1	--	0	--
75-08-21	268	.4	--	--	--	--	--	--	40	2	--	1	--
75-08-20	266	.3	--	--	4.9	--	ND	--	300	0	--	3	--
75-03-19	234	.4	--	--	1.8	--	ND	--	ND	1	--	8	--
75-10-22	464	.3	--	--	2.4	--	40	--	50	1	--	4	--
75-03-27	56	.2	--	--	6.2	--	ND	--	ND	0	--	2	--
75-10-21	81	.2	--	--	.12	--	<0	--	50	1	--	0	--
75-05-13	105	.2	--	--	3.1	--	ND	--	ND	0	--	3	--
75-08-23	152	.4	--	--	18	--	ND	--	120	0	--	0	--
75-06-05	27	.4	--	--	.25	--	ND	--	540	4	--	0	--
75-06-07	28	.3	--	--	1.2	--	ND	--	--	1	--	0	--
75-08-22	224	.6	--	--	15	--	ND	--	150	0	--	58	--
75-11-12	302	.7	--	--	1.2	--	20	--	<0	2	--	3	--
75-11-12	77	6.0	--	--	12	--	<0	--	150	1	--	9	--
75-11-25	53	.1	--	--	2.4	--	40	--	90	0	--	7	--
75-11-25	117	.5	--	--	6.8	--	10	--	90	0	--	2	--
74-05-06	120	1.0	13	.48	--	.00	350	40	40	--	4	--	8
73-08-09	92	.7	14	.43	--	.02	30	10	60	--	2	--	6
74-05-06	76	1.1	4.7	.71	--	.10	210	20	50	--	2	--	12
75-11-25	28	.2	--	--	6.2	--	20	--	50	0	--	4	--
75-11-24	21	.2	--	--	3.7	--	10	--	50	1	--	3	--
75-06-12	76	.5	--	--	12	--	ND	--	120	0	--	310	--
75-08-23	--	--	--	--	--	--	--	--	--	0	--	300	--
75-07-24	113	.2	--	--	13	--	ND	--	50	1	--	9	--
75-08-27	75	.2	--	--	7.7	--	ND	--	50	1	--	130	--
75-03-26	97	.1	--	--	4.9	--	ND	--	ND	1	--	4	--
75-05-02	40	.5	--	--	.62	--	ND	--	ND	0	--	2	--
74-06-10	33	.4	16	6.3	--	.01	150	0	1100	--	0	--	110
75-03-24	75	.2	--	--	3.1	--	0	--	ND	1	--	4	--
75-03-25	29	.1	--	--	4.9	--	0	--	6	0	--	3	--
75-11-14	80	.1	--	--	1.2	--	<0	--	<0	1	--	2	--
75-08-23	21	.3	--	--	6.2	--	ND	--	120	0	--	92	--
75-05-14	28	.1	--	--	2.4	--	ND	--	ND	0	--	3	--
75-03-25	34	.1	--	--	1.8	--	ND	--	ND	0	--	2	--
74-05-01	37	.9	14	1.0	--	.01	70	0	10	--	0	--	2
75-05-14	44	.1	--	--	3.7	--	ND	--	ND	0	--	2	--
75-03-24	30	.1	--	--	8.6	--	30	--	ND	0	--	3	--
75-11-14	51	.1	--	--	22	--	20	--	50	1	--	2	--
75-03-26	38	.2	--	--	1.8	--	ND	--	ND	0	--	1	--

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEO-LOGIC UNIT	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE
39	371253107474800	NB03400902UCDA	BERNERD COOPER	49	40	75-06-20	111AVMT	7.5	7.1	660
40	371307107454300	NB03400818UBAB	LEROY CUNDIFF	31	19	75-08-23	111AVMT	11.0	6.9	645
41	370312107070600	NB03200301AAA	ADOLPH CHAVEZ	10	9	75-10-24	111FLDP	12.0	6.4	775
42	370345107244600	NB03300532ACD	DRILL HOLE 1, LINE 3, PIEDRA	27	6	75-06-03	111FLDP	17.0	7.5	660
43	370416107243700	NB03300529DDB	CHARLES DUNAGAN	33	20	75-06-09	111FLDP	8.5	7.8	650
44	370450107530700	NB03301025BAA	DON PAXTON	50	48	76-02-03	111FLDP	8.0	6.9	1100
45	370537107234200	NB03300521ACB	DRILL HOLE 1, LINE 2, PIEDRA	31	4	75-06-03	111FLDP	10.0	7.4	460
46	370749107214300	NB03300502CAD	DRILL HOLE 1, LINE 1, PIEDRA	31	3	75-06-04	111FLDP	10.0	7.9	445
47	370754107373200	NB03300705DAB	DRILL HOLE 2, LINE 3, LOS PINOS	17	3	75-06-04	111FLDP	9.0	7.0	800
48	370427107363300	NB03300728DAB	DRILL HOLE 1, LINE 4, LOS PINOS	16	2	75-06-07	111VLFL	12.0	7.8	925
49	370549107370400	NB03300716CDC	R JEFFERSON	78	5	74-05-24	111VLFL	13.0	7.5	620
50	370556107330200	NB03300713DDA	ISABEL KENT	177	7	74-06-11	111VLFL	13.0	7.8	1530
51	370652107372500	NB03300708DDA	GENEVIEVE GUNN	54	13	74-05-23	111VLFL	13.0	7.3	318
52	370701107373300	NB03300708DAB	RALPH CLOUD	60	--	74-06-20	111VLFL	13.0	8.4	559
53	370702107373300	NB03300708DAB	BENNETT THOMPSON	51	17	74-05-23	111VLFL	11.5	7.3	815
54	370713107372500	NB03300708ADD	WALTER SCOTT	45	38	74-06-20	111VLFL	--	7.5	720
55	370717107373900	NB03300708ACA	FLORA HOWE	45	12	74-06-20	111VLFL	17.0	8.2	496
56	370728107414500	NB03300810AAA	J B WARFORD	15	4	74-06-17	111VLFL	12.5	7.8	584
57	370759107372000	NB03300705ADD	DON GOSNEY	100	7	74-06-13	111VLFL	12.0	7.5	592
58	370927107352400	NB03400727DDB	JERRY ROMERO	43	11	74-05-29	111VLFL	13.0	7.8	280
59	371037107342500	NB03400723ACD	VINCENT GROVE	46	10	74-05-22	111VLFL	11.0	7.7	306
60	371118107343900	NB03400714UCAD	J WILLIAMS	28	4	74-06-10	111VLFL	12.0	7.8	310
61	371122107343400	NB03400714UDBB	EVERETT BURCH	47	12	74-05-22	111VLFL	12.0	7.6	359
62	371142107344700	NB03400714UBAC	JOE LUCERO	60	11	74-05-21	111VLFL	12.0	7.4	525
63	370033107243500	NB03200520AAB3	COLORADO PARKS 3	150	--	75-08-20	124SNJS	21.0	7.0	860
64	370033107244300	NB03200520ABA2	COLORADO PARKS 2	230	48	73-08-07	124SNJS	21.0	7.3	1130
64			COLORADO PARKS 2			75-06-09	124SNJS	13.0	7.3	1025
65	370043107294300	NB03200615CCB	CARL RAINWATER	60	14	74-06-13	124SNJS	--	7.7	801
66	370113107252400	NB03200517ADA4	COLORADO PARKS 4	150	--	75-08-20	124SNJS	18.0	7.2	900
67	370115107244800	NB03200517ACB	WILLARD SEIBEL	92	--	75-10-23	124SNJS	12.0	5.4	855
68	370116107241900	NB03200516BCB	COLORADO PARKS 5	206	25	75-11-11	124SNJS	13.0	5.9	990
69	370119107254300	NB03200517ABD	HOWARD B MASSEY	120	41	75-08-20	124SNJS	14.0	7.2	1000
69			HOWARD B MASSEY			75-10-02	124SNJS	14.0	6.4	1050
70	370125107195800	NB03200418BBC	ERNEST HERRERA	85	54	75-08-25	124SNJS	14.5	7.8	1200
71	370128107301500	NB03200616ABB	LES SUTTON	158	4	74-06-13	124SNJS	14.0	8.4	1180
72	370128107362400	NB03200709DDD	ELLA WATTS	121	17	74-05-24	124SNJS	12.0	8.5	609
73	370129107311500	NB03200608DCD	ABE MUNOZ	100	5	75-06-09	124SNJS	14.0	7.7	1450
74	370132107251400	NB03200508CCD	C A BOWEN	165	74	75-08-02	124SNJS	14.5	6.6	1675
74			C A BOWEN			75-11-24	124SNJS	12.0	--	1900
75	370141107363300	NB03200709DCA	CLIFTON BAKER	158	5	74-06-11	124SNJS	--	7.6	522

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
	500	500	NONE	NONE	NONE	NONE	NONE	NONE	NONE	125	NONE	NONE	NONE	250
75-06-20	--	425	331	3	43	278	300	29	100	12	42	1.1	1.1	24
75-08-23	--	424	325	26	76	310	305	ND	108	8.5	26	.6	.7	14
75-10-24	--	453	302	39	244	314	290	<0	94	13	80	2.0	2.3	7.0
75-06-03	--	414	156	14	9.3	127	260	109	84	12	30	.8	3.1	.0
75-06-09	--	295	219	12	6.2	199	255	56	86	9.7	23	.6	1.1	5.3
76-02-03	--	700	415	0	84	340	375	35	103	29	96	2.1	2.3	56
75-06-03	--	232	123	9	9.1	100	155	0	56	3.6	18	.6	1.9	3.5
75-06-04	--	338	182	14	4.3	149	225	52	70	12	27	.8	1.5	.0
75-06-04	--	393	281	24	53	230	225	0	68	13	57	1.6	2.7	10
75-06-07	--	550	290	19	8.4	269	235	ND	78	9.7	120	3.4	2.7	52
74-05-24	384	--	281	0	14	230	220	0	68	11	56	1.7	2.3	8.4
74-06-11	985	--	608	0	15	499	140	0	43	8.8	310	11	1.1	12
74-05-23	198	--	174	0	14	143	130	0	43	6.1	18	.7	1.0	3.4
74-06-20	333	--	310	0	2.0	254	53	0	20	.8	110	6.6	.7	11
74-05-23	499	--	436	0	35	358	210	0	65	11	110	3.3	1.1	15
74-06-20	444	--	398	0	20	326	180	0	55	9.4	100	3.3	1.4	13
74-06-20	298	--	270	0	2.7	221	65	0	22	2.4	88	4.8	1.1	9.9
74-06-17	334	--	330	0	8.4	271	140	0	41	9.8	73	2.7	.9	11
74-06-13	354	--	317	0	16	260	200	0	64	9.5	51	1.6	3.3	7.2
74-05-29	161	--	163	0	4.1	134	140	6	50	3.5	3.6	.1	1.2	1.1
74-05-22	179	--	182	0	5.8	149	150	2	53	4.5	6.5	.2	1.1	1.6
74-06-10	181	--	181	0	4.6	148	150	0	50	5.4	9.8	.4	1.2	1.7
74-05-22	210	--	217	0	8.7	178	150	0	47	7.8	19	.7	1.2	2.2
74-05-21	308	--	315	0	20	258	210	0	66	11	30	.9	1.2	2.0
75-08-20	--	588	324	51	68	350	335	ND	100	20	101	2.4	2.3	19
73-08-07	756	--	501	0	40	411	400	0	120	25	110	2.4	3.3	30
75-06-09	--	661	371	24	34	344	330	0	110	13	113	2.7	2.3	19
74-06-13	490	--	254	0	8.1	208	130	0	40	7.9	120	4.5	3.6	19
75-08-20	--	564	339	38	42	342	235	ND	72	13	129	3.6	3.1	37
75-10-23	--	523	256	26	1980	255	215	<0	76	6.0	124	3.6	1.9	19
75-11-11	--	558	409	8	858	349	430	81	128	26	85	1.7	4.6	19
75-08-20	--	677	287	43	38	307	390	83	88	41	113	2.4	1.9	60
75-10-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-08-25	--	790	377	38	12	373	460	87	142	25	98	2.0	3.5	19
74-06-13	690	--	319	2	2.1	265	36	0	14	.2	240	17	.8	22
74-05-24	372	--	291	5	1.5	247	16	0	6.2	.1	140	15	.7	7.4
75-06-09	--	898	395	90	18	474	115	ND	38	4.8	310	12	1.9	40
75-08-02	--	1133	133	41	87	178	155	0	60	1.2	333	11	3.5	101
75-11-24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
74-06-11	313	--	255	0	10	209	110	0	36	5.1	74	3.1	1.6	6.8

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) 10	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) 10
75-06-20	56	.1	--	--	9.3	--	ND	--	ND	0	--	2	--
75-08-23	27	.1	--	--	6.2	--	ND	--	ND	0	--	1	--
75-10-24	127	.2	--	--	1.8	--	40	--	<0	1	--	5	--
75-06-03	155	.2	--	--	.12	--	0	--	0	1	--	0	--
75-06-09	98	.3	--	--	6.8	--	0	--	120	0	--	3	--
76-02-03	160	.6	--	--	19	--	20	--	0	0	--	19	--
75-06-03	68	.1	--	--	.62	--	0	--	0	0	--	1	--
75-06-04	114	.1	--	--	.31	--	0	--	0	1	--	2	--
75-06-04	83	.2	--	--	.19	--	0	--	0	1	--	0	--
75-06-07	161	.8	--	--	.62	--	ND	--	--	?	--	1	--
74-05-24	88	.6	10	.25	--	.01	320	30	30	--	0	--	9
74-06-11	300	1.4	6.7	.44	--	.00	--	--	40	--	0	--	1
74-05-23	21	.1	18	.24	--	.14	50	30	30	--	61	--	0
74-06-20	28	.6	8.0	.21	--	.01	40	0	40	--	3	--	0
74-05-23	63	.4	13	1.3	--	.02	70	40	30	--	0	--	24
74-06-20	54	.4	12	.65	--	.01	50	20	50	--	0	--	31
74-06-20	29	.9	9.7	.44	--	.01	20	0	40	--	2	--	4
74-06-17	24	.9	8.8	.37	--	.09	70	300	30	--	2	--	0
74-06-13	39	.2	11	2.8	--	.02	40	10	40	--	0	--	2
74-05-29	9.2	.2	8.9	.60	--	.01	60	0	8	--	1	--	1
74-05-22	12	.2	8.6	.35	--	.03	40	10	10	--	0	--	1
74-06-10	12	.3	9.8	.31	--	.02	140	40	6	--	1	--	3
74-05-22	13	.3	11	.33	--	.03	20	60	10	--	0	--	0
74-05-21	24	.4	14	.95	--	.02	50	10	30	--	0	--	6
75-08-20	188	.4	--	--	1.8	--	ND	--	80	0	--	7	--
73-08-07	140	.6	27	12	--	.02	30	30	330	--	0	120	120
75-06-09	155	.4	--	--	75	--	0	--	260	1	--	89	--
74-06-13	150	.5	7.1	3.8	--	.01	40	0	30	--	1	--	45
75-08-20	144	.5	--	--	4.3	--	ND	--	80	0	--	48	--
75-10-23	195	.8	--	--	1.2	--	<0	--	50	1	--	9	--
75-11-11	233	.4	--	--	3.7	--	320	--	<0	1	--	24	--
75-08-20	193	.9	--	--	8.6	--	ND	--	80	0	--	220	--
75-10-02	--	--	--	--	--	--	0	--	--	0	--	160	--
75-08-25	305	.3	--	--	.25	--	ND	--	50	1	--	9	--
74-06-13	240	5.4	7.9	.08	--	.02	100	10	50	--	1	--	0
74-05-24	57	2.5	9.3	.03	--	.01	120	30	80	--	0	--	1
75-06-09	154	.9	--	--	75	--	ND	--	600	0	--	9	--
75-08-02	511	2.0	--	--	.62	--	0	--	0	0	--	1	--
75-11-24	--	--	--	--	--	--	1900	--	--	--	--	--	--
74-06-11	51	3.6	8.4	.08	--	.00	20	40	60	--	15	--	1

MAP NUM-BER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEO-LOGIC UNIT	TEMPER-ATURE (DEG C) NONE	PH (UNITS) NONE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) NONE
76	370147107360100	N803200710CBD	CARL BAKER	--	--	74-06-13	124SNJS	13.0	7.5	571
77	370155107360400	N803200710BCD	TOM NEWTON SPRING	--	--	74-05-24	124SNJS	10.5	7.4	623
78	370156107585400	N803201007CBB	THEIRRY SPRING PICNIC FLATS	--	--	74-05-09	124SNJS	10.0	7.3	350
79	370154107303600	N803200609CBA	ORIN BEATY	114	10	74-06-11	124SNJS	13.0	8.1	1490
80	370203107234100	N803200509ACD	JOSE E MARQUEZ	117	--	75-08-25	124SNJS	16.5	8.0	975
81	370219107355400	N803200710BAB	MAX WATTS	152	15	74-06-12	124SNJS	--	7.8	780
82	370232107241000	N803200504CCA	FLOYD ANDREWS	187	150	75-11-11	124SNJS	14.0	7.5	900
83	370310107335000	N803200701BBA	STEVE ALTON	115	27	74-06-20	124SNJS	16.0	7.4	2700
84	370436107013900	N803300629BDC	L HOPKINS	205	130	74-06-13	124SNJS	15.5	7.6	5660
85	370441107342200	N803300726ACA	JOE WILLIAMS	199	10	74-06-11	124SNJS	11.5	7.8	748
86	370446107414700	N803300827AAD	RAYMOND JACQUEZ	269	136	74-06-20	124SNJS	13.0	8.3	1750
87	370620107442700	N803300817BDD1	CLAUDE HARMON 1	159	50	74-06-18	124SNJS	17.5	8.2	2780
87			CLAUDE HARMON 1	159	--	75-07-24	124SNJS	15.0	8.2	3000
88	370620107442800	N803300817BDD2	CLAUDE HARMON 2	194	53	75-10-01	124SNJS	12.0	8.7	2600
89	370620107443200	N803300817BDD3	CLAUDE HARMON 3	300	48	75-10-01	124SNJS	16.0	8.4	2575
90	370625107451000	N803300818ADB	MILDRED DOLAN	68	43	75-05-02	124SNJS	10.5	8.2	2700
91	370637107434200	N803300816BBA	ALFREDO VASQUEZ	120	47	74-06-17	124SNJS	13.0	8.9	754
92	370653107435400	N803300808DDA	ROBERT DICKEY	200	20	75-06-12	124SNJS	13.5	9.6	975
93	370707107462700	N803300912ACD	RODGER MALSTEAD	103	18	74-06-19	124SNJS	12.0	7.6	1940
94	370728107405500	N803300802DBA	JOSE QUINTANA	85	65	74-06-17	124SNJS	13.0	7.8	1520
95	370750107435500	N803300808AAD	LYLE OLSON	180	90	74-06-17	124SNJS	14.0	8.5	1700
96	370801107381600	N803300705BCD	LEONARD BURCH	40	8	74-05-28	124SNJS	12.0	8.0	751
97	370817107380400	N803300705BAC	EDDIE BOX JR.	199	38	74-06-10	124SNJS	--	8.2	667
98	370822107384900	N803300706ABA	JOHN MONTE	--	--	74-06-07	124SNJS	11.0	8.0	714
99	370826107384600	N803400836CDD	SHIRLEY GOODTRACK	150	16	74-06-13	124SNJS	17.0	8.6	1130
100	370831107403400	N803400836CCB	CLEM BAKER	98	48	74-06-10	124SNJS	12.0	8.8	659
101	370837107420600	N803400834DCC	ROBERT KLUSMAN STOCK	160	17	74-06-18	124SNJS	--	7.5	959
102	370839107415900	N803400834DAC	ROBERT KLUSMAN ARTESIAN	--	F*	74-06-18	124SNJS	17.0	8.1	3430
103	370841107415800	N803400834DDA	ROBERT KLUSMAN DOMESTIC	90	20	74-06-18	124SNJS	13.0	8.2	1430
104	370932107414900	N803400827DAD	PINON RIDGE RANCH	196	194	76-02-03	124SNJS	14.5	7.5	1000
105	370933107404100	N803400826DAD	KAARE EVENSEN	116	23	75-08-01	124SNJS	27.0	7.9	1000
105			KAARE EVENSEN	116	17	75-10-26	124SNJS	11.0	6.7	875
106	370934107404100	N803400826DAD	OXFORD TEST 1 SAMPLE	35	22	75-07-29	124SNJS	12.5	9.0	660
106			OXFORD TEST 2 SAMPLE	267	128	75-07-30	124SNJS	13.0	9.0	650
106			OXFORD TEST 3 SAMPLE	502	20	75-08-26	124SNJS	13.0	8.3	590
106			OXFORD TEST 3 SAMPLE			75-08-26	124SNJS	13.0	8.3	590
106			OXFORD TEST 4 SAMPLE	502	--	75-08-27	124SNJS	13.0	8.8	600
106			OXFORD TEST 4 SAMPLE			75-08-27	124SNJS	13.0	8.8	600
106			OXFORD TEST 5 SAMPLE	502	17	75-10-02	124SNJS	12.0	7.8	590
106			OXFORD TEST 6 SAMPLE	502	20	75-10-26	124SNJS	13.0	7.9	565

*F INDICATES FLOWING WELL.

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 500	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) NONE	SODIUM AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
74-06-13	346	--	324	0	16	266	200	0	61	11	52	1.6	1.2	8.3
74-05-24	373	--	313	0	20	257	170	0	50	12	72	2.4	1.0	13
74-05-09	194	--	202	0	16	166	170	2	56	6.7	10	.3	2.0	3.2
74-06-11	944	--	697	0	8.9	572	59	0	18	3.3	340	19	2.1	7.2
75-08-25	--	660	371	33	7.0	360	170	ND	56	7.3	181	6.0	1.9	5.3
74-06-12	472	--	416	0	11	341	280	0	79	19	66	1.7	.9	18
75-11-11	--	519	195	26	13	231	20	ND	6.0	1.2	207	20	.7	23
74-06-20	2110	--	258	0	16	212	860	650	250	58	330	4.9	6.6	19
74-06-13	2910	--	94	0	3.8	77	390	310	150	3.2	980	22	2.4	1700
74-06-11	490	--	300	0	7.6	246	290	44	85	19	61	1.6	1.0	5.9
74-06-20	939	--	255	0	2.0	209	100	0	38	1.2	320	14	.9	370
74-06-18	1630	--	94	0	.9	77	77	0	29	1.1	550	27	1.2	530
75-07-24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-10-01	--	1624	87	7	.3	84	60	ND	22	1.2	506	28	.7	551
75-10-01	--	1614	84	9	.7	86	70	ND	28	ND	492	25	5.0	537
75-05-02	--	1857	166	14	2.0	161	170	9	56	7.3	536	17	3.5	123
74-06-17	433	--	236	1	.5	195	8	0	3.0	.2	160	24	.4	39
75-06-12	--	519	248	24	.1	243	30	ND	6.0	3.6	214	16	.3	154
74-06-19	1360	--	182	0	7.3	149	700	550	210	43	170	2.8	2.9	120
74-06-17	917	--	406	0	10	333	170	0	64	2.6	270	9.0	.9	120
74-06-17	995	--	218	1	1.1	180	51	0	19	.9	340	21	.9	230
74-05-28	441	--	431	0	6.9	354	100	0	26	9.3	140	6.0	1.3	17
74-06-10	401	--	339	0	3.4	278	47	0	17	1.2	140	8.9	1.2	17
74-06-07	417	--	305	0	4.9	250	61	0	20	2.7	140	7.8	.4	36
74-06-13	671	--	225	3	.9	190	27	0	9.9	.5	230	19	.6	58
74-06-10	373	--	191	6	.5	167	8	0	2.8	.2	140	22	.2	49
74-06-18	601	--	263	0	13	216	220	5	75	8.1	120	3.5	1.0	28
74-06-18	2210	--	2130	0	27	1750	23	0	7.6	1.0	910	82	4.2	18
74-06-18	896	--	375	0	3.8	308	40	0	15	.5	310	21	.5	51
76-02-03	--	663	283	--	14	240	90	0	20	9.7	200	9.1	1.9	39
75-08-01	--	855	664	109	18	727	60	0	22	1.2	324	18	4.3	2.1
75-10-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-07-29	--	378	204	33	.4	225	45	0	12	3.6	136	8.8	1.1	23
75-07-30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-08-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-08-26	--	358	242	29	2.4	246	15	0	6.0	.0	138	15	.7	21
75-08-27	--	363	222	16	.6	210	10	0	4.0	.0	138	18	.7	37
75-08-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-10-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-10-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) 10	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) 10
74-06-13	35	.7	14	.55	--	.00	180	0	30	--	0	--	9
74-05-24	49	.8	13	1.7	--	.01	10	20	40	--	0	--	13
74-05-09	11	1.0	3.3	.12	--	.01	40	430	40	--	2	--	1
74-06-11	200	1.3	6.9	4.8	--	.02	60	0	50	--	0	--	2
75-08-25	155	.7	--	--	3.1	--	ND	--	120	0	--	53	--
74-06-12	57	.9	17	2.1	--	.02	--	--	70	--	1	--	71
75-11-11	205	.2	--	--	.25	--	ND	--	<0	10	--	1	--
74-06-20	1300	.7	7.6	2.6	--	.02	720	110	70	--	0	--	29
74-06-13	19	3.2	5.3	.48	--	.03	50	280	60	--	6	--	0
74-06-11	150	1.3	10	.81	--	.00	130	5500	10	--	1	--	2
74-06-20	70	5.3	7.1	.18	--	.01	30	20	70	--	5	--	5
74-06-18	150	3.2	5.4	70	--	.01	50	0	80	--	0	7860	700
75-07-24	--	--	--	--	--	--	--	--	--	1	--	13000	--
75-10-01	122	2.5	--	--	246	--	50	--	50	0	--	5400	--
75-10-01	67	2.1	--	--	246	--	30	--	ND	0	--	6200	--
75-05-02	927	3.5	--	--	32	--	ND	--	12	0	--	1200	--
74-06-17	100	5.4	7.1	.05	--	.01	90	10	70	--	14	--	6
75-06-12	43	5.9	--	--	.12	--	ND	--	260	1	--	4	--
74-06-19	710	.7	7.4	2.4	--	2.4	100	40	40	--	0	--	66
74-06-17	250	.2	8.6	.13	--	.00	230	10	50	--	6	--	20
74-06-17	240	6.3	7.9	9.3	--	.00	40	10	60	--	1	--	60
74-05-28	32	.4	2.4	.03	--	.00	70	160	50	--	1	--	3
74-06-10	42	.7	7.7	1.6	--	.01	50	30	40	--	7	--	18
74-06-07	52	3.0	9.5	.67	--	.01	50	20	40	--	1	--	1
74-06-13	240	6.0	5.7	1.5	--	.00	80	0	50	--	5	--	80
74-06-10	65	6.4	8.4	.08	--	.01	50	0	50	--	11	--	20
74-06-18	200	.3	7.3	7.1	--	.00	50	130	40	--	4	--	4
74-06-18	26	1.3	30	.13	--	.06	480	0	1100	--	0	--	1
74-06-18	320	3.0	8.2	.55	--	.00	140	10	70	--	5	--	2
76-02-03	240	1.6	--	--	9.3	--	10	--	60	14	--	4	--
75-08-01	25	2.3	--	--	.62	--	0	--	50	5	--	58	--
75-10-26	--	--	--	--	--	--	90	--	--	0	--	33	--
75-07-29	54	3.0	--	--	8.0	--	0	--	50	1	--	400	--
75-07-30	--	--	--	--	--	--	--	--	--	0	--	540	--
75-08-26	--	--	--	--	--	--	--	--	--	0	--	120	--
75-08-26	39	1.7	--	--	6.2	--	160	--	50	--	--	--	--
75-08-27	39	3.5	--	--	5.7	--	90	--	0	--	--	--	--
75-08-27	--	--	--	--	--	--	--	--	--	1	--	330	--
75-10-02	--	--	--	--	--	--	0	--	--	0	--	260	--
75-10-26	--	--	--	--	--	--	10	--	--	2	--	90	--

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEOLOGIC UNIT	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE
107	370952107395100	NB03400825ACA	JAMES MARTIN	197	63	75-08-28	124SNJS	15.0	7.5	735
108	370956107412600	NB03400826BDB	PATRICK KERRIGAN	170	--	75-11-21	124SNJS	11.5	6.5	1750
109	371006107422200	NB03400827BAA	ELI KOVACICH ARTESIAN	244	F*	74-06-20	124SNJS	12.0	8.9	1700
110	371008107391900	NB03400730BBA	E PRESTON 1	21	10	74-06-20	124SNJS	12.0	7.6	573
111	371008107392400	NB03400730BBB	E PRESTON 2	59	4	74-06-19	124SNJS	13.0	7.7	1150
112	371012107405700	NB03400823DCD	W J WITT	125	79	75-08-27	124SNJS	16.0	8.1	1650
113	371026107433000	NB03400821CAC	LEROY MC CAW	90	18	74-06-20	124SNJS	12.0	8.1	857
114	371029107420000	NB03400822DBD	MIKE MC MANUS	105	30	75-08-28	124SNJS	15.0	8.0	2000
114			MIKE MC MANUS			75-12-22	124SNJS	17.0	7.8	1800
115	370017107152400	NB03200423BCD	CHRIS A BAKER	124	21	75-11-24	125ANMS	9.0	7.7	570
116	370025107135900	NB03200424ACB	CHRIS CHAVEZ	65	8	75-08-25	125ANMS	14.0	8.2	1500
117	370118107522700	NB03200918BBC	B COGBURN 1	53	30	73-08-09	125ANMS	26.0	7.4	2200
117			B COGBURN 1			75-06-10	125ANMS	12.5	7.5	2010
118	370122107083600	NB03200314ABC	MODESTA ORTIZ 2	9	7	75-08-22	125ANMS	14.0	7.6	560
119	370122107522700	NB03200918BBB	B COGBURN 2	138	25	74-06-20	125ANMS	12.0	7.5	4920
120	370131107090200	NB03200311CCD	MODESTA ORTIZ 1	76	--	75-08-22	125ANMS	14.5	7.4	650
121	370132107524500	NB03201012DDC	MIKE MOHAR	143	86	75-06-10	125ANMS	18.0	7.6	2050
122	370150107121900	NB03200308CBC	MARTIN MARTINEZ	80	72	75-08-22	125ANMS	18.0	8.1	950
123	370151107122700	NB03200307DAD2	SOPHIA MARTINEZ 2	130	71	75-08-22	125ANMS	14.5	8.0	775
124	370204107085200	NB03200311BDB	ELOISA VILLARREAL	50	23	75-08-21	125ANMS	13.0	7.3	900
125	370246107114000	NB03200305DBA	LU ANN MATTSON	108	77	75-08-21	125ANMS	19.5	8.5	760
126	370300107081300	NB03200302AAD	TRAIL CANYON SPRING	--	--	74-05-27	125ANMS	--	7.8	1090
127	370314107522700	NB03300931CCC	CARL WESTON	201	52	75-06-11	125ANMS	16.0	7.9	1400
128	370331107114100	NB03300332DBD	GOMEZ SPRING	--	--	75-08-21	125ANMS	16.0	7.3	420
129	370400107243100	NB03300532AAB	L A FISHER	60	13	75-03-19	125ANMS	11.5	8.1	525
130	370422107360900	NB03300727CBC	RAY SAGE SPRING	--	--	74-06-10	125ANMS	12.0	7.4	820
131	370429107362000	NB03300728DAA	MARTIN HAYS	118	56	74-05-25	125ANMS	13.5	7.8	2130
132	370433107241400	NB03300528BCD	H W LINDSEY	48	14	75-05-10	125ANMS	10.5	7.9	555
133	370454107362700	NB03300728AAB	JULIUS CLOUD	230	49	74-06-12	125ANMS	13.0	7.8	1380
134	370503107362200	NB03300721DDA	MAURICE SAGE SR.	160	22	74-06-07	125ANMS	13.0	7.6	1340
135	370506107360300	NB03300722CCA	MAURICE SAGE SPRING	--	--	74-05-23	125ANMS	13.0	7.6	1810
136	370508107311000	NB03300724DDB	RAY OLQUIN	85	7	74-06-11	125ANMS	12.0	7.7	1850
137	370508107515900	NB03300919DCB	WILLIAM GRIMES	262	155	76-02-03	125ANMS	10.5	6.7	610
138	370514107355900	NB03300722CAC	MILLER SPRING	--	--	74-05-25	125ANMS	8.5	7.5	532
139	370519107361700	NB03300721DAA	CLAUDENE MILLER	142	5	74-05-25	125ANMS	13.0	7.4	2480
140	370549107432200	NB03300716CDD	J BROWN	176	43	74-06-18	125ANMS	13.0	7.8	1250
141	370556107343500	NB03300714DCB	EUGENE VALDEZ	81	14	74-06-12	125ANMS	12.0	7.5	1770
142	370602107330200	NB03300713DAD	BONNY KENT	50	9	74-06-11	125ANMS	12.0	7.7	1560
143	370607107332800	NB03300714DBD	JUNIA RUYBAL	60	18	74-06-11	125ANMS	--	7.9	1150
144	370628107343500	NB03300714ABC	DIAMOND SMITH	90	18	74-06-12	125ANMS	12.0	7.6	1560

*F INDICATES FLOWING WELL.

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 500	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) NONE	SODIUM AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
75-08-28	--	445	275	33	17	281	90	ND	34	1.2	138	6.3	1.9	47
75-11-21	--	117	404	26	232	376	100	<0	36	2.4	372	16	1.1	115
74-06-20	944	--	243	11	.5	218	53	0	19	1.4	330	20	1.5	310
74-06-20	329	--	296	0	12	243	210	0	67	9.9	38	1.1	.8	10
74-06-19	709	--	350	0	11	287	160	0	52	7.5	190	6.5	1.3	29
75-08-27	--	1041	352	24	5.1	328	65	ND	24	1.2	344	18	1.1	149
74-06-20	466	--	343	0	4.4	281	66	0	23	2.1	1.6	8.6	.7	37
75-08-28	--	1358	309	31	6.0	305	150	ND	60	ND	393	13	1.9	152
75-12-22	--	1205	360	9	9.6	311	150	<0	48	7.3	395	14	3.5	127
75-11-24	--	383	225	363	31	245	20	<0	6.0	1.2	152	14	.3	21
75-08-25	--	948	343	33	4.2	337	150	ND	44	9.7	312	11	1.1	58
73-08-09	1480	--	261	0	17	214	960	740	300	50	120	1.7	3.3	380
75-06-10	--	1266	216	19	13	209	775	566	265	27	145	2.2	7.8	266
75-08-22	--	371	200	17	9.4	192	225	33	74	9.7	39	1.1	1.5	ND
74-06-20	3490	--	135	0	6.8	111	1200	1100	420	39	770	9.6	5.9	1400
75-08-22	--	409	244	29	19	248	265	17	82	14	43	1.1	3.1	19
75-06-10	--	1592	244	21	12	235	515	280	148	35	347	6.6	1.9	284
75-08-22	--	605	239	219	8.7	232	330	98	100	19	102	2.4	3.5	17
75-08-22	--	415	259	24	4.9	252	210	ND	68	9.7	92	2.7	3.1	3.5
75-08-21	--	565	202	33	22	221	210	ND	70	8.5	120	3.5	1.1	54
75-08-21	--	340	245	9	1.3	217	25	0	8.0	1.2	131	11	.3	7.0
74-05-27	--	--	403	36	12	390	280	0	76	21	152	4.0	1.6	5.3
75-06-11	--	793	229	53	6.8	277	80	ND	30	1.2	276	13	.7	222
75-08-21	--	252	153	26	17	170	215	46	42	26	37	.4	.7	1.7
75-03-19	--	341	209	15	3.1	198	50	ND	18	1.2	92	5.7	5.4	14
74-06-10	492	--	360	0	23	295	390	90	100	33	24	.5	.7	42
74-05-25	1230	--	851	0	22	698	61	0	22	1.5	480	27	1.8	290
75-05-10	--	365	253	0	5.1	208	230	22	80	7.3	37	1.0	1.9	5.3
74-06-12	765	--	516	0	13	423	46	0	17	.9	290	19	1.5	190
74-06-07	971	--	422	0	17	346	290	0	87	18	200	5.1	1.0	52
74-05-23	1310	--	333	0	13	273	880	600	260	55	89	1.3	5.5	25
74-06-11	1190	--	502	0	16	412	150	0	52	3.8	370	13	1.6	57
76-02-03	--	382	198	0	63	162	15	0	6.0	.0	120	13	1.5	21
74-05-25	331	--	216	0	11	177	210	29	61	13	33	1.0	.5	6.9
74-05-25	1720	--	519	0	33	426	570	150	160	42	360	6.5	1.4	120
74-06-18	679	--	182	0	4.6	149	27	0	10	.6	250	21	1.4	240
74-06-12	1240	--	505	0	26	414	390	0	120	22	280	6.2	3.4	30
74-06-11	993	--	503	0	16	413	110	0	30	7.3	320	14	1.0	17
74-06-11	744	--	230	0	4.6	189	210	19	69	8.5	170	5.1	3.4	18
74-06-12	1010	--	179	0	7.2	147	320	170	77	30	210	5.1	2.8	75

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) 10	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) 10
75-08-28	31	2.6	--	--	2.0	--	ND	--	ND	2	--	140	--
75-11-21	241	1.4	--	--	31	--	20	--	150	1	--	11	--
74-06-20	100	3.2	10	8.6	--	.02	70	0	50	--	0	--	240
74-06-20	35	1.0	8.8	2.8	--	.01	30	0	40	--	4	--	3
74-06-19	240	1.0	7.9	1.8	--	.00	70	0	30	--	0	--	16
75-08-27	189	1.7	--	--	126	--	ND	--	180	1	--	52	--
74-06-20	59	1.0	6.2	1.7	--	.00	50	0	50	--	6	--	8
75-08-28	115	.6	--	--	482	--	ND	--	50	0	--	170	--
75-12-22	145	.9	--	--	423	--	60	--	--	0	--	240	--
75-11-24	855	3.0	--	--	<.00	--	50	--	150	18	--	0	--
75-08-25	365	1.3	--	--	.12	--	20	--	ND	4	--	0	--
73-08-09	440	.4	11	9.6	--	.01	30	20	250	--	0	--	28
75-06-10	432	.3	--	--	15	--	ND	--	400	1	--	32	--
75-08-22	131	.3	--	--	1.9	--	ND	--	150	0	--	1	--
74-06-20	770	.3	7.0	1.9	--	.01	30	50	110	--	3	--	100
75-08-22	46	.2	--	--	37	--	--	--	12	1	--	7	--
75-06-10	567	1.4	--	--	.06	--	ND	--	400	2	--	0	--
75-08-22	250	.4	--	--	8.6	--	ND	--	40	0	--	33	--
75-08-22	129	.3	--	--	6.8	--	ND	--	80	0	--	14	--
75-08-21	93	.3	--	--	80	--	ND	--	240	0	--	4	--
75-08-21	80	2.8	--	--	.62	--	--	--	80	2	--	2	--
74-05-27	175	.4	--	1.8	--	--	--	--	300	--	--	--	--
75-06-11	92	1.9	--	--	.12	--	ND	--	120	1	--	1	--
75-08-21	58	.3	--	--	8.6	--	ND	--	40	0	--	24	--
75-03-19	32	1.2	--	--	3.7	--	ND	--	ND	0	--	0	--
74-06-10	50	2.8	27	7.8	--	.02	90	150	90	--	1	--	10
74-05-25	4.8	1.0	10	.02	--	.01	310	0	60	--	2	--	0
75-05-10	97	.5	--	--	ND	--	ND	--	ND	0	--	1	--
74-06-12	2.3	2.0	6.4	.09	--	.00	--	--	50	--	2	--	3
74-06-07	290	.6	12	.45	--	.01	160	510	40	--	0	--	50
74-05-23	700	.3	9.6	.10	--	.01	20	50	40	--	22	--	22
74-06-11	450	1.5	7.4	.10	--	.00	--	--	60	--	4	--	1
76-02-03	85	3.6	--	--	1.2	--	10	--	60	0	--	28	--
74-05-25	94	.8	14	.23	--	.02	20	20	10	--	1	--	30
74-05-25	770	.6	9.9	.23	--	.01	70	40	60	--	0	--	24
74-06-18	73	5.6	7.1	.23	--	.01	30	0	80	--	1	--	240
74-06-12	520	.4	6.9	.91	--	.01	--	--	30	--	0	--	16
74-06-11	360	1.5	7.1	.18	--	.00	0	10	40	--	14	--	53
74-06-11	340	.2	5.4	3.7	--	.01	--	--	40	--	1	--	3
74-06-12	520	1.6	.8	.28	--	.00	20	100	50	--	28	--	4

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEOLOGIC UNIT	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE
145	370631107340700	NB03300714AAD	SUNSHINE SMITH	115	42	74-06-12	125ANMS	13.5	9.6	1080
146	370707107365700	NB03300709CAB	JAMES BAKER	55	18	74-06-12	125ANMS	11.0	7.6	768
147	370708107365000	NB03300709BDD	NOVA BURCH	118	16	74-06-11	125ANMS	11.5	7.9	734
148	370708107373700	NB03300708ACD	GERALD HOWE	101	27	74-05-23	125ANMS	13.5	8.6	551
149	370711107371200	NB03300709BCC	ERNEST BURCH	205	--	74-06-13	125ANMS	14.0	8.0	787
149			ERNEST BURCH			74-09-26	125ANMS	--	--	--
150	370722107330300	NB03300712ADD	BENNY BERRY	200	3	75-03-27	125ANMS	7.0	8.2	1750
151	370725107363500	NB03300709ABD	HARRY RICHARDS	--	55	74-06-13	125ANMS	14.0	7.6	1180
152	370728107324600	NB03300607BBA	O R CROSS	80	17	75-08-28	125ANMS	16.5	7.5	700
153	370730107533600	NB03301012BBB	HINIO TUCSON	94	21	75-06-11	125ANMS	14.0	8.3	1400
154	370731107370800	NB03300709BBA2	EDNA HOOD	40	5	74-06-13	125ANMS	11.0	7.2	900
155	370732107370900	NB03300709BBA1	M DURAN	130	25	74-06-13	125ANMS	13.0	7.4	860
156	370732107523800	NB03301012AAB1	MARY MC CULLOCH 1	116	--	75-11-25	125ANMS	8.0	6.5	775
157	370734107380900	NB03300705CDC	STANLEY FROST	60	5	74-05-27	125ANMS	10.0	7.3	1020
158	370736107381600	NB03300705CCD	BIRD RED	8	4	74-05-27	125ANMS	12.0	7.5	1080
159	370805107040300	NB03300701BBC	ALLAN CAREL	159	27	74-06-13	125ANMS	13.0	8.1	1060
159			ALLAN CAREL			75-05-01	125ANMS	13.5	8.2	1050
160	370814107330300	NB03300701AAD	ELMER POWELL	75	33	73-08-08	125ANMS	18.0	8.0	1110
160			ELMER POWELL	75	41	75-05-14	125ANMS	13.0	--	1100
161	370821107462400	NB03300901ABA	M B DORE	90	26	75-07-26	125ANMS	14.0	8.7	1440
162	370824107341900	NB03300702AAB	ELMER KENNER SPRING	--	--	75-05-01	125ANMS	10.5	7.8	800
163	370825107334800	NB03400736CDC	TEAD RUSSELL	85	9	75-05-01	125ANMS	11.5	7.8	735
164	370825107341200	NB03400735DDD	ELMER KENNER	200	--	75-05-01	125ANMS	10.0	8.2	570
165	370830107374900	NB03400732DCC	J SANCHEZ	58	19	74-06-07	125ANMS	15.0	7.6	1040
166	370835107210600	NB03400536CCB	JOHN GALLEGOS JR. 1	80	18	75-05-06	125ANMS	12.0	7.9	850
167	370840107363100	NB03400733DBD	OSCAR STRAIN 2	60	6	74-05-27	125ANMS	11.0	7.4	398
168	370841107374300	NB03400732DBD	VONESTA HERRERA	160	15	74-06-08	125ANMS	12.0	7.8	940
169	370842107361900	NB03400733DAD	OSCAR STRAIN 1	52	28	74-05-27	125ANMS	12.0	7.4	546
170	370849107375200	NB03400732DBB	M SANTISTEVAN	130	40	74-06-07	125ANMS	12.0	8.3	622
171	370901107375100	NB03400732ACB	JOE GOMEZ	87	30	74-06-01	125ANMS	13.0	8.7	576
172	370911107371100	NB03400732AAA	SAM PINNECOOSE	198	18	74-06-10	125ANMS	12.0	8.7	596
173	370913107363900	NB03400733ABA	RUBY GARCIA	198	7	74-05-28	125ANMS	14.0	8.5	680
174	370913107375000	NB03400732ABB2	GARNET OLQUIN	96	28	74-06-01	125ANMS	13.0	8.2	767
175	370915107364400	NB03400733ABB	SYLVIA VALDEZ	114	6	74-05-27	125ANMS	12.0	7.3	640
176	370916107371100	NB03400733BBA	FRED PINNECOOSE	75	--	74-06-01	125ANMS	12.0	7.3	638
177	370916107374600	NB03400732ABB1	BELLE CUTHAIR	61	35	74-06-01	125ANMS	12.0	7.4	632
178	370920107363100	NB03400728DDC	JOE RAEL	82	11	74-05-27	125ANMS	21.0	7.8	503
179	370922107450900	NB03400830DDC	LA PLATA AIRPORT W.	177	70	74-06-20	125ANMS	14.0	8.5	1160
180	370924107363100	NB03400728DDB	JOE TREE	154	25	74-05-27	125ANMS	23.0	8.5	613
181	370929107345400	NB03400726CCA	BERTHA GROVE	122	7	74-05-23	125ANMS	--	9.0	677

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 500	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) NONE	SODIUM AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
74-06-12	632	--	174	60	.1	243	28	0	9.5	1.0	220	18	2.4	80
74-06-12	475	--	455	0	18	373	290	0	93	14	65	1.7	1.2	4.0
74-06-11	442	--	369	0	7.4	303	130	0	39	7.1	120	4.6	1.9	14
74-05-23	328	--	281	5	1.2	239	7	0	2.9	.0	130	21	.4	13
74-06-13	440	--	262	0	4.2	215	49	0	16	2.1	150	9.4	1.2	77
74-09-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-03-27	--	1247	413	31	4.8	392	125	ND	40	6.0	384	15	.7	15
74-06-13	763	--	379	0	15	311	250	0	86	8.3	170	4.7	1.5	8.5
75-08-28	--	430	320	41	20	330	225	ND	84	3.6	72	2.0	1.5	12
75-06-11	--	1148	414	31	3.8	391	75	ND	28	1.2	400	20	2.7	119
74-06-13	550	--	522	0	53	428	350	0	110	19	66	1.5	.9	7.4
74-06-13	522	--	528	0	34	433	190	0	50	17	130	4.1	1.0	7.6
75-11-25	--	473	259	7	138	224	105	<0	34	4.8	122	5.1	1.9	31
74-05-27	604	--	538	0	43	441	310	0	93	18	110	2.7	1.2	36
74-05-27	666	--	543	0	27	445	240	0	67	17	160	4.5	1.4	41
74-06-13	692	--	216	0	2.7	177	180	4	48	15	150	4.8	.9	46
75-05-01	--	734	67	17	1.0	180	235	80	70	14	140	3.9	.7	47
73-08-08	713	--	439	0	7.0	360	66	0	15	7.0	240	13	.7	10
75-05-14	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75-07-26	--	578	143	31	.7	170	35	ND	12	1.2	216	15	.3	179
75-05-01	--	494	317	24	9.3	301	295	35	84	20	75	192	.7	35
75-05-01	--	434	395	14	11	349	130	0	40	7.3	126	4.7	1.5	8.8
75-05-01	348	433	311	18	3.5	286	180	0	58	8.5	63	2.0	2.7	14
74-06-07	638	--	434	0	17	356	250	0	78	14	140	3.8	1.2	41
75-05-06	--	613	320	ND	6.5	263	350	87	100	24	57	1.3	1.5	15
74-05-27	249	--	203	0	13	167	120	0	38	7.2	25	1.0	21	3.3
74-06-08	567	--	422	0	11	346	200	0	63	10	140	4.3	1.1	33
74-05-27	327	--	283	0	18	232	200	0	65	10	40	1.2	1.1	7.7
74-06-07	362	--	226	0	1.8	185	69	0	23	2.7	110	5.8	.4	42
74-06-01	336	--	109	3	.4	94	21	0	8.2	.2	110	10	.3	30
74-06-10	290	--	216	3	.7	182	11	0	3.9	.2	110	15	.3	25
74-05-28	399	--	333	4	1.7	280	19	0	7.1	.2	150	15	.4	25
74-06-01	444	--	194	0	2.0	159	40	0	14	1.3	140	9.6	.6	61
74-05-27	385	--	352	0	28	289	300	8	94	15	22	.6	.9	14
74-06-01	379	--	359	0	29	294	260	0	84	12	35	.9	.8	5.3
74-06-01	371	--	365	0	23	299	240	0	76	13	43	1.2	1.1	7.8
74-05-27	295	--	290	0	7.4	238	130	0	39	7.6	65	2.5	1.4	3.4
74-06-20	700	--	324	0	1.6	266	17	0	6.5	.3	250	26	.4	83
74-05-27	370	--	311	4	1.6	262	19	0	6.0	.9	140	14	.5	14
74-05-23	384	--	249	18	.5	234	8	0	2.9	.2	150	23	.3	49

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) 10	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) 10
74-06-12	88	2.3	2.4	18	--	.18	0	0	90	--	14	--	12
74-06-12	45	.3	22	1.4	--	.03	--	--	40	--	0	--	17
74-06-11	54	.3	7.0	3.8	--	.00	40	0	50	--	0	--	76
74-05-23	26	2.1	8.8	.18	--	.01	50	20	30	--	32	--	1
74-06-13	49	2.0	5.5	1.8	--	.00	30	90	30	--	0	--	450
74-09-26	--	--	--	--	--	--	--	--	--	--	--	240	--
75-03-27	531	1.0	--	--	1.2	--	ND	--	ND	1	--	0	--
74-06-13	290	.1	8.2	.78	--	.01	160	60	60	--	0	--	49
75-08-28	21	.3	--	--	8.9	--	ND	--	120	1	--	40	--
75-06-11	386	2.4	--	--	--	--	ND	--	100	1	14	19	4
74-06-13	56	.2	22	2.5	--	.03	20	0	30	--	1	--	20
74-06-13	30	.3	19	1.5	--	.01	50	0	70	--	0	--	13
75-11-25	113	1.5	--	--	.62	--	10	--	50	1	--	1	--
74-05-27	65	.6	13	.18	--	.03	460	560	40	--	0	--	7
74-05-27	96	.6	14	.18	--	.05	50	470	50	--	0	--	2
74-06-13	48	.4	2.7	62	--	.00	40	0	40	--	14	--	4
75-05-01	63	.6	--	--	297	--	ND	--	26	0	--	3	--
73-08-08	210	1.7	7.7	.97	--	.01	30	10	60	--	0	--	21
75-05-14	--	--	--	--	--	--	--	--	--	2	--	20	--
75-07-26	54	.3	--	--	5.5	--	ND	--	50	2	--	53	--
75-05-01	96	.6	--	--	4.3	--	ND	--	ND	0	--	0	--
75-05-01	65	.3	--	--	.62	--	ND	--	ND	0	--	4	--
75-05-01	31	.4	--	--	1.8	--	--	--	ND	1	--	0	--
74-06-07	130	.6	12	1.6	--	.11	50	0	30	--	1	--	14
75-05-06	159	.4	--	--	21	--	ND	--	ND	0	--	2	--
74-05-27	31	.3	14	1.3	--	1.1	70	20	60	--	2	--	0
74-06-08	98	.5	9.4	.83	--	.01	100	50	20	--	2	--	14
74-05-27	43	.4	12	1.9	--	.02	50	10	20	--	0	--	3
74-06-07	51	3.0	11	1.6	--	.01	70	0	40	--	10	--	21
74-06-01	120	1.8	8.1	.12	--	.01	60	20	40	--	9	--	12
74-06-10	30	2.5	8.6	.06	--	.02	90	10	60	10	13	--	1
74-05-28	36	3.1	8.7	.03	--	.01	40	0	50	--	4	--	3
74-06-01	120	2.1	8.5	.11	--	.02	90	10	40	--	4	--	1
74-05-27	33	.8	24	1.6	--	.06	50	10	30	--	0	--	1
74-06-01	25	.4	19	4.7	--	.03	50	0	20	--	1	--	0
74-06-01	30	.6	15	.94	--	.00	60	0	20	--	0	--	21
74-05-27	29	.6	5.0	.08	--	.01	40	140	40	--	0	--	0
74-06-20	190	.9	8.2	.11	--	.01	100	30	60	--	10	--	22
74-05-27	41	1.1	8.2	.09	--	.04	60	20	60	--	2	--	0
74-05-23	29	4.5	6.8	.05	--	.01	130	50	50	--	5	--	1

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	NAME OF WELL OWNER	WELL DEPTH (FEET)	DEPTH TO WATER (FEET)	DATE OF SAMPLE	GEOLOGIC UNIT	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE
182	370930107361100	NB03400727CCB	HAZEL WEAVER	53	4	74-05-29	125ANMS	10.0	7.7	704
183	370931107344100	NB03400726CAD	SANDRA BURCH	253	4	75-11-11	125ANMS	11.5	5.9	590
184	370937107355500	NB03400727CAB	ROLAND WEAVER	128	48	74-05-31	125ANMS	11.0	8.0	863
185	370947107361300	NB03400727BCC	ARTHUR WEAVER	140	12	74-05-31	125ANMS	11.0	7.2	538
186	370958107361100	NB03400727BBC	NEOMA RED	113	13	74-05-28	125ANMS	11.0	7.4	672
187	371007107343100	NB03400726ABB	LUCY THOMPSON	86	6	74-05-23	125ANMS	11.0	8.9	579
188	371009107361300	NB03400722BBB	BRYCE RED	72	16	74-05-31	125ANMS	--	7.2	577
189	371011107355400	NB03400722CDC	RILEY JOY	105	14	74-05-31	125ANMS	11.0	7.7	390
190	371034107360100	NB03400722CBA	G PINNECOOSE	25	18	74-06-10	125ANMS	10.0	7.3	472
191	371034107361300	NB03400722CBB	F PINNECOOSE	90	9	74-05-28	125ANMS	12.0	7.3	491
192	371042107343000	NB03400723ACC	ALDEN NARANGO JR.	116	15	74-05-22	125ANMS	13.0	8.8	491
193	371102107361900	NB03400722BBB2	B FROST	102	14	74-06-07	125ANMS	11.0	7.6	948
194	371103107481300	NB03400914CCC	ROBERT WUEST	118	62	75-03-24	125ANMS	7.0	7.2	660
195	371104107470100	NB03400913CCD	BRUCE FASSETT	240	48	75-03-24	125ANMS	8.5	7.6	715
195			BRUCE FASSETT	240	--	75-05-03	125ANMS	12.0	--	710
196	371115107343400	NB03400714UDCB	J WILLIAMS	201	8	74-06-10	125ANMS	--	9.8	467
197	371131107343400	NB03400714UACC	JACK FROST	141	56	74-05-22	125ANMS	13.0	7.7	446
198	371144107361300	NB03400715UBBC	IRWIN TAYLOR	62	26	74-05-31	125ANMS	10.0	7.3	1080
199	371154107502000	NB03400916BBB	PERRY CRAIG	60	49	75-03-25	125ANMS	4.0	7.0	875
200	371156107463000	NB03400812UDCC	JAMES JEFFERSON	201	45	74-06-13	125ANMS	14.0	7.8	535
201	371156107465701	NB03400912UCCD1	EMILY BUTLER 1	200	38	74-06-10	125ANMS	12.0	8.8	313
202	371156107465702	NB03400912UCCD2	EMILY BUTLER 2	300	42	75-07-23	125ANMS	16.0	9.3	850
203	371200107344600	NB03400711UCDC	JOHN WILLIAMS	105	45	74-05-10	125ANMS	16.5	7.8	622
204	371201107485800	NB03400910UCDC	AUSTIN DECKER	304	104	75-03-21	125ANMS	10.0	7.5	480
205	371216107345100	NB03400711UCAB	RUSSELL BOX SR.	102	15	74-05-21	125ANMS	10.5	7.4	683
206	371220107490400	NB03400910UCBA	B B QUEEN	234	114	75-06-12	125ANMS	14.5	8.5	650
207	371227107350500	NB03400711UCBB	MANUEL CASIAS	65	--	74-05-25	125ANMS	11.0	7.7	201
208	371242107331800	NB03400712UABA	M EVENSEN	107	24	74-06-08	125ANMS	12.0	8.4	932
209	371243107361100	NB03400710UBBB	FRITZ BOX	99	39	74-05-31	125ANMS	--	8.1	495
210	371244107345900	NB03400711UBBA	MARY CHAVEZ 1	78	25	74-05-10	125ANMS	11.5	7.2	697
211	371246107352000	NB03400710UAAB	BRYAN ROCK	175	14	74-05-21	125ANMS	11.0	8.5	576
212	371258107474300	NB03400912DDD	JEANETT BARRY	63	19	74-06-13	125ANMS	13.0	7.1	618
213	371322107442500	NB03400810CCC	E GERRY	110	74	73-08-09	125ANMS	19.0	8.3	553
214	371327107364300	NB03400711CBD	MARY SAGE	199	37	74-06-20	125ANMS	14.0	8.4	588
215	370325108050500	NB03301131CDA	PICNIC FLATS ARTESIAN	--	F*	74-05-09	125KRLD	19.0	7.0	3920
216	370346108044800	NB03301131ACD	PICNIC FLATS ARTESIAN	--	F*	74-05-09	125KRLD	19.0	7.6	6530
217	370449108041900	NB03301129BBC	PICNIC FLATS ARTESIAN	--	F*	74-05-09	125KRLD	--	7.3	4600
218	370611108040400	NB03301117CAD	IRON SPRING PICNIC FLATS	--	--	74-05-09	125KRLD	9.5	7.4	1810
219	370051108111300	NB03201303CBD	STEWARD 1 GAS TEST-ARTESIAN	3240	F*	75-07-25	211CLFH	15.5	8.6	1725
220	370628108084300	NB03301215BCB	MARVEL COMMUNITY SPRING	--	--	75-10-30	211CLFH	12.0	6.9	640

*F INDICATES FLOWING WELL.

DATE OF SAMPLE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
	500	500	NONE	NONE	NONE	NONE	NONE	NONE	NONE	125	NONE	NONE	NONE	250
74-05-29	433	--	400	0	13	328	290	0	96	12	46	1.2	.9	3.6
75-11-11	--	338	345	14	756	308	190	<0	64	7.3	80	5.5	1.1	8.8
74-05-31	536	--	332	0	5.3	272	97	0	34	2.9	160	7.1	1.0	14
74-05-31	321	--	315	0	32	258	240	0	77	12	22	.6	.9	2.5
74-05-28	402	--	406	0	26	333	260	0	81	13	50	1.4	1.3	1.8
74-05-23	349	--	264	15	.6	258	6	0	2.3	.1	140	25	.3	11
74-05-31	350	--	305	0	31	250	230	0	71	13	32	.9	1.2	10
74-05-31	237	--	215	0	6.9	176	100	0	33	4.6	49	2.1	1.1	2.5
74-06-10	290	--	273	0	22	224	190	0	63	9.0	27	.8	1.0	2.6
74-05-28	295	--	273	0	22	224	200	0	62	11	28	.9	1.2	3.9
74-05-22	304	--	259	10	.7	229	12	0	4.4	.2	120	15	.5	5.6
74-06-07	585	--	539	0	22	442	380	0	120	20	74	1.6	.8	25
75-03-24	--	436	289	33	36	293	315	78	100	15	35	.9	1.5	33
75-03-24	--	456	195	29	10	21	285	111	84	18	43	1.1	.7	85
75-05-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
74-06-10	271	--	119	54	.1	188	12	0	4.2	.3	100	13	.9	11
74-05-22	261	--	244	0	7.8	200	160	0	48	8.9	35	1.2	1.5	4.0
74-05-31	643	--	560	0	45	459	450	0	140	24	65	1.3	1.4	40
75-03-25	--	613	408	12	69	354	465	131	98	53	23	.5	1.1	30
74-06-13	308	--	277	0	7.0	227	180	0	59	7.8	46	1.5	.8	21
74-06-10	178	--	154	4	.4	133	28	0	9.7	1.0	61	5.0	.5	15
75-07-23	--	406	192	24	.2	199	30	0	10	1.2	167	13	.3	65
74-05-10	367	--	329	0	8.3	270	54	0	20	1.1	120	7.1	.8	3.3
75-03-21	307	--	291	0	15	239	200	0	63	10	34	1.1	1.6	12
74-05-21	403	--	419	0	27	344	230	0	68	14	62	1.8	1.7	3.3
75-06-12	--	356	256	20	1.5	243	60	ND	20	2.4	129	7.2	.7	50
74-05-25	115	--	112	0	3.6	92	94	2	32	3.3	4.0	.2	.8	1.3
74-06-08	544	--	413	1	2.6	340	24	0	8.1	.8	210	19	.5	60
74-05-31	296	--	220	0.	2.8	180	52	0	19	1.0	92	5.6	.6	25
74-05-10	421	--	382	0	39	313	300	0	97	14	34	.9	.9	8.0
74-05-21	314	--	210	3	1.1	177	14	0	5.2	.2	120	14	.6	65
74-06-13	356	--	333	0	42	273	270	0	91	10	22	.6	.8	16
73-08-09	335	--	283	0	2.3	232	12	0	5.0	.0	130	16	.3	12
74-06-20	354	--	339	0	2.2	278	35	0	13	.6	130	9.6	.4	9.0
74-05-09	2710	--	2970	[illegible]	475	2440	160	0	36	18	1100	37	9.1	13
74-05-09	4450	--	5090	0	205	4170	150	0	35	15	1800	64	13	21
74-05-09	3140	--	3480	0	279	2850	110	0	29	9.7	1300	53	8.0	14
74-05-09	1120	--	1240	0	79	1020	24	0	5.9	2.2	440	39	2.6	21
75-07-25	--	1018	549	77	3.0	621	50	ND	6.0	8.5	407	25	1.9	115
75-10-30	--	402	259	14	58	236	290	54	84	19	32	.8	1.5	26

[The mandatory and recommended limits for drinking water of the Colorado Department of Health (1971) and the U.S. Public Health Service (1962) are listed for each constituent immediately below the column headings. NONE indicates that no limit has been established. MG/L = milligrams per liter; UG/L = micrograms per liter; ND = not detectable]

MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	STATION NAME	DATE OF SAMPLE	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) 500
1	STA.NO.09354500[1]		LOS PINOS RIVER AT LA BOCA	74-05-03	19.5	8.3	309	182
2	STA.NO.09355000[1]		SPRING CREEK AT LA BOCA	74-05-03	20.0	7.7	485	292
3	STA.NO.09363100[1]		SALT CREEK NEAR OXFORD	74-05-01	16.0	8.0	1530	905
4	370036107272400	NB03200624BBA	SAMBRITO CREEK NEAR MOUTH	75-08-02	24.0	8.3	320	--
5	370126107085600	NB03200314BBB	NAVAJO RIVER NEAR GAGING STATION	75-10-24	3.5	6.7	370	--
6	370142107361400	NB03200710CBC	LOS PINOS RIVER NEAR CLEM BAKER RANCH	74-05-03	19.0	8.4	294	173
7	370220107120000	NB03200308BAA	CAT CREEK AT PAGOSA JUNCTION	75-08-29	18.0	7.9	900	--
8	370230108052600	NB03201106CCC	IRON SPRINGS - IRON SPRINGS GULCH	75-10-29	7.0	8.6	6000	--
9	370313107011900	NB03300236CDC	MONTEZUMA CREEK AT KING RANCH	75-10-22	15.0	8.2	1425	--
10	370324108103700	NB03301232CDB	LONG HOLLOW CREEK NEAR CONFLUENCE LA PLATA RIVER	75-07-25	21.0	8.6	1415	--
11	370325107520900	NB03300931CAC	FLORIDA RIVER CONFLUENCE WITH ANIMAS RIVER	75-11-22	4.0	6.9	530	--
12	370328107364200	NB03300733DBC	LOS PINOS RIVER NEAR MAX MARTINEZ RANCH	74-05-24	13.5	7.6	252	147
13	370340107080000	NB03300336CCC	TRAIL CANYON CREEK NEAR JUANITA	73-08-07	23.0	8.1	551	349
13			TRAIL CANYON CREEK NEAR JUANITA	74-05-24	--	8.2	560	--
14	370342107052400	NB03300232ACC	COAL MINE CREEK AT PAGOSA ROAD	75-10-31	8.0	5.3	490	--
15	370433108074100	NB03301227ADD	LONG HOLLOW CREEK AT HERRERA RANCH	75-10-29	10.5	8.4	1440	--
16	370447107113500	NB03300329AAC	ROUND MEADOW CREEK AT MOUTH	75-10-28	10.0	7.7	480	--
17	370538107363800	NB03300721ABD	UTE CREEK NEAR MOUTH	74-05-03	20.5	7.9	457	--
18	370547107371500	NB03300721BBB	LOS PINOS RIVER NEAR UTE CREEK MOUTH	74-05-03	17.0	7.3	232	134
19	370607107024500	NB03300214CBC	SAN JUAN RIVER AT TRUJILLO	75-10-21	12.5	8.5	365	--
20	370623107375700	NB03300717BDA	ROCK CREEK SOUTH OF IGNACIO	74-05-02	17.0	7.5	277	157
21	370656108115400	NB03301207CBC	CHERRY CREEK CONFLUENCE LA PLATA RIVER	75-07-25	28.5	8.7	750	--
22	370716107023600	NB03300211BCA	RIO BLANCO RIVER AT MOUTH	75-08-25	23.5	9.5	225	--
23	370724107380000	NB03300708BAD	SEEP LINE SOUTH OF SOUTHERN UTE AGENCY	74-05-02	17.0	7.8	983	589
24	370749107471000	NB03300902DAD	SALT CREEK AT CONFLUENCE FLORIDA RIVER	75-07-28	21.5	8.8	195	--
25	370754107473100	NB03300902DBA	PINE CREEK NEAR MOUTH	75-07-26	22.0	9.2	355	--
26	370758107385200	NB03300706DBB	IGNACIO CREEK WEST OF SOUTHERN UTE AGENCY	75-11-21	4.0	6.7	925	--
27	370803107480400	NB03300902BCD	COTTONWOOD CREEK AT MOUTH	75-07-26	19.0	9.1	510	--
28	370804107372100	NB03300705ADD	LOS PINOS RIVER NE OF SOUTHERN UTE AGENCY	74-05-03	13.0	8.1	246	143
29	370824107402400	NB03300801BBB	ROCK CREEK SOUTH OF OXFORD TRACT	74-05-01	22.0	8.7	1320	741
30	370825108094100	NB03301204BBA	ALKALI GULCH CONFLUENCE LA PLATA RIVER	75-07-24	19.5	8.3	5570	--
31	370827107210200	NB03400536CCC	STOLLSTEIMER CREEK AT GALLEGOS BRIDGE	75-07-26	26.0	8.9	725	--
32	370831107371800	NB03400733CCC	DRY CREEK NEAR MOUTH SOUTHERN UTE AGENCY	74-05-02	--	8.4	565	339
33	370859107354600	NB03400734BDA	COMMISSIONER DITCH PT. DIVERSION	74-05-03	10.0	7.7	184	106
34	370859107354700	NB03400734BDA	OSCAR STRAIN DRAIN DITCH	74-05-22	9.5	7.4	484	289
35	370923107403800	NB03400826DDD	OXFORD TRACT POND - NORTH BANK	75-07-31	22.5	9.9	138	--
36	370924107404000	NB03400826DDD	OXFORD TRACT POND - NORTH BANK	74-05-01	18.0	7.9	241	121
37	370933107403900	NB03400826DAD	DR. MORRISON DITCH LATERAL - OXFORD TRACT	75-07-31	21.0	7.7	95	--
38	370958108083100	NB03401227BBD	HAY GULCH CONFLUENCE LA PLATA RIVER	75-07-24	14.5	7.8	1750	--
38			HAY GULCH CONFLUENCE LA PLATA RIVER	75-07-25	--	--	--	--

[1]U.S. GEOLOGICAL SURVEY GAGING STATION.

Appendix 14b Chemical analyses of surface water samples (Hutchinson and Brogden 1976)

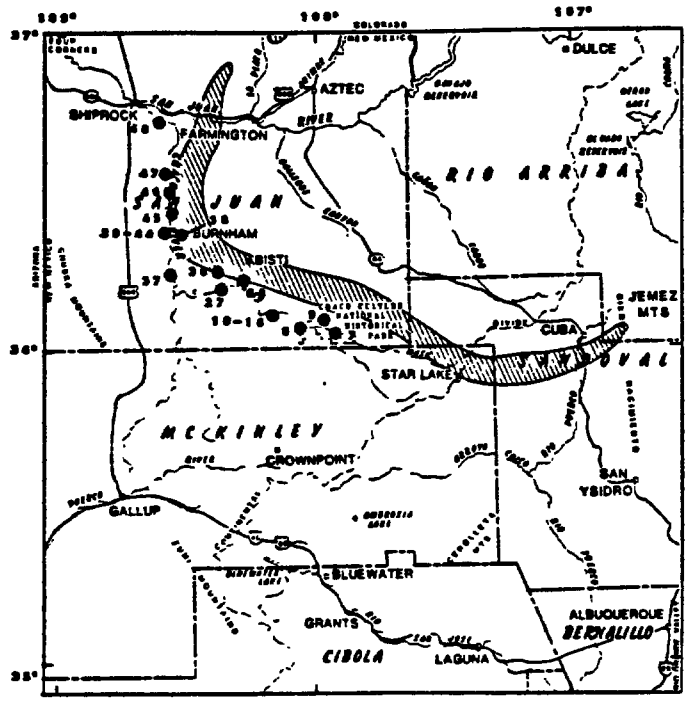
DATE OF SAMPLE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) 250	SODIUM-AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
74-05-03	--	143	0	1.1	117	110	0	35	6.2	24	1.0	2.1	6.0
74-05-03	--	163	0	5.2	134	130	0	37	8.7	50	1.9	4.8	8.9
74-05-01	--	411	0	6.6	337	240	0	68	17	250	7.0	5.3	160
75-08-02	202	109	24	1.3	494	110	ND	36	4.8	32	1.3	2.7	2.4
75-10-24	281	101	2	34	87	125	38	40	6.0	20	.8	2.3	1.7
74-05-03	--	136	0	.9	112	99	0	30	5.9	23	1.0	2.0	6.3
75-08-29	625	309	24	7.2	293	390	97	84	43	63	1.3	3.5	7.0
75-10-29	5378	2745	388	14	2897	695	<0	261	10	1832	30	8.9	69
75-10-22	1064	221	29	2.8	271	550	279	122	59	140	2.6	3.9	24
75-07-25	1081	109	65	1.0	198	675	477	154	70	64	1.0	1.1	34
75-11-22	263	267	6	56	229	215	<0	70	9.7	45	1.3	2.3	30
74-05-24	--	121	0	4.9	99	91	0	28	5.0	16	.7	3.3	4.3
73-08-07	--	253	0	3.2	208	150	0	39	13	68	2.4	1.5	5.8
74-05-24	--	210	21	2.6	207	140	0	34	12	77	2.9	2.0	8.9
75-10-31	280	234	21	2240	229	170	<0	52	9.7	48	1.6	1.9	1.7
75-10-29	1089	281	17	2.0	260	700	440	156	75	73	1.2	3.1	37
75-10-28	251	202	31	8.5	219	190	<0	60	9.7	41	1.3	1.9	1.7
74-05-03	--	191	0	3.8	157	120	0	33	8.0	49	2.0	4.6	9.2
74-05-03	--	109	0	8.7	89	76	0	23	4.8	18	.9	2.0	4.9
75-10-21	258	114	<0	.6	93	115	22	34	7.3	32	1.3	3.5	7.0
74-05-02	--	118	0	6.0	97	77	0	23	4.7	25	1.2	2.1	7.2
75-07-25	497	138	36	.7	144	355	181	86	84	22	.5	2.7	17
75-08-25	133	109	2	.1	94	90	ND	28	4.8	11	.5	1.9	ND
74-05-02	--	409	0	10	335	260	0	76	18	120	3.2	2.5	51
75-07-28	134	79	7	.2	72	80	2	28	2.4	11	.5	3.5	35
75-07-26	227	106	26	.2	132	150	18	50	6.0	16	.5	3.1	16
75-11-21	572	314	36	124	319	210	<0	62	13	168	5.0	4.3	62
75-07-26	263	145	38	.3	184	190	6	64	7.3	22	.7	1.9	16
74-05-03	--	124	0	1.6	102	95	0	29	5.6	14	.6	1.5	3.0
74-05-01	--	338	6	1.1	287	62	0	17	4.8	260	14	3.4	170
75-07-24	6175	255	55	3.0	302	3600	3298	321	681	400	2.9	6.6	101
75-07-26	500	161	38	.5	197	355	158	90	31	32	.7	2.3	6.0
74-05-02	--	240	0	1.5	197	140	0	40	10	74	2.7	2.6	18
74-05-03	--	93	0	3.0	76	79	3	24	4.6	6.9	.3	1.1	1.5
74-05-22	--	256	0	16	210	220	5	68	11	22	.7	1.3	5.6
75-07-31	120	57	7	.0	60	60	ND	14	6.0	11	.6	1.9	.7
74-05-01	--	114	0	2.3	94	49	0	14	3.3	28	1.7	1.5	6.8
75-07-31	70	48	ND	1.5	40	50	10	16	2.4	4.6	.2	1.5	.7
75-07-24	1387	227	51	8.4	271	950	679	192	114	52	.7	3.1	28
75-07-25	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) NONE	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) NONE
74-05-03	33	.6	4.2	.01	--	--	80	0	20	2	--	3	--
74-05-03	92	.8	8.1	.17	--	--	80	0	60	4	--	2	--
74-05-01	200	.7	1.2	.02	--	--	80	210	40	--	1	--	25
75-08-02	49	.4	--	--	.62	--	ND	--	ND	2	--	3	--
75-10-24	81	.4	--	--	.62	--	10	--	<0	4	--	0	--
74-05-03	34	.5	4.2	.01	--	.02	80	0	20	--	2	--	2
75-08-29	248	.3	--	--	.25	--	0	--	ND	1	--	4	--
75-10-29	1568	.5	--	--	.19	--	20	--	1320	2	--	0	--
75-10-22	545	.2	--	--	.12	--	<0	--	50	1	--	1	--
75-07-25	527	.3	--	--	1.8	--	ND	--	50	1	--	3	--
75-11-22	57	.2	--	--	.62	--	20	--	<0	0	--	6	--
74-05-24	24	.3	6.4	.03	--	.04	70	40	30	--	0	--	1
73-08-07	88	.3	8.8	.01	--	.00	10	10	40	--	--	--	--
74-05-24	77	.2	--	1.8	--	--	10	--	370	--	--	--	--
75-10-31	59	.1	--	--	.62	--	10	--	<0	1	--	0	--
75-10-29	520	.3	--	--	.12	--	10	--	<0	1	--	2	--
75-10-28	51	.4	--	--	.62	--	20	--	50	0	--	1	--
74-05-03	60	.7	--	--	--	--	70	30	50	--	1	--	2
74-05-03	22	.5	5.1	.08	--	.04	30	70	20	--	6	--	4
75-10-21	73	.2	--	--	.12	--	20	--	50	4	--	0	--
74-05-02	30	.6	5.1	.13	--	.02	40	120	30	--	5	--	6
75-07-25	199	230	--	--	.62	--	ND	--	ND	1	--	1	--
75-08-25	23	.2	--	--	.12	--	ND	--	ND	1	--	0	--
74-05-02	110	.6	8.8	.04	--	.04	70	160	70	--	0	--	3
75-07-28	20	.2	--	--	.62	--	100	--	100	0	--	1	--
75-07-26	28	.1	--	--	.62	--	ND	--	50	4	--	1	--
75-11-21	152	.5	--	--	.62	--	20	--	<0	0	--	>30	--
75-07-26	22	.2	--	--	.25	--	ND	--	120	1	--	2	--
74-05-03	22	.5	5.7	.03	--	.02	100	20	20	--	1	--	0
74-05-01	99	1.2	2.0	2.4	--	.03	60	60	50	--	0	--	--
75-07-24	3821	31	--	--	.62	--	0	--	120	3	--	2	--
75-07-26	210	.3	--	--	.12	--	ND	--	ND	2	--	4	--
74-05-02	70	.5	5.1	.01	--	.03	100	50	40	--	0	--	3
74-05-03	16	.4	5.4	.06	--	.01	90	0	40	--	0	--	1
74-05-22	44	.3	9.4	.10	--	.01	110	290	20	--	0	--	1
75-07-31	26	.4	--	--	.25	--	0	--	ND	1	--	1	--
74-05-01	10	1.0	.1	.02	--	.00	30	0	40	--	2	--	1
75-07-31	17	.2	--	--	.12	--	ND	--	ND	0	--	0	--
75-07-24	694	.2	--	--	1.2	--	ND	--	100	2	--	1	--
75-07-25	--	--	--	--	--	--	--	--	--	2	--	1	--

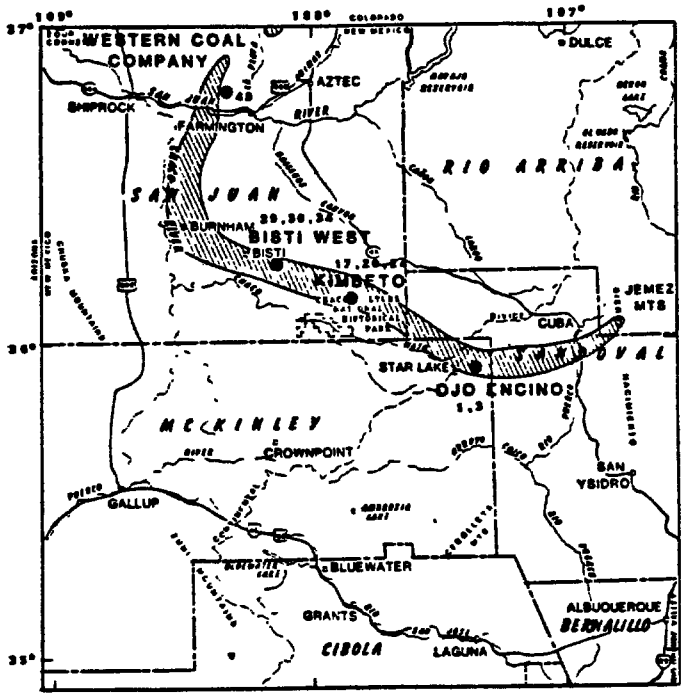
MAP NUMBER	LATITUDE AND LONGITUDE	LOCATION	STATION NAME	DATE OF SAMPLE	TEMPERATURE (DEG C) NONE	PH (UNITS) NONE	SPECIFIC CONDUCTANCE (MICROMHOS) NONE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) 500
39	371017107342400	NB03400723DCA	BEAVER CREEK AT BUCK HIGHWAY	74-05-03	9.0	7.6	167	98
40	371018107430800	NB03400821DCA	SALT CREEK AT OXFORD HIGHWAY 172	74-05-01	22.0	7.8	1320	755
41	371033107350200	NB03400723CBB	LOS PINOS RIVER AT SOUTHERN UTE WATER PLANT	74-05-02	19.5	7.7	158	92
42	371112107524500	NB03401013DDB	BASIN CREEK AT MOUTH ANIMAS RIVER	75-11-22	1.0	7.1	2100	--
43	371149107433500	NB03400816UBAB	SALT CREEK NORTH OF OXFORD	74-05-01	19.0	7.8	1110	665
44	371200107153000	NB03400411UCCD	CAPOTE LAKE - NORTH SHORE	75-05-13	17.0	8.4	950	--
45	371240107174800	NB03400409UBBC	DEVIL CREEK AT U.S. HIGHWAY 160	75-10-20	11.0	6.9	620	--
46	371245107340100	NB03400712UBBB	BEAVER CREEK AT NORTH RESERVATION BOUNDARY	74-05-02	14.0	7.4	128	76
47	371246107352800	NB03400710UABA	CEANOBOO DIVERSION LOS PINOS RIVER	74-05-03	6.5	7.6	120	68
48	371333107405600	NB03400707CAC	DRY CREEK WEST OF BAYFIELD ON U.S. 160	74-06-20	25.0	8.3	718	433

DATE OF SAMPLE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) 500	BICAR-BONATE (HCO3) (MG/L) NONE	CAR-BONATE (CO3) (MG/L) NONE	CARBON DIOXIDE (CO2) (MG/L) NONE	ALKA-LINITY AS CACO3 (MG/L) NONE	HARD-NESS (CA,MG) (MG/L) NONE	NON-CAR-BONATE HARD-NESS (MG/L) NONE	DIS-SOLVED CAL-CIUM (CA) (MG/L) NONE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L) 125	DIS-SOLVED SODIUM (NA) (MG/L) 250	SODIUM-AD-SORP-TION RATIO NONE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) NONE	DIS-SOLVED CHLO-RIDE (CL) (MG/L) 250
74-05-03	--	82	0	3.3	67	70	3	21	4.3	7.1	.4	1.0	1.9
74-05-01	--	465	0	12	381	190	0	55	12	210	6.7	5.6	120
74-05-02	--	84	0	2.7	69	71	3	23	3.4	4.9	.3	1.2	1.8
75-11-22	1702	373	0	50	320	940	620	160	216	156	2.7	5.0	31
74-05-01	--	364	0	9.2	299	250	0	73	17	150	4.1	1.2	69
75-05-13	883	161	36	1.5	191	540	349	104	55	39	.7	76	86
75-10-20	414	225	9	49	201	335	134	94	24	13	.3	2.3	12
74-05-02	--	60	0	3.8	49	54	5	16	3.4	4.3	.3	1.0	1.1
74-05-03	--	64	0	2.6	53	56	4	18	2.8	1.9	.1	.9	.6
74-06-20	--	393	0	3.2	322	100	0	23	11	130	5.6	1.0	18

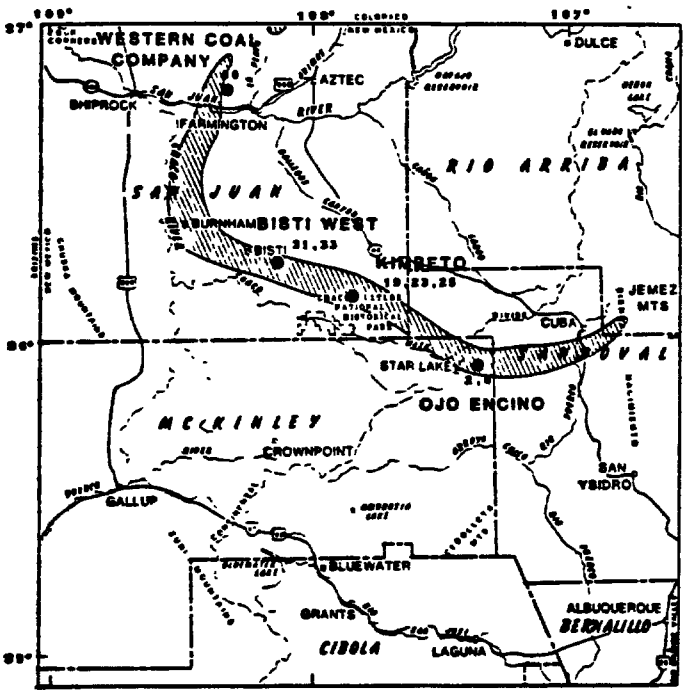
DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L) 250	DIS-SOLVED FLUO-RIDE (F) (MG/L) 1.3	DIS-SOLVED SILICA (SIO2) (MG/L) NONE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) 10	DIS-SOLVED NITRATE (NO3) (MG/L) 45	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L) NONE	DIS-SOLVED IRON (FE) (UG/L) 300	DIS-SOLVED MAN-GANESE (MN) (UG/L) 50	DIS-SOLVED BORON (B) (UG/L) NONE	DIS-SOLVED ARSENIC (AS) (UG/L) 10	TOTAL ARSENIC (AS) (UG/L) NONE	DIS-SOLVED SELE-NIUM (SE) (UG/L) 10	TOTAL SELE-NIUM (SE) (UG/L) NONE
74-05-03	16	.4	5.1	.05	--	.03	140	10	30	--	1	--	1
74-05-01	120	1.1	1.3	.07	--	.02	110	610	0	--	0	--	21
74-05-02	9.7	.6	4.6	.03	--	.01	190	800	10	--	0	--	1
75-11-22	855	.4	--	--	<.00	--	50	--	<0	0	--	5	--
74-05-01	170	.6	4.3	.06	--	.01	40	240	40	--	0	--	16
75-05-13	341	.2	--	--	3.1	--	20	--	ND	0	--	1	--
75-10-20	139	.1	--	--	.12	--	<0	--	<0	0	--	2	--
74-05-02	14	.4	5.4	.02	--	.01	230	10	30	--	1	--	0
74-05-03	8.0	.4	3.8	.03	--	.01	40	0	7	--	0	--	1
74-06-20	49	.7	5.6	.23	--	.01	30	30	70	--	4	--	4



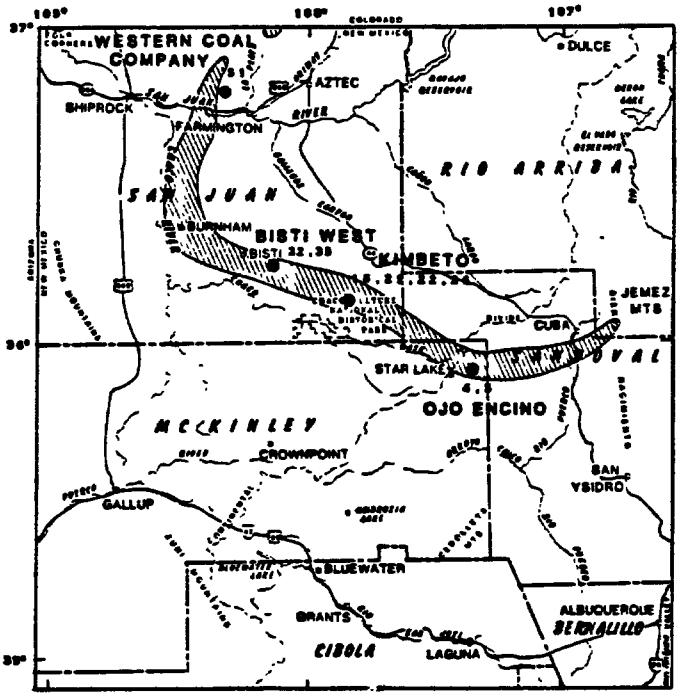
--Location of observation wells completed in the alluvium along the Chaco River and the tributaries to the east and northeast.



--Location of observation wells completed in the Pictured Cliffs Sandstone.



--Location of observation wells completed in the overburden of the Kirtland Shale and Fruitland Formation.



--Location of observation wells-completed in coal seams and interbedded lithologic units of the Fruitland Formation.

0 10 20 30 MILES
0 10 20 30 KILOMETERS

EXPLANATION

SURFACE-MINABLE COAL RESERVES IN THE FRUITLAND FORMATION

3 OBSERVATION WELL AND NUMBER

Appendix 15a. Groundwater sampling sites (Myers and Villanueva 1986)

[μS = microsiemens per centimeter at 25 degrees Celsius; deg. C = degrees Celsius; mg/L = milligrams per liter; fet-fld = fixed-pH endpoint titration - field; μg/L = micrograms per liter; -- indicates no data]

Number in figure 7	Station number	Date of sample	Specific conductance (μS)	pH (standard units)	Temperature (deg. C)	Hardness (mg/L as $CaCO_3$)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium, dissolved (mg/L as K)	Bicarbonate fet-fld (mg/L as HCO_3)
3	355400107224201	07-25-79	4,000	8.8	16.0	28	8.4	1.5	930	81	6.2	840
17	360731107494701	05-25-78	11,000	8.5	15.0	70	19	5.2	2,500	140	13	510
20	360822107561601	02-23-78	3,100	9.2	15.5	16	4.9	.80	800	92	13.6	990
24	360916107543901	11-14-77	11,300	8.0	15.5	140	37	12	2,600	98	12	700
29	361407108081901	03-31-76	5,200	9.2	18.0	36	11	2.0	1,200	91	5.4	210
30	361435108093001	10-21-75	7,120	9.6	16.0	23	4.1	3.2	1,500	140	9.9	300
34	361457108081901	08-20-75	7,820	9.2	17.0	27	4.8	3.6	1,700	150	11	320
49	364744108225001	02-21-78	11,000	8.1	15.0	820	230	58	2,100	33	20	250

Number in figure 7	Date of sample	Carbonate fet-fld (mg/L as CO_3)	Alkalinity field (mg/L as $CaCO_3$)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Solids, residue at 180 deg. C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Iron dissolved (μg/L as Fe)	Carbon, organic dissolved (mg/L as C)	Carbon, organic suspended total (mg/L as C)
3	07-25-79	--	690	380	700	3.5	8.2	2,340	2,500	20	37	--
17	05-25-78	10	430	98	3,800	1.6	30	5,670	6,700	10	8.9	--
20	02-23-78	180	1,120	280	230	4.3	10	--	2,200	80	18	--
24	11-14-77	.00	570	250	3,400	1.4	9.6	--	6,700	40	8.8	--
29	03-31-76	8	184	1,600	590	4.0	4.5	--	3,500	110	40	--
30	10-21-75	130	462	85	2,000	1.5	7.0	--	4,000	80	--	--
34	08-20-75	62	365	120	2,300	1.1	6.6	--	4,400	140	80	--
49	02-21-78	.00	200	1,500	2,700	1.8	15	--	6,800	10	180	--

Appendix 15b. Representative chemical analyses of water from selected observation wells completed in the Pictured Cliffs Sandstone (Myers and Villanueva 1986)

Appendix 15c. Representative chemical analyses of water from selected observation wells completed in the coal seams and interbedded lithologic units of the Fruitland Formation (Myers and Villanueva 1986)

[µS = microsiemens per centimeter at 25 degrees Celsius; deg. C = degrees Celsius; mg/L = milligrams per liter; fet-fld = fixed-pH endpoint titration - field; µg/L = micrograms per liter; -- indicates no data]

Number in figure 10	Station number	Date of sample	Specific conductance (µS)	pH (standard units)	Temperature (deg. C)	Hardness (mg/L as $CaCO_3$)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium, dissolved (mg/L as K)	Bicarbonate fet-fld (mg/L as HCO_3)
5	355447107224301	07-25-79	1,900	9.0	16.0	7	2.5	0.20	550	94	2.7	860
18	360734107523101	05-25-78	2,200	10.2	14.0	10	4.0	.10	490	67	4.9	250
21	360823107544001	02-23-78	3,200	10.2	14.0	15	5.6	.20	800	95	12	250
22	360849107561801	08-17-77	4,500	8.3	17.0	27	7.2	2.0	980	86	5.5	1,360
26	361008107543901	05-24-78	13,000	7.8	16.0	260	99	1.8	3,300	95	14	710
32	361446108090801	10-19-76	7,200	7.9	21.0	94	25	7.6	1,900	88	11	1,370
35	361513108090701	02-07-80	6,500	11.8	14.0	58	23	.00	1,400	85	9.1	0
51	364845108214201	02-22-78	8,800	8.1	18.0	46	12	3.6	2,000	130	7.4	1,480

Number in figure 10	Date of sample	Carbonate fet-fld (mg/L as CO_3)	Alkalinity field (mg/L as $CaCO_3$)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Solids, residue at 180 deg. C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Nitrogen, nitrate total (mg/L as N)	Nitrogen, NO_2+NO_3 total (mg/L as N)	Nitrogen, ammonia total (mg/L as N)	Nitrogen, organic total (mg/L as N)
5	07-25-79	39	770	290	31	2.7	7.5	1,200	1,400	--	--	--	--
18	05-25-78	370	820	160	30	4.9	37	1,250	1,200	--	--	--	--
21	02-23-78	710	1,390	140	200	1.7	38	--	2,800	--	--	--	--
22	08-17-77	98	1,280	120	500	2.3	8.6	--	2,500	--	--	--	--
26	05-24-78	.00	580	16	4,700	.80	10	6,590	8,500	--	--	--	--
32	10-19-76	.00	1,120	2,500	390	1.0	7.8	5,740	5,500	.0270	0.270	1.30	2.2
35	02-07-80	100	170	160	1,900	1.1	41	3,080	3,900	--	--	--	--
51	02-22-78	.00	1,210	160	2,000	2.4	11	--	4,900	--	--	--	--

Number in figure 10	Date of sample	Nitrogen, total (mg/L as N)	Phosphorus, total (mg/L as P)	Iron dissolved (µg/L as Fe)	Carbon, organic dissolved (mg/L as C)	Carbon, organic suspended total (mg/L as C)
5	07-25-79	--	--	10	5.9	--
18	05-25-78	--	--	30	13	--
21	02-23-78	--	--	20	15	--
22	08-17-77	--	--	20	--	--
26	05-24-78	--	--	20	7.1	0.40
32	10-19-76	3.8	0.160	--	--	--
35	02-07-80	--	--	70	24	--
51	02-22-78	--	--	90	10	--

[μS = microsiemens per centimeter at 25 degrees Celsius; deg. C = degrees Celsius; mg/L = milligrams per liter; fet-fld = fixed-pH endpoint titration - field; μg/L = micrograms per liter; -- indicates no data]

Number in figure 13	Station number	Date of sample	Specific conductance (μS)	pH (standard units)	Temperature (deg. C)	Hardness (mg/L as $CaCO_3$)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium, dissolved (mg/L as K)	Bicarbonate fet-fld (mg/L as HCO_3)
19	360754107505201	05-25-78	1,180	8.5	13.0	7	1.4	0.80	280	48	2.2	490
31	361446108083701	10-19-76	13,000	7.5	14.5	930	320	31	3,500	52	17	800
33	361447108090901	02-08-80	7,850	10.0	--	20	3.0	3.1	1,900	190	14	360
50	364750108214701	03-05-80	23,000	12.0	15.0	550	210	3.3	3,600	71	31	0

Number in figure 13	Date of sample	Carbonate fet-fld (mg/L as CO_3)	Alkalinity field (mg/L as $CaCO_3$)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Solids, residue at 180 deg. C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Nitrogen, nitrate total (mg/L as N)	Nitrogen, NO_2+NO_3 total (mg/L as N)	Nitrogen, ammonia total (mg/L as N)	Nitrogen, organic total (mg/L as N)
19	05-25-78	10	420	170	7.2	1.7	10	738	730	--	--	--	--
31	10-19-76	.00	657	7,100	63	.40	6.9	11,500	11,000	12.0	12.0	2.90	1.1
33	02-08-80	210	640	3,200	300	.90	54	1,430	6,100	--	--	--	--
50	03-05-80	380	636	120	6,000	1.0	4.5	9,940	11,000	--	--	--	--

Number in figure 13	Date of sample	Nitrogen, total (mg/L as N)	Phosphorus, total (mg/L as P)	Iron dissolved (μg/L as Fe)	Carbon, organic dissolved (mg/L as C)	Carbon, organic suspended total (mg/L as C)
19	05-25-78	--	--	150	4.7	--
31	10-19-76	16	0.130	--	--	--
33	02-08-80	--	--	--	--	--
50	03-05-80	--	--	120	40	--

Appendix 15d. Representative chemical analyses of water from selected observation wells completed in the overburden of the Kurtland Shale and Fruitland Formation (Myers and Villanueva 1986)

Appendix 15e. Representative chemical analyses of water from selected observation wells in the alluvium along the Chaco River and the tributaries to the east and northeast (Myers and Villanueva 1986)

[μS = microsiemens per centimeter at 25 degrees Celsius; deg. C = degrees Celsius; mg/L = milligrams per liter; fet-fld = fixed-pH endpoint titration - field; μg/L = micrograms per liter; -- indicates no data]

Number in figures 16 and 17	Station number	Date of sample	Specific conductance (μS)	pH (standard units)	Temperature (deg. C)	Hardness (mg/L as $CaCO_3$)	Calcium dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium, dissolved (mg/L as K)	Bicarbonate fet-fld (mg/L as HCO_3)
8	360415108022201	12-19-77	950	8.0	8.5	62	21	2.4	210	12	1.9	420
9	360621107582301	12-19-77	1,340	7.7	7.0	110	37	3.4	280	12	3.0	420
10	360717108102301	09-27-76	1,000	8.1	16.0	44	14	2.2	220	15	4.0	400
12	360725108102701	04-14-82	990	7.3	11.0	53	17	2.4	210	13	2.1	390
13	360726108102801	03-11-81	882	7.5	5.0	110	37	5.1	160	7	3.9	390
14	360729108102901	09-27-76	870	7.9	19.0	91	31	3.3	160	8	12	330
15	360733108103201	12-19-77	800	7.9	10.0	95	31	4.3	160	7	2.4	310
27	361142108220401	12-20-77	1,500	8.1	12.0	170	56	7.4	290	10	4.4	460
28	361318108151401	03-15-78	1,900	8.0	8.0	210	73	7.5	370	12	2.7	350
36	361503108243801	12-20-77	10,000	8.0	12.0	1,300	300	130	2,300	29	10	530
37	361554108333201	12-20-77	840	7.8	10.0	98	34	3.1	180	8	2.8	260
38	362145108310901	12-18-77	1,570	8.0	11.0	220	77	7.7	350	11	3.6	310
42	362212108340701	12-18-77	1,280	8.3	13.0	120	40	5.2	290	12	3.1	490
43	362213108340501	12-18-77	1,040	8.0	13.0	130	42	5.2	210	8	3.5	330
46	363113108333501	12-21-77	2,700	7.6	11.0	290	91	15	540	14	4.5	340
47	363503108342101	12-21-77	1,580	7.7	10.5	250	82	12	330	9	5.2	410
48	364325108353001	08-25-78	3,580	8.3	22.0	110	19	15	750	32	5.9	240

Number in figures 16 and 17	Date of sample	Carbonate fet-fld (mg/L as CO_3)	Alkalinity field (mg/L as $CaCO_3$)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Solids, residue at 180 deg. C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Nitrogen, nitrate total (mg/L as N	Nitrogen, NO_2+NO_3 total (mg/L as N)	Nitrogen, ammonia total (mg/L as N)	Nitrogen, organic total (mg/L as N)
8	12-19-77	.00	342	160	7.5	.90	11	636	620	--	.100	.080	.77
9	12-19-77	.00	344	340	9.3	.60	13	877	890	--	.100	.390	.00
10	09-27-76	.00	328	180	9.2	1.1	15	--	640	--	--	--	--
12	04-14-82	--	271	210	8.6	.90	14	654	630	--	--	--	--
13	03-11-81	.00	320	150	5.6	.40	13	575	570	.000	.000	.510	.69
14	09-27-76	.00	274	170	12	.80	13	--	570	--	--	--	--
15	12-19-77	.00	258	170	6.7	1.1	10	529	550	.010	.010	.010	.54
27	12-20-77	.00	376	400	9.5	.80	15	991	1,000	.010	.010	.730	.03
28	03-15-78	.00	283	640	22	.80	11	1280	1,300	2.90	2.90	.010	.73
36	12-20-77	.00	438	5,700	30	1.3	21	8,440	8,800	.180	.180	.040	.33
37	12-20-77	.00	214	210	8.7	1.0	13	557	590	.010	.010	.040	.11
38	12-18-77	.00	256	670	12	1.5	13	1,290	1,300	2.30	2.30	.010	.29
42	12-28-77	.00	404	350	11	1.5	15	931	960	--	.100	.290	1.0
43	12-18-77	.00	274	290	9.3	1.4	12	738	750	.030	.030	.460	.52
46	12-21-77	.00	275	1,100	36	1.6	12	1,950	2,000	1.90	1.90	.020	.21
47	12-21-77	.00	340	560	16	.90	14	1,150	1,200	.010	.010	.570	.00
48	08-25-78	.00	197	1,300	180	2.2	9.0	2,410	2,400	--	.100	1.50	.40

Number in figures 16 and 17	Date of sample	Nitrogen, total (mg/L as N)	Phosphorus, total (mg/L as P)	Iron dissolved (μg/L as Fe)	Carbon, organic dissolved (mg/L as C)	Carbon, organic suspended total (mg/L as C)
8	12-19-77	0.85	0.170	90	2.1	1.9
9	12-19-77	.37	.020	140	4.2	.10
10	09-27-76	--	--	--	--	--
12	04-14-82	--	--	4,800	4.1	--
13	03-11-81	1.1	.050	10	13	1.3
14	09-27-76	--	--	1,600	--	--
15	12-19-77	.55	.110	70	2.7	1.8
27	12-20-77	.77	.060	30	5.0	.30
28	03-15-78	3.6	.060	30	1.9	.30
36	12-20-77	.55	.130	30	8.4	.50
37	12-20-77	.16	.050	40	4.2	.70
38	12-18-77	2.6	.120	270	--	--
42	12-18-77	1.3	.480	80	--	--
43	12-18-77	1.0	.080	1,800	--	--
46	12-21-77	2.1	.110	20	2.5	--
47	12-21-77	.56	.610	20	6.9	5.0
48	08-25-78	1.9	.130	20	4.1	1.3

Records of sampled water wells and springs

[Depths of wells are in feet below land surface; altitudes of land surface are shown in feet above NGVD; --, no data; Fm, Formation; ~, year approximate]

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
1	James Rosenau	371312107512701	34N-09W-09DBC	--	25	6,370	Animas Fm
2	Jim Sinton	371253107511801	34N-09W-09DCD	--	180	6,400	Animas Fm
3	Colorado Ute Electric Association	371242107512901	34N-09W-07AAA	1985	199	6,440	Animas Fm
4	Charles Weekly	371225107513801	34N-09W-07ADC	1983	300	6,470	Animas Fm
5	David Wylie	371211107514601	34N-09W-07DBD	1983	200	6,450	Animas Fm
6	Roy Peterson	371204107515001	34N-09W-07DCA	1985	380	6,450	Animas Fm
7	Jolius Roastinger	371148107520701	34N-09W-18BAA	1984	262	6,420	Animas Fm
8	Peter Kewitt	371127107521701	34N-09W-18CAB	1978	162	6,310	Animas Fm
9	Glenn Wycoff	371126107522401	34N-09W-18CBA	1977	110	6,330	Animas Fm
10	Robin Converse	371013107523001	34N-09W-19CCC	1984	190	6,260	Animas Fm
11	Tom Joerger	371002107522801	34N-09W-30BBC	1987	73	6,220	Valley fill
12	Arabella Williams	370852107525301	34N-10W-36ACD	1983	136	6,240	Animas Fm
13	LaDonna Bellman	370852107522701	34N-09W-31BCC	1981	126	6,240	Animas Fm
14	Ron Ollier	370848107531801	34N-10W-36CAB	--	250	6,200	Animas Fm
15	Mark Goldfarb	370847107530701	34N-10W-36CAA	1965	69	6,200	Animas Fm
16	Rainbow Springs Trout Ranch[1]	370836107520801	34N-09W-31CDB	--	0	6,400	Terrace deposits
17	R.L. Robertson	370804107524701	33N-10W-01ADC	1972	50	6,260	Terrace deposits
18	Steven McCullough	370733107523801	33N-10W-12AAA	1969	116	6,240	Animas Fm
19	Hinio Tucson	370730107533601	33N-10W-12BBB	1970	94	6,160	Animas Fm
20	Chuck Atwood	370715107522201	33N-09W-07BCA	1987	220	6,250	Animas Fm

Appendix 16a. Records of sampled water wells and springs (U.S. Geological Survey 1993a)

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
21	Dorene Fickett	370714107524701	33N-10W-12ADB	1976	65	6,230	Terrace deposits
22	W.J. Hallock	370655107523901	33N-10W-12DAD	1984	140	6,210	Terrace deposits
23	Jack Benton	370653107525501	33N-10W-12DCA	1971	49	6,185	Terrace deposits
24	Skip White	370650107522701	33N-09W-07CCB	1982	40	6,230	Animas Fm
25	Rusty Bonsor	370645107534301	33N-10W-11DDD	1986	86	6,150	Nacimiento Fm
26	Katherine Dale	370638107530501	33N-10W-13BAA	1986	150	6,185	Animas Fm
27	Gerald Zink	370637107525001	33N-10W-13ABA	~1935	50	6,180	Terrace deposits
28	Gary Pasco	370632107535101	33N-10W-14AAC	1958	65	6,150	Terrace deposits
29	Neal Edwards	370630107522901	33N-09W-18BBC	1980	120	6,215	Animas Fm
30	Winona Morgan	370627107525101	33N-10W-13ACA	1946	63	6,185	Animas Fm
31	Tony Schweikle	370612107522201	33N-09W-18CBA	1975	110	6,220	Animas Fm
32	Andy Chilton	370603107522901	33N-09W-18CBC	1982	130	6,175	Animas Fm
33	Don Carrol	370602107524001	33N-10W-13DAC	1974	52	6,175	Terrace deposits
34	Seven Mazzone	370601107524801	33N-10W-13DX	--	41	6,170	Terrace deposits
35	James Standifer	370552107521801	33N-09W-18CCD	1985	140	6,190	Animas Fm
36	Terry Obery	370548107524701	33N-10W-13DDC	1985	150	6,170	Animas Fm
37	Carl Johnson	370508107530701	33N-10W-24CDA	--	70	6,130	Terrace deposits
38	Karen Harrison	370450107530701	33N-10W-25BAA	~1975	55	6,130	Terrace deposits
39	Patty Haneman	370443107531901	33N-10W-25BAC	1982	230	6,150	Nacimiento Fm
40	Lawrence Craig	370443107530301	33N-10W-25ABC	1940	43	6,120	Terrace deposits
41	Joe Williams	370442107525101	33N-10W-25ACA	1976	60	6,110	Terrace deposits
42	Gerald Brown	370437107530201	33N-10W-25ACB	1950	130	6,110	Nacimiento Fm
43	John Gamble	370437107524201	33N-10W-25ADB	1986	260	6,090	Nacimiento Fm
44	Jerry Schane	370430107531801	33N-10W-25BDC	1979	110	6,150	Nacimiento Fm
45	Neal Short	370412107530701	33N-10W-25CDA	1905	50	6,120	Terrace deposits

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
46	David Huffman	370403107525201	33N-10W-25DCD	1981	127	6,090	Nacimiento Fm
47	Randy McKee	370359107530401	33N-10W-36ABB	~1950	72	6,120	Nacimiento Fm
48	Randy McKee	370355107524101	33N-10W-36AAC	1984	142	6,110	Nacimiento Fm
49	Edith Rhodes	370347107525201	33N-10W-36ACA	--	180	6,090	Nacimiento Fm
50	Lester Davis	370347107520801	33N-09W-31BDB	1977	218	6,080	Nacimiento Fm
51	Doyle Hartman	370343107521701	33N-09W-31BDC	1983	140	6,060	Nacimiento Fm
52	Jack Kloepfer	370337107524901	33N-10W-36ACD	~1950	130	6,080	Nacimiento Fm
53	Carl Weston	370337107522801	33N-09W-31CBB	1986	217	6,060	Nacimiento Fm
54	Catherine Sutton	370332107525301	33N-10W-36DBA	1987	140	6,080	Nacimiento Fm
55	Catherine Sutton	370332107525302	33N-10W-36DBA	1961	35	6,080	Terrace deposits
56	Rick Heinz	370323107520901	33N-09W-31CDB	1983	12	6,020	Valley fill
57	David Temple	370319107525201	33N-10W-36DCA	1980	199	6,070	Nacimiento Fm
58	Carl Weston	370316107522701	33N-09W-31CCC	1968	201	6,040	Nacimiento Fm
59	Maurice Walter	370301107523701	32N-10W-01AAD	1960	112	6,050	Nacimiento Fm
60	Trans Ohio Bank	370257107523301	32N-10W-01ADA	1975	128	6,040	Nacimiento Fm
61	Junior Bonds	370248107524501	32N-10W-01ADC	1945	60	6,060	Nacimiento Fm
62	Bill Mullins	370245107523001	32N-09W-06CBB	--	25	6,025	Terrace deposits
63	Junior Bonds	370208107523301	32N-10W-12AAD	1946	80	6,000	Nacimiento Fm
64	Jenny Boyer	370133107524601	32N-10W-12DDC	1960	121	6,080	Nacimiento Fm
65	Blanton Cogburn	370127107522801	32N-09W-07CCC	1987	140	5,980	Nacimiento Fm
66	John Goldman	370117107522801	32N-09W-18BBC	--	120	5,985	Nacimiento Fm
67	Blanton Cogburn	370117107522501	32N-09W-18BBD	1973	50	5,970	Terrace deposits
68	Foy Cogburn	370104107522701	32N-09W-18BCC	1967	170	5,990	Nacimiento Fm
69	Foy Cogburn	370103107522501	32N-09W-18BCD	1966	60	5,970	Nacimiento Fm
70	Robert Kinslow	370055107522801	32N-09W-18CBB	--	80	6,015	Nacimiento Fm

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
71	Richard Banes	370054107522001	32N-09W-18CBD	1962	14	5,950	Valley fill
72	L. Dean Johnson	370003107520301	32N-09W-19CAA	--	58	5,930	Valley fill
73	Patricia Johnson	365938107521701	32N-10W-10CDD	1977	280	6,000	Nacimiento Fm
74	Donna Gilbert	365911107522001	32N-10W-15BDC	--	116	5,970	Nacimiento Fm
75	R. Shindledecker	365910107520701	32N-10W-15ACC	1983	102	5,925	Nacimiento Fm
76	James Wilkerson	365902107523301	32N-10W-15CBA	1983	155	5,990	Nacimiento Fm
77	Leroy Bussel	365855107522101	32N-10W-15CAC	--	44	5,940	Terrace deposits
78	Wesley Bond	365838107523101	32N-10W-22BBA	1943	70	5,940	Nacimiento Fm
79	Linn Blancett	365838107520801	32N-10W-22BAA	1976	99	5,930	Nacimiento Fm
80	Pat Knepp	365818107525701	32N-10W-21ACD	1982	105	5,960	Nacimiento Fm
81	James Welles	365807107522701	32N-10W-22CBD	1974	20	5,885	Terrace deposits
82	Fred Clark	365803107524301	32N-10W-21DAD	1967	104	5,910	Nacimiento Fm
83	Mitch Waggoner	365758107525801	32N-10W-21DCA	1981	70	5,950	Nacimiento Fm
84	Dwayne Lewis	365752107530301	32N-10W-21DCD	1980	255	6,060	Nacimiento Fm
85	James Musgrove[1]	365751107525201	32N-10W-21DDC	--	0	5,880	Nacimiento Fm
86	Ray Kysar	365733107523801	32N-10W-27BCB	1980	38	5,880	Terrace deposits
87	Ray Kysar	365717107524101	32N-10W-28DAA	--	39	5,890	Terrace deposits
88	Ray Kysar	365655107524601	32N-10W-33AAA	--	29	5,860	Terrace deposits
89	Lanier Clark	365637107524501	32N-10W-33ADD	~1925	50	5,860	Valley fill
90	Jay Riley	365636107524801	32N-10W-33ADD	1980	42	5,870	Valley fill
91	Faye Warren	365632107524801	32N-10W-33ADD	1984	80	5,870	Valley fill
92	Stanley Lanier	365632107524201	32N-10W-33ADD	1976	49	5,850	Valley fill
93	Paul Rouse	365626107523701	32N-10W-34CBA	~1900	23	5,860	Valley fill
94	Clarence Hunter	365625107531101	32N-10W-33DBB	~1950	48	5,880	Valley fill
95	Bill Townsend	365625107525201	32N-10W-33DAB	1980	45	5,860	Valley fill

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
96	Maxine Welch	365623107523301	32N-10W-34CBD	1977	40	5,850	Valley fill
97	Thomas McCartney	365622107530001	32N-10W-33DBD	1987	76	5,880	Valley fill
98	Keith Benfield	365621107532501	32N-10W-33CAC	1982	75	5,880	Valley fill
99	Benson Leeper	365619107533001	32N-10W-33CBD	1980	70	5,880	Valley fill
100	Mary Brimhall	365619107531101	32N-10W-33DBC	1982	60	5,860	Valley fill
101	Jim Englert	365618107530801	32N-10W-33DBC	--	60	5,860	Valley fill
102	Richard Lopez	365618107523501	32N-10W-34CBD	1979	31	5,840	Valley fill
103	Joe Anderson	365617107525901	32N-10W-33DCA	1965	33	5,855	Valley fill
104	Jimmy Reiter	365617107523401	32N-10W-34CCA	1987	28	5,850	Valley fill
105	Benson Leeper	365616107533601	32N-10W-33CCA	1984	60	5,870	Valley fill
106	Gene Brown	365614107531301	32N-10W-33CDA	~1935	36	5,865	Valley fill
107	Benson Leeper	365613107534501	32N-10W-32DDA	1946	40	5,860	Valley fill
108	Donald Martinez	365613107523901	32N-10W-34CCA	~1920	30	5,840	Valley fill
109	Robert McClanahan	365613107523201	32N-10W-34CCA	--	15	5,850	Valley fill
110	Inez McCloud	365612107532501	32N-10W-33CDB	1935	35	5,850	Valley fill
111	Wilbur Brewer	365610107531801	32N-10W-33CDD	1978	62	5,860	Valley fill
112	Benson Leeper	365609107534501	32N-10W-32DDD	1950	40	5,850	Valley fill
113	George Betz	365609107531101	32N-10W-33DCC	~1900	60	5,860	Valley fill
114	Lee Flaherty	365605107540001	32N-10W-32DDC	1962	26	5,850	Valley fill
115	Henry Knowlton	365604107542001	31N-10W-05BAA	1975	14	5,810	Valley fill
116	Caleb Dickson	365604107530101	31N-10W-04ABA	1985	40	5,835	Valley fill
117	James Duke	365604107523801	31N-10W-03BBB	1981	35	5,835	Valley fill
118	Keith Rhodes	365603107541101	31N-10W-05ABB	1974	12	5,810	Valley fill
119	John Zoller	365603107531001	31N-10W-04ABB	1986	55	5,855	Valley fill
120	Charles Head	365603107524601	31N-10W-04AAA	1979	99	5,850	Nacimiento Fm

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
121	Ken Stanley	365602107533301	31N-10W-04BBA	~1950	35	5,830	Valley fill
122	Bill Metz	365558107525601	31N-10W-04AAC	1976	66	5,850	Valley fill
123	Glen Rhodes	365553107540001	31N-10W-05AAC	1968	10	5,815	Valley fill
124	Marshall Johnson	365553107532901	31N-10W-04BBD	1978	26	5,820	Valley fill
125	Melvin Johnson	365553107530401	31N-10W-04ABD	~1955	40	5,840	Valley fill
126	Frank Nordstrom	365552107531201	31N-10W-04ACB	1977	28	5,830	Valley fill
127	Dutchman Hills Water Company	365550107531701	31N-10W-04BDA	1978	90	5,820	Nacimiento Fm
128	Dutchman Hills Water Company	365549107531701	31N-10W-04BDA	1978	70	5,820	Nacimiento Fm
129	Keith Englehart	365548107543501	31N-10W-05BCA	1985	60	5,810	Valley fill
130	Jerry Marcotte	365548107535201	31N-10W-05ADA	--	30	5,825	Valley fill
131	Laverne Hill	365545107532901	31N-10W-04BCD	~1960	30	5,825	Valley fill
132	Glen Rhodes	365538107540701	31N-10W-05DBA	1963	45	5,820	Valley fill
133	Pat Cugnini	365533107544601	31N-10W-05CBC	--	40	5,820	Valley fill
134	Helen Moss	365531107535901	31N-10W-05DAC	1971	42	5,830	Valley fill
135	Paul Kennedy	365528107541301	31N-10W-05DBC	1965	33	5,820	Valley fill
136	Bryan Burge	365523107540301	31N-10W-05DCA	1982	60	5,830	Nacimiento Fm
137	Jim Wilson	365523107535301	31N-10W-05DDB	1983	62	5,850	Nacimiento Fm
138	Ronald Osborn	365522107543101	31N-10W-05CDB	1980	4	5,800	Valley fill
139	Bud Beasley	365521107541101	31N-10W-05DCB	1982	40	5,820	Valley fill
140	Wright McEwen	365518107542901	31N-10W-05CDC	1990	35	5,815	Valley fill

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
141	Mike Carruthers	365513107545401	31N-10W-07AAA	~1940	20	5,795	Valley fill
142	Jess Satathite	365513107541301	31N-10W-05DCC	1986	35	5,820	Valley fill
143	John Brandenburg	365500107545401	31N-10W-07AAD	1988	42	5,790	Valley fill
144	Enrique Del Vito	365457107542801	31N-10W-08BDB	~1950	25	5,810	Valley fill
145	Flora Griffin	365450107542501	31N-10W-08BDD	~1950	40	5,820	Valley fill
146	Lee Flaherty	365439107545601	31N-10W-07DAD	1987	30	5,780	Valley fill
147	C.A. Dickens	365437107543801	31N-10W-08CBD	1978	40	5,785	Valley fill
148	Odus Johns	365433107550901	31N-10W-07DCA	1983	35	5,785	Valley fill
149	Bill Greenhalgh	365426107552501	31N-10W-07CDD	1978	60	5,800	Valley fill
150	Willard Hottell	365421107544301	31N-10W-08CCD	--	19	5,770	Valley fill
151	Geraldine Powers	365407107554201	31N-10W-18BCA	~1955	32	5,870	Valley fill
152	Terry Kennedy	365403107555701	31N-10W-18BCB	1980	35	5,790	Valley fill
153	David Tingstrom	365400107561001	31N-11W-13ADC	1982	60	5,780	Valley fill
154	Charles Martin	365353107555201	31N-10W-18CBB	1980	25	5,750	Valley fill
155	Len Chapman	365352107553301	31N-10W-18CAB	1985	20	5,740	Valley fill
156	Darwin Wilson	365352107552901	31N-10W-18CAA	--	22	5,765	Valley fill
157	Lewis Oltmanns	365347107562201	31N-11W-13DBD	1976	18	5,730	Valley fill
158	Olan Pousson	365343107554801	31N-10W-18CBD	1981	26	5,740	Valley fill
159	Williard Gore	365338107561701	31N-11W-13DCA	--	40	5,730	Valley fill
160	William Stallings	365337107564301	31N-11W-13CDB	1977	45	5,760	Valley fill
161	Ronald Custer	365331107555801	31N-11W-13DDD	1983	45	5,765	Valley fill
162	Don Norman	365318107560001	31N-11W-24AAD	--	50	5,760	Valley fill
163	Bob Nyce	365307107563501	31N-11W-24BDD	--	28	5,730	Valley fill
164	John Durham	365307107560001	31N-11W-24ADD	1981	92	5,780	Valley fill
165	Roger Bixler	365303107561501	31N-11W-24ACD	1969	30	5,750	Valley fill

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
166	Charles Turner	365252107562701	31N-11W-24DBC	1978	38	5,740	Valley fill
167	Leon Spiller	365248107563001	31N-11W-24CDA	1971	30	5,740	Valley fill
168	Leon Knowlton	365242107574301	31N-11W-23CDD	1988	40	5,720	Valley fill
169	Stan Maynes	365242107571001	31N-11W-23DDD	1975	30	5,715	Valley fill
170	S.E. Winters	365240107561601	31N-11W-24DCD	1981	101	5,790	Valley fill
171	Irvin Randlemon	365238107564501	31N-11W-24CDC	1987	47	5,730	Valley fill
172	Charles Randlemon	365223107565701	31N-11W-25BCB	1967	65	5,750	Valley fill
173	James Hall	365212107575001	31N-11W-26BDC	1980	49	5,795	Valley fill
174	M. Shackleford	365210107570101	31N-11W-25CBB	1957	90	5,755	Valley fill
175	James Almond	365205107575301	31N-11W-26CBA	1978	18	5,685	Valley fill
176	Mozelle Mickey	365203107582701	31N-11W-27DBD	--	125	5,725	Valley fill
177	Carlos Marquez	365202107570501	31N-11W-26DAD	1981	69	5,760	Valley fill
178	Charles McFarland	365200107572501	31N-11W-26DBD	1947	42	5,730	Valley fill
179	Theron Whipple	365158107571101	31N-11W-26DAC	~1975	90	5,750	Valley fill
180	Everett Lee	365154107581801	31N-11W-27DDB	--	35	5,670	Valley fill
181	C.E. Awtrey	365152107583201	31N-11W-27DCA	1988	54	5,680	Valley fill
182	C.E. Awtrey	365147107583501	31N-11W-27DCC	--	47	5,690	Valley fill
183	Jim Houston	365143107575501	31N-11W-35BBA	1982	23	5,675	Valley fill
184	Lois Scott	365137107581801	31N-11W-34AAC	--	22	5,665	Valley fill
185	Ernest Phelps	365136107583301	31N-11W-34ABC	1978	25	5,665	Valley fill
186	Dwayne Lillywhite	365130107585101	31N-11W-34BDB	1979	79	5,700	Valley fill
187	Emma Giles	365128107572301	31N-11W-35ACA	1980	100	5,740	Valley fill
188	Bruce Krueger	365127107581901	31N-11W-34ADB	1982	22	5,665	Valley fill
189	Lawton Williams	365117107585501	31N-11W-34CAB	--	30	5,665	Valley fill
190	Don Taylor	365116107581501	31N-11W-34DAB	1983	10	5,665	Valley fill

Records of sampled water wells and springs--Continued

Number on plate 1	Well or spring owner	Station number	Land-net location	Year drilled	Total depth of well	Altitude of land surface	Aquifer
191	Stanley Campbell	365113107575301	31N-11W-35CBA	1972	90	5,735	Nacimiento Fm
192	Houston Perry	365103107581501	31N-11W-34DDA	1957	42	5,695	Valley fill
193	Carl Sexton	365057107583901	31N-11W-34DCC	1982	34	5,670	Valley fill
194	Don Taylor	365052107582501	30N-11W-03ABA	1970	40	5,660	Valley fill
195	Dewey Sexton	365045107584701	30N-11W-03BAD	1980	36	5,665	Valley fill
196	All Miller	365038107590201	30N-11W-03BCA	1988	25	5,640	Valley fill
197	K.C. Longwell	365035107584001	30N-11W-03ACB	~1970	21	5,660	Valley fill
198	Andres Martinez	365029107591201	30N-11W-03BCC	1966	32	5,630	Valley fill
199	Buster Jaquez	365028107591301	30N-11W-04DAA	1981	14	5,630	Valley fill
200	Joe Gomez	365024107593201	30N-11W-04DBA	~1965	40	5,640	Valley fill
201	Jeff Houser	365020107584501	30N-11W-03CAD	1984	36	5,660	Valley fill
202	Buster Jaquez	365016107590401	30N-11W-03CBD	1981	28	5,640	Valley fill
203	Kathy Daddow	365014107592801	30N-11W-04DDB	--	7	5,610	Valley fill
204	Howard Stinson	365004107591501	30N-11W-04DDD	1978	30	5,645	Valley fill
205	Ken Shultz	364942107590201	30N-11W-10BCD	1977	72	5,670	Valley fill

[1]Spring owner.

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs

[Water levels are in feet below land surface; µS/cm, microsiemens per centimeter at 25 degrees Celsius; deg C, degrees Celsius; it, incremental titration; mg/L, milligrams per liter; mg/L_g, milligrams per liter of gas; <, less than; µg/L, micrograms per liter; --, no data]

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
1	08-28-90	14.3	1,000	7.3	12.0	--	--	--	--	--
2	08-28-90	62.5	730	7.9	17.0	182	517	41	5.4	140
3	08-27-90	87.0	820	8.6	16.0	--	--	--	--	--
4	08-27-90	170.1	540	8.9	16.0	179	300	2.4	<.01	120
5	10-19-90	142.1	519	8.9	15.0	--	--	--	--	--
6	09-05-90	76.1	769	8.0	16.5	--	--	--	--	--
7	08-28-90	140.7	600	8.9	17.0	144	335	3.1	<.01	130
8	08-27-90	--	655	8.5	14.0	--	--	--	--	--
9	08-29-90	--	623	8.8	14.0	216	391	3.7	.23	140
10	08-27-90	64.7	760	8.5	12.0	196	436	13	.88	160
11	08-29-90	10.2	788	8.0	13.0	--	--	--	--	--
12	08-24-90	32.2	832	8.3	12.5	--	--	--	--	--
13	08-24-90	15.8	825	7.0	13.5	356	482	92	17	63
14	08-21-90	47.3	880	8.5	13.0	277	502	5.0	.13	190
15	11-19-90	14.9	786	7.5	12.0	230	--	--	--	--
16	08-24-90	--	680	7.1	11.0	318	387	96	16	27
17	08-24-90	37.4	869	7.2	12.0	--	--	--	--	--
18	08-24-90	22.5	785	7.2	13.0	--	--	--	--	--
19	08-21-90	23.2	1,520	7.9	13.5	--	--	--	--	--
20	08-23-90	50.4	888	7.5	12.5	337	507	42	8.9	140
21	08-23-90	33.8	690	7.3	11.5	--	--	--	--	--
22	08-23-90	29.8	703	8.7	13.0	--	--	--	--	--
23	08-23-90	18.3	732	7.2	15.0	--	--	--	--	--
24	08-22-90	--	737	7.2	14.0	--	--	--	--	--
25	08-21-90	53.0	980	8.2	13.0	290	579	6.7	.22	220
26	08-23-90	13.4	728	7.7	13.0	253	424	39	9.0	110
27	08-22-90	--	762	7.2	12.0	--	--	--	--	--
28	08-20-90	48.2	1,010	7.6	12.5	--	--	--	--	--
29	08-22-90	47.5	810	7.6	13.0	267	509	23	4.4	160
30	08-22-90	20.5	710	7.4	17.0	--	--	--	--	--
31	08-22-90	--	665	8.0	17.0	--	--	--	--	--
32	08-21-90	22.0	803	7.5	12.0	--	--	--	--	--
33	08-23-90	9.5	829	7.1	13.0	--	--	--	--	--
34	08-23-90	17.3	774	7.1	13.0	--	--	--	--	--
35	08-22-90	30.7	850	7.3	14.0	316	516	78	17	93

Appendix 16b. Water level and water quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs (U S. Geological Survey 1993a)

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
36	08-20-90	21.9	710	7.6	12.5	257	414	39	6.0	110
	11-15-90	26.9	644	7.7	12.0	--	--	--	--	--
	03-06-91	27.2	740	7.1	12.0	--	--	--	--	--
37	08-16-90	35.5	852	7.3	15.0	--	--	--	--	--
38	08-15-90	33.3	572	7.5	12.5	187	334	58	14	40
39	08-15-90	52.6	1,210	8.2	14.0	174	676	11	.15	240
40	08-15-90	24.9	918	7.3	12.0	--	--	--	--	--
41	08-17-90	11.3	952	7.1	11.0	382	570	100	37	61
42	08-17-90	--	1,130	7.7	13.0	288	814	32	1.3	250
43	08-16-90	--	1,260	7.4	12.0	405	719	48	5.9	220
44	08-14-90	62.8	919	7.8	15.0	--	--	--	--	--
45	08-14-90	23.6	667	7.4	13.0	--	--	--	--	--
46	08-16-90	--	802	7.7	12.0	217	474	16	1.4	160
47	08-14-90	--	547	7.5	13.5	--	--	--	--	--
48	08-13-90	--	690	7.9	13.0	--	--	--	--	--
49	08-10-90	15.9	564	7.6	12.0	188	328	62	8.1	45
50	08-08-90	49.0	893	8.1	14.0	213	506	17	.33	170
51	08-17-90	--	1,950	8.0	13.0	--	--	--	--	--
52	08-09-90	19.6	758	8.4	12.5	171	423	13	.21	140
53	08-07-90	43.0	1,190	7.9	13.0	260	760	21	.45	250
54	10-29-90	39.8	795	7.7	12.0	243	507	51	10	120
55	10-29-90	10.8	780	7.2	13.5	272	493	100	23	36
56	08-09-90	7.9	622	7.1	14.0	264	--	--	--	--
57	10-10-90	56.8	720	7.8	13.0	237	481	41	4.2	130
58	08-06-90	46.6	1,780	7.6	12.5	282	916	60	9.4	270
59	10-25-90	16.3	900	7.8	12.0	251	524	43	4.4	140
60	08-20-90	11.9	898	7.3	13.0	--	--	--	--	--
61	08-14-90	--	769	7.3	15.5	276	478	110	21	29
62	08-29-90	11.3	888	7.1	16.0	--	--	--	--	--
63	08-13-90	--	1,460	7.1	11.5	408	924	110	35	160
64	08-29-90	72.9	2,880	7.2	14.5	275	2,040	190	42	420
65	08-30-90	21.6	3,250	7.9	14.0	225	2,230	110	8.9	730
66	09-04-90	33.4	1,410	8.3	13.0	--	--	--	--	--
67	08-30-90	--	960	8.5	12.0	--	--	--	--	--
68	08-30-90	--	4,800	6.9	12.0	--	--	--	--	--
69	08-30-90	13.7	2,770	7.2	16.0	--	--	--	--	--
70	08-30-90	--	1,210	8.4	20.0	198	668	8.8	.6	240
71	08-29-90	3.2	604	7.4	18.0	--	--	--	--	--
72	09-10-90	6.1	705	7.4	15.0	--	--	--	--	--
73	09-04-90	--	4,050	8.1	15.0	77	2,040	45	.72	730

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
74	09-05-90	--	773	7.5	13.5	--	--	--	--	--
75	09-05-90	15.9	757	7.2	15.0	--	--	--	--	--
76	09-10-90	68.1	2,790	7.5	14.0	501	1,670	40	18	550
77	09-05-90	22.8	740	7.2	16.0	252	432	110	18	19
78	09-11-90	--	845	7.1	13.0	--	--	--	--	--
79	09-10-90	--	650	7.3	14.0	--	--	--	--	--
80	09-06-90	59.7	3,300	7.2	15.5	--	--	--	--	--
81	09-07-90	2.5	1,330	7.1	17.0	--	--	--	--	--
82	09-06-90	19.5	1,240	8.1	13.5	234	727	22	3.5	240
83	09-19-90	37.4	1,050	7.4	14.5	--	--	--	--	--
84	09-11-90	94.7	5,200	7.3	15.5	323	2,970	150	19	890
85	09-11-90	--	775	7.3	14.0	--	--	--	--	--
86	09-06-90	10.0	959	7.1	14.5	--	--	--	--	--
87	09-07-90	22.9	900	7.1	14.0	345	525	120	29	25
88	09-07-90	15.0	1,080	7.2	14.0	--	--	--	--	--
89	09-12-90	22.0	1,130	7.1	14.5	--	--	--	--	--
	02-20-91	26.0	1,235	6.8	13.5	--	--	--	--	--
90	09-14-90	28.5	774	7.2	15.5	270	464	100	23	31
	02-22-91	32.8	1,060	6.9	13.0	--	--	--	--	--
91	09-13-90	25.6	649	6.9	15.5	--	--	--	--	--
92	09-13-90	--	1,200	7.0	16.5	351	680	130	30	69
	02-21-91	--	1,630	6.9	11.0	--	--	--	--	--
93	09-13-90	--	660	7.4	17.0	--	--	--	--	--
	02-19-91	--	960	6.9	11.5	--	--	--	--	--
94	09-12-90	37.3	610	7.4	14.5	--	--	--	--	--
	02-25-91	49.5	730	6.9	13.5	--	--	--	--	--
95	09-19-90	23.0	680	7.4	15.0	--	--	--	--	--
96	09-13-90	11.2	620	7.3	16.0	186	366	90	13	20
	02-21-91	13.5	970	7.2	9.0	--	--	--	--	--
97	09-14-90	26.0	720	7.5	15.0	--	--	--	--	--
	02-22-91	36.1	655	7.3	13.0	--	--	--	--	--
98	09-17-90	32.0	833	7.3	14.0	--	--	--	--	--
	02-25-91	51.4	1,160	6.9	13.5	--	--	--	--	--
99	09-18-90	37.3	746	7.3	14.5	--	--	--	--	--
	02-20-91	66.7	1,110	7.0	14.0	--	--	--	--	--
100	09-17-90	--	613	7.4	14.0	--	--	--	--	--
	02-21-91	--	730	7.3	14.5	--	--	--	--	--
101	09-12-90	20.7	675	7.3	15.5	--	--	--	--	--
102	09-12-90	7.5	640	7.3	14.5	197	377	82	16	28
103	09-20-90	15.9	832	7.0	17.5	271	505	120	17	31
	02-22-91	--	765	7.2	10.0	--	--	--	--	--

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
104	09-14-90	8.0	625	7.4	14.0	199	372	86	15	22
105	09-18-90	34.3	1,020	7.4	15.0	264	605	82	18	120
106	09-13-90	17.5	840	7.0	14.5	--	--	--	--	--
	02-21-91	29.5	700	6.9	13.5	--	--	--	--	--
107	09-17-90	--	790	7.3	16.0	247	477	100	23	38
108	09-12-90	--	615	7.3	17.5	--	--	--	--	--
109	09-13-90	9.2	862	7.0	17.0	--	--	--	--	--
	02-22-91	10.4	795	7.0	11.5	--	--	--	--	--
110	09-11-90	--	775	7.1	15.0	--	--	--	--	--
111	09-19-90	20.8	820	7.1	16.0	--	--	--	--	--
112	09-17-90	--	748	7.1	15.0	--	--	--	--	--
	02-20-91	--	752	6.7	14.5	--	--	--	--	--
113	09-12-90	25.1	715	7.4	14.0	--	--	--	--	--
	02-21-91	41.6	894	7.2	14.0	--	--	--	--	--
114	09-11-90	12.3	2,790	7.4	15.5	247	2,090	230	41	390
115	09-11-90	3.2	578	7.4	17.5	--	--	--	--	--
	02-25-91	6.4	675	7.0	12.0	--	--	--	--	--
116	09-17-90	22.7	631	7.3	16.5	--	--	--	--	--
	02-22-91	32.8	730	7.1	15.0	--	--	--	--	--
117	10-15-90	--	623	7.4	17.0	--	--	--	--	--
118	09-10-90	5.2	2,250	7.4	15.0	--	--	--	--	--
119	09-20-90	30.3	643	7.4	15.0	--	--	--	--	--
	02-20-91	43.4	605	6.9	15.0	--	--	--	--	--
120	09-18-90	17.5	1,950	7.4	15.5	247	805	57	7.8	230
121	09-14-90	25.0	745	7.2	16.0	267	433	110	17	24
	02-20-91	32.2	765	6.9	15.0	--	--	--	--	--
122	09-19-90	26.7	684	7.3	16.0	--	--	--	--	--
123	09-27-90	4.8	1,660	7.1	18.0	289	1,000	160	40	120
124	09-19-90	6.7	690	7.5	14.5	223	426	98	15	26
125	09-17-90	13.9	665	7.2	16.5	--	--	--	--	--
	02-25-91	23.8	770	6.7	14.5	--	--	--	--	--
126	09-19-90	8.4	688	7.3	16.0	--	--	--	--	--
127	09-20-90	--	10,000	8.2	13.0	129	6,020	120	4.7	2,000
128	09-20-90	--	730	7.4	13.0	243	428	100	15	28
129	09-24-90	--	3,400	7.1	14.0	--	--	--	--	--
130	09-24-90	17.6	1,110	7.1	16.0	--	--	--	--	--
131	09-20-90	6.0	985	7.2	14.5	--	--	--	--	--
132	09-27-90	--	710	7.2	16.0	--	--	--	--	--
133	09-24-90	21.1	870	7.2	14.0	--	--	--	--	--
134	09-27-90	--	850	6.9	14.5	--	--	--	--	--

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
135	09-27-90	--	665	7.2	16.0	--	--	--	--	--
136	09-27-90	21.3	980	7.3	14.0	222	593	93	14	91
137	09-27-90	30.6	1,180	7.4	15.5	--	--	--	--	--
138	09-26-90	--	700	7.5	17.0	254	434	110	13	23
139	10-01-90	6.6	828	7.3	14.5	--	--	--	--	--
140	09-26-90	--	680	7.3	17.0	--	--	--	--	--
141	09-24-90	--	2,500	7.1	14.0	--	--	--	--	--
142	10-01-90	7.3	910	7.2	14.5	--	--	--	--	--
143	09-24-90	23.0	600	7.3	16.5	--	--	--	--	--
144	10-01-90	20.8	1,320	7.3	15.0	236	964	170	27	98
145	10-01-90	13.4	1,650	7.2	15.0	--	--	--	--	--
146	09-24-90	8.6	900	7.2	13.0	297	508	120	20	50
147	10-01-90	4.0	775	7.1	13.0	--	--	--	--	--
148	09-25-90	16.7	828	7.1	14.5	--	--	--	--	--
149	10-18-90	--	795	7.1	15.0	--	--	--	--	--
150	10-02-90	6.4	1,080	7.1	14.0	311	--	--	--	--
151	09-25-90	17.0	1,220	7.0	15.5	--	--	--	--	--
152	09-25-90	--	870	7.2	15.5	--	--	--	--	--
153	09-26-90	--	1,140	7.1	14.5	--	--	--	--	--
154	09-25-90	7.0	1,290	7.1	15.0	297	847	140	34	94
155	10-01-90	9.7	1,600	7.1	14.0	--	--	--	--	--
156	10-04-90	5.9	2,900	7.2	18.0	244	2,020	150	21	480
157	09-26-90	5.2	1,810	7.3	14.0	274	1,160	150	40	170
158	10-02-90	8.1	2,140	7.3	16.0	306	1,510	190	32	260
159	10-02-90	13.3	2,870	7.6	14.0	--	--	--	--	--
160	09-26-90	21.1	873	7.2	16.0	--	--	--	--	--
161	10-03-90	--	720	7.2	14.0	--	--	--	--	--
162	10-02-90	27.4	740	7.1	16.0	--	--	--	--	--
163	10-03-90	6.9	800	7.1	16.0	--	--	--	--	--
164	10-03-90	46.4	420	7.3	14.0	--	--	--	--	--
165	10-02-90	23.2	905	7.1	14.0	--	--	--	--	--
166	10-03-90	11.2	690	7.3	14.5	--	--	--	--	--
167	10-04-90	--	915	7.1	13.0	--	--	--	--	--
168	09-26-90	26.0	973	7.1	14.5	--	--	--	--	--
169	10-04-90	--	710	7.3	15.5	--	--	--	--	--
170	10-03-90	--	1,020	7.3	14.0	--	--	--	--	--
171	10-03-90	12.9	785	7.2	14.5	--	--	--	--	--
172	10-05-90	38.8	775	7.2	13.5	--	--	--	--	--
173	10-04-90	18.5	1,420	7.1	14.0	--	--	--	--	--
174	10-04-90	38.2	1,020	7.2	14.0	301	607	110	20	89

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Water level	Specific conductance (µS/cm)	pH (standard units)	Temperature, water (deg C)	Alkalinity dissolved, onsite, it (mg/L as $CaCO_3$)	Dissolved solids, sum of constituents (mg/L)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)
175	10-05-90	--	1,070	7.0	15.0	--	--	--	--	--
176	10-18-90	--	7,000	7.2	15.0	--	--	--	--	--
177	10-09-90	--	1,360	7.2	14.0	288	916	140	24	130
178	10-05-90	26.7	1,040	7.1	14.5	--	--	--	--	--
179	10-15-90	38.3	1,200	7.2	14.0	--	--	--	--	--
180	10-18-90	10.3	923	7.2	15.0	--	--	--	--	--
181	10-18-90	17.5	3,320	7.1	15.0	--	--	--	--	--
182	10-18-90	32.6	2,280	7.2	14.0	--	--	--	--	--
183	10-03-90	3.3	1,100	7.2	12.5	--	--	--	--	--
184	10-09-90	8.8	2,740	7.1	15.0	395	2,030	220	60	320
185	10-16-90	--	858	7.2	14.0	--	--	--	--	--
186	10-16-90	--	1,770	7.2	14.0	--	--	--	--	--
187	10-05-90	--	1,010	7.1	14.5	--	--	--	--	--
188	10-15-90	5.9	2,170	7.1	15.0	--	--	--	--	--
189	10-16-90	23.9	754	7.4	13.5	--	--	--	--	--
190	10-09-90	3.9	1,870	7.2	14.0	--	--	--	--	--
191	10-09-90	16.6	2,740	7.2	15.0	--	--	--	--	--
192	10-05-90	20.4	2,150	7.3	15.0	154	1,580	200	37	230
193	10-15-90	--	750	7.2	15.0	--	--	--	--	--
194	10-16-90	19.7	1,160	7.2	14.0	--	--	--	--	--
195	10-15-90	--	925	7.2	15.0	--	--	--	--	--
196	10-17-90	--	838	7.1	12.0	--	--	--	--	--
197	10-16-90	5.2	959	7.2	14.0	--	--	--	--	--
198	10-17-90	4.3	959	7.1	13.5	--	--	--	--	--
199	10-17-90	4.7	1,180	7.2	14.0	--	--	--	--	--
200	10-18-90	31.3	910	7.1	15.0	--	--	--	--	--
201	10-16-90	--	1,590	7.1	14.0	--	--	--	--	--
202	10-17-90	3.7	1,300	7.1	14.0	--	--	--	--	--
203	10-17-90	2.4	1,390	7.1	16.5	354	997	210	22	78
204	10-17-90	4.8	725	7.2	15.0	--	--	--	--	--
205	10-16-90	26.9	2,200	6.9	13.5	--	--	--	--	--

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
1	08-28-90	--	--	--	--	--	--	--	<0.005	<0.005
2	08-28-90	0.79	190	21	0.14	9.2	5	4	<.005	--
3	08-27-90	--	--	--	--	--	--	--	.068	<.005
4	08-27-90	.25	44	14	.12	12	4	12	11	<.005
5	10-19-90	--	--	--	--	--	--	--	<.005	<.005
6	09-05-90	--	--	--	--	--	--	--	<.005	<.005
7	08-28-90	.29	69	46	.37	12	17	3	2.8	<.005
8	08-27-90	--	--	--	--	--	--	--	<.005	<.005
9	08-29-90	.29	80	26	.09	11	<3	4	.010	<.005
10	08-27-90	.45	100	35	.12	9.1	9	2	<.005	--
11	08-29-90	--	--	--	--	--	--	--	<.005	<.005
12	08-24-90	--	--	--	--	--	--	--	<.005	<.005
13	08-24-90	2.7	55	23	.19	16	18	3	<.005	<.005
14	08-21-90	.34	42	88	.14	10	19	7	16	<.005
15	11-19-90	--	--	--	--	--	--	--	.040	<.005
16	08-24-90	1.6	27	11	.16	18	<3	<1	<.005	--
17	08-24-90	--	--	--	--	--	--	--	<.005	<.005
18	08-24-90	--	--	--	--	--	--	--	<.005	<.005
19	08-21-90	--	--	--	--	--	--	--	<.005	<.005
20	08-23-90	1.3	80	22	.18	11	4	6	.54	<.005
21	08-23-90	--	--	--	--	--	--	--	<.005	<.005
22	08-23-90	--	--	--	--	--	--	--	<.005	<.005
23	08-23-90	--	--	--	--	--	--	--	<.005	<.005
24	08-22-90	--	--	--	--	--	--	--	<.005	<.005
25	08-21-90	.46	140	29	.05	8.6	22	5	.49	<.005
26	08-23-90	1.6	83	20	.10	9.6	6	<1	<.005	<.005
27	08-22-90	--	--	--	--	--	--	--	<.005	<.005
28	08-20-90	--	--	--	--	--	--	--	<.005	<.005
29	08-22-90	.76	120	31	.23	9.2	8	<1	.72	<.005
30	08-22-90	--	--	--	--	--	--	--	<.005	<.005
31	08-22-90	--	--	--	--	--	--	--	<.005	<.005
32	08-21-90	--	--	--	--	--	--	--	<.005	<.005
33	08-23-90	--	--	--	--	--	--	--	<.005	<.005
34	08-23-90	--	--	--	--	--	--	--	<.005	--
35	08-22-90	1.7	97	27	.21	13	<3	<1	<.005	<.005
36	08-20-90	1.8	74	20	.16	9.0	<3	10	19	<.005
	11-15-90	--	--	--	--	--	--	--	9.0	--
	03-06-91	--	--	--	--	--	--	--	4.5	--
37	08-16-90	--	--	--	--	--	--	--	.006	<.005
38	08-15-90	1.3	86	14	.02	8.4	5	3	1.6	<.005

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
39	08-15-90	0.49	160	150	0.34	9.8	13	12	5.0	<0.005
40	08-15-90	--	--	--	--	--	--	--	2.4	<.005
41	08-17-90	2.6	110	19	.05	11	230	32	.80	<.005
42	08-17-90	.95	280	67	.26	9.5	170	81	5.3	<.005
43	08-16-90	1.9	150	40	.13	10	9	<1	27	<.005
44	08-14-90	--	--	--	--	--	--	--	<.005	<.005
45	08-14-90	--	--	--	--	--	--	--	<.005	<.005
46	08-16-90	.62	120	36	.18	9.2	13	7	.025	<.005
47	08-14-90	--	--	--	--	--	--	--	<.005	<.005
48	08-13-90	--	--	--	--	--	--	--	<.005	--
49	08-10-90	2.0	76	13	0.03	9.2	<3	<1	<.005	<.005
50	08-08-90	.69	110	71	.27	8.9	<3	7	.46	<.005
51	08-17-90	--	--	--	--	--	--	--	.031	<.005
52	08-09-90	.60	110	48	.14	8.2	<3	25	2.3	<.005
53	08-07-90	.94	280	42	.20	9.4	11	6	<.005	<.005
54	10-29-90	2.1	130	35	.05	11	28	3	28	<.005
55	10-29-90	3.5	130	26	.05	11	93	8	.26	<.005
56	08-09-90	--	--	--	--	--	--	--	.007	<.005
57	10-10-90	1.6	100	51	.09	9.2	8	29	.96	<.005
58	08-06-90	1.4	44	350	.87	10	620	230	7.4	<.005
59	10-25-90	2.1	140	34	.13	9.1	17	100	2.6	<.005
60	08-20-90	--	--	--	--	--	--	--	.059	<.005
61	08-14-90	2.7	120	17	.05	11	910	380	.26	<.005
62	08-29-90	--	--	--	--	--	--	--	<.005	<.005
63	08-13-90	1.4	320	41	.10	12	19	<1	<.005	<.005
64	08-29-90	2.8	910	300	.73	11	120	88	.10	<.005
65	08-30-90	3.0	230	1,000	.98	8.9	64	140	.48	<.005
66	09-04-90	--	--	--	--	--	--	--	.56	<.005
67	08-30-90	--	--	--	--	--	--	--	<.005	<.005
68	08-30-90	--	--	--	--	--	--	--	<.005	<.005
69	08-30-90	--	--	--	--	--	--	--	<.005	<.005
70	08-30-90	.65	80	210	.55	8.4	39	13	17	<.005
71	08-29-90	--	--	--	--	--	--	--	<.005	<.005
72	09-10-90	--	--	--	--	--	--	--	<.005	<.005
73	09-04-90	2.3	12	1,200	.89	7.5	250	74	39	<.005
74	09-05-90	--	--	--	--	--	--	--	<.005	<.005
75	09-05-90	--	--	--	--	--	--	--	<.005	<.005
76	09-10-90	2.6	490	260	.45	11	55	52	.29	<.005
77	09-05-90	2.5	99	21	.05	11	9	3	<.005	<.005
78	09-11-90	--	--	--	--	--	--	--	<.005	<.005

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
79	09-10-90	--	--	--	--	--	--	--	<0.005	<0.005
80	09-06-90	--	--	--	--	--	--	--	.009	<.005
81	09-07-90	--	--	--	--	--	--	--	<.005	<.005
82	09-06-90	1.1	160	150	0.16	10	18	12	1.4	<.005
83	09-19-90	--	--	--	--	--	--	--	.90	<.005
84	09-11-90	3.7	820	880	1.0	8.9	190	470	3.6	.065
85	09-11-90	--	--	--	--	--	--	--	.98	--
86	09-06-90	--	--	--	--	--	--	--	<.005	<.005
87	09-07-90	2.4	110	19	.05	13	3	1	1.2	<.005
88	09-07-90	--	--	--	--	--	--	--	<.005	<.005
89	09-12-90	--	--	--	--	--	--	--	<.005	<.005
	02-20-91	--	--	--	--	--	--	--	<.005	--
90	09-14-90	2.4	110	23	.06	10	2,000	620	.009	.005
	02-22-91	--	--	--	--	--	--	--	<.005	--
91	09-13-90	--	--	--	--	--	--	--	<.005	--
92	09-13-90	5.9	120	100	.13	13	49	1,400	.71	<.005
	02-21-91	--	--	--	--	--	--	--	<.005	--
93	09-13-90	--	--	--	--	--	--	--	<.005	--
	02-19-91	--	--	--	--	--	--	--	<.005	--
94	09-12-90	--	--	--	--	--	--	--	<.005	<.005
	02-25-91	--	--	--	--	--	--	--	<.005	--
95	09-19-90	--	--	--	--	--	--	--	<.005	<.005
96	09-13-90	2.8	97	23	.05	9.0	66	2	<.005	.5
	02-21-91	--	--	--	--	--	--	--	.87	--
97	09-14-90	--	--	--	--	--	--	--	<.005	<.005
	02-22-91	--	--	--	--	--	--	--	<.005	--
98	09-17-90	--	--	--	--	--	--	--	<.005	<.005
	02-25-91	--	--	--	--	--	--	--	<.005	--
99	09-18-90	--	--	--	--	--	--	--	.007	<.005
	02-20-91	--	--	--	--	--	--	--	.011	--
100	09-17-90	--	--	--	--	--	--	--	<.005	<.005
	02-21-91	--	--	--	--	--	--	--	<.005	--
101	09-12-90	--	--	--	--	--	--	--	<.005	--
102	09-12-90	3.1	98	22	.05	10	170	3	<.005	<.005
103	09-20-90	3.7	130	29	.05	11	800	140	.005	<.005
	02-22-91	--	--	--	--	--	--	--	.041	--
104	09-14-90	4.2	95	21	.04	9.5	410	20	.050	<.005
105	09-18-90	2.2	130	82	.11	11	560	640	.080	<.005
106	09-13-90	--	--	--	--	--	--	--	<.005	--
	02-21-91	--	--	--	--	--	--	--	<.005	--

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
107	09-17-90	2.2	130	25	0.07	11	8	<1	<0.005	<0.005
108	09-12-90	--	--	--	--	--	--	--	<.005	--
109	09-13-90	--	--	--	--	--	--	--	<.005	<.005
	02-22-91	--	--	--	--	--	--	--	<.005	--
110	09-11-90	--	--	--	--	--	--	--	<.005	<.005
111	09-19-90	--	--	--	--	--	--	--	<.005	<.005
112	09-17-90	--	--	--	--	--	--	--	<.005	--
	02-20-91	--	--	--	--	--	--	--	<.005	--
113	09-12-90	--	--	--	--	--	--	--	<.005	--
	02-21-91	--	--	--	--	--	--	--	<.005	--
114	09-11-90	3.5	1,200	66	.25	8.6	370	3,600	.20	<.005
115	09-11-90	--	--	--	--	--	--	--	<.005	<.005
	02-25-91	--	--	--	--	--	--	--	<.005	--
116	09-17-90	--	--	--	--	--	--	--	<.005	<.005
	02-22-91	--	--	--	--	--	--	--	.075	--
117	10-15-90	--	--	--	--	--	--	--	<.005	<.005
118	09-10-90	--	--	--	--	--	--	--	.13	<.005
119	09-20-90	--	--	--	--	--	--	--	<.005	<.005
	02-20-91	--	--	--	--	--	--	--	<.005	--
120	09-18-90	2.2	160	190	.19	8.9	690	110	15	<.005
121	09-14-90	2.1	86	21	.04	11	6	1,500	.63	<.005
	02-20-91	--	--	--	--	--	--	--	<.005	--
122	09-19-90	--	--	--	--	--	--	--	<.005	<.005
123	09-27-90	5.8	250	240	.26	10	28	530	.45	<.005
124	09-19-90	2.9	110	26	.06	12	1,600	1,200	2.7	<.005
125	09-17-90	--	--	--	--	--	--	--	<.005	<.005
	02-25-91	--	--	--	--	--	--	--	.54	--
126	09-19-90	--	--	--	--	--	--	--	<.005	<.005
127	09-20-90	4.9	2,100	1,700	1.6	9.0	140	490	33	<.005
128	09-20-90	2.6	100	26	.05	9.3	170	790	1.7	<.005
129	09-24-90	--	--	--	--	--	--	--	<.005	<.005
130	09-24-90	--	--	--	--	--	--	--	<.005	<.005
131	09-20-90	--	--	--	--	--	--	--	<.005	<.005
132	09-27-90	--	--	--	--	--	--	--	<.005	<.005
133	09-24-90	--	--	--	--	--	--	--	<.005	<.005
134	09-27-90	--	--	--	--	--	--	--	<.005	<.005
135	09-27-90	--	--	--	--	--	--	--	<.005	<.005
136	09-27-90	1.3	210	38	.08	12	44	4	1.1	<.005
137	09-27-90	--	--	--	--	--	--	--	.21	<.005
138	09-26-90	1.8	100	22	.05	10	910	260	.38	.032

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
139	10-01-90	--	--	--	--	--	--	--	<0.005	<0.005
140	09-26-90	--	--	--	--	--	--	--	<.005	<.005
141	09-24-90	--	--	--	--	--	--	--	<.005	<.005
142	10-01-90	--	--	--	--	--	--	--	<.005	<.005
143	09-24-90	--	--	--	--	--	--	--	<.005	<.005
144	10-01-90	1.1	470	41	0.12	12	1,000	2,200	.014	.005
145	10-01-90	--	--	--	--	--	--	--	<.005	<.005
146	09-24-90	2.6	110	17	.06	9.9	<3	<1	<.005	<.005
147	10-01-90	--	--	--	--	--	--	--	.005	<.005
148	09-25-90	--	--	--	--	--	--	--	<.005	<.005
149	10-18-90	--	--	--	--	--	--	--	.008	<.005
150	10-02-90	--	--	--	--	--	--	--	<.005	<.005
151	09-25-90	--	--	--	--	--	--	--	<.005	<.005
152	09-25-90	--	--	--	--	--	--	--	<.005	<.005
153	09-26-90	--	--	--	--	--	--	--	<.005	<.005
154	09-25-90	2.8	340	45	.13	13	160	8	<.005	<.005
155	10-01-90	--	--	--	--	--	--	--	<.005	<.005
156	10-04-90	4.0	1,100	110	.16	12	73	840	.11	<.005
157	09-26-90	3.2	460	150	.13	14	960	2,600	.080	<.005
158	10-02-90	4.9	730	100	.12	12	1,100	750	.024	<.005
159	10-02-90	--	--	--	--	--	--	--	<.005	<.005
160	09-26-90	--	--	--	--	--	--	--	.018	<.005
161	10-03-90	--	--	--	--	--	--	--	<.005	<.005
162	10-02-90	--	--	--	--	--	--	--	<.005	<.005
163	10-03-90	--	--	--	--	--	--	--	<.005	<.005
164	10-03-90	--	--	--	--	--	--	--	<.005	<.005
165	10-02-90	--	--	--	--	--	--	--	<.005	<.005
166	10-03-90	--	--	--	--	--	--	--	<.005	<.005
167	10-04-90	--	--	--	--	--	--	--	<.005	<.005
168	09-26-90	--	--	--	--	--	--	--	<.005	<.005
169	10-04-90	--	--	--	--	--	--	--	<.005	<.005
170	10-03-90	--	--	--	--	--	--	--	<.005	<.005
171	10-03-90	--	--	--	--	--	--	--	<.005	<.005
172	10-05-90	--	--	--	--	--	--	--	.13	< 005
173	10-04-90	--	--	--	--	--	--	--	<.005	<.005
174	10-04-90	2.0	170	22	.10	13	130	45	4.9	<.005
175	10-05-90	--	--	--	--	--	--	--	<.005	<.005
176	10-18-90	--	--	--	--	--	--	--	<.005	<.005
177	10-09-90	1.9	400	35	.13	12	190	24	1.5	<.005
178	10-05-90	--	--	--	--	--	--	--	<.005	<.005

Water-level and water-quality measurements and nearby soil-gas-methane concentrations for selected water wells and springs--Continued

Number on plate 1	Date sampled	Potassium, dissolved (mg/L as K)	Sulfate dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Iron, dissolved (µg/L as Fe)	Manganese, dissolved (µg/L as Mn)	Methane, dissolved (mg/L)	Methane, in soil gas (mg/L_g)
179	10-15-90	--	--	--	--	--	--	--	<0.005	<0.005
180	10-18-90	--	--	--	--	--	--	--	<.005	<.005
181	10-18-90	--	--	--	--	--	--	--	<.005	<.005
182	10-18-90	--	--	--	--	--	--	--	<.005	<.005
183	10-03-90	--	--	--	--	--	--	--	<.005	<.005
184	10-09-90	3.3	1,100	88	0.14	4.6	230	1,300	<.005	<.005
185	10-16-90	--	--	--	--	--	--	--	<.005	<.005
186	10-16-90	--	--	--	--	--	--	--	<.005	<.005
187	10-05-90	--	--	--	--	--	--	--	<.005	<.005
188	10-15-90	--	--	--	--	--	--	--	<.005	<.005
189	10-16-90	--	--	--	--	--	--	--	<.005	<.005
190	10-09-90	--	--	--	--	--	--	--	<.005	<.005
191	10-09-90	--	--	--	--	--	--	--	<.005	<.005
192	10-05-90	1.1	1,000	11	.05	4.1	980	38	.32	<.005
193	10-15-90	--	--	--	--	--	--	--	<.005	<.005
194	10-16-90	--	--	--	--	--	--	--	<.005	<.005
195	10-15-90	--	--	--	--	--	--	--	<.005	<.005
196	10-17-90	--	--	--	--	--	--	--	<.005	<.005
197	10-16-90	--	--	--	--	--	--	--	<.005	<.005
198	10-17-90	--	--	--	--	--	--	--	<.005	<.005
199	10-17-90	--	--	--	--	--	--	--	<.005	<.005
200	10-18-90	--	--	--	--	--	--	--	<.005	<.005
201	10-16-90	--	--	--	--	--	--	--	<.005	<.005
202	10-17-90	--	--	--	--	--	--	--	<.005	<.005
203	10-17-90	4.0	420	31	.07	14	2,100	2,800	.077	<.005
204	10-17-90	--	--	--	--	--	--	--	<.005	<.005
205	10-16-90	--	--	--	--	--	--	--	<.005	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings

[ft, feet; mg/L_g, milligrams per liter of gas; GAS, producing or shut-in single-completion gas well; DA, hole drilled and abandoned; 2GAS, producing or shut-in dual-completion gas well; PA, gas well plugged and abandoned; WOC, gas well waiting on completion when sampled; FL, Fruitland Formation coals; PC, Pictured Cliffs Sandstone; LS, Lewis Shale; MV, Mesaverde Group; DK Dakota Sandstone; --, producing formation not applicable; <, less than; ---, no data]

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO				
S. Ute 32-9, 6-1	32N-09W-06ADB	1990	3,475	GAS	FL	04-25-91	0.3
Block 6, 5-6	32N-09W-06ADB	1960	5,700	GAS	PC	04-25-91	.02
Mechel 5	32N-09W-06BBD	1969	4,314	GAS	LS	10-23-90	<.005
Dakota Ute 2	32N-09W-06BBD	1969	4,583	GAS	MV	10-23-90	<.005
Ben Ute 3	32N-09W-06BCA	1969	7,398	GAS	DK	10-10-90	.03
S. Ute B-1	32N-09W-07CCB	1965	7,448	GAS	DK	05-01-91	.3
NE Cox Canyon 1-7	32N-09W-07CCC	1964	7,705	GAS	MV	05-01-91	<.005
Block 13, 5-18	32N-09W-18ABD	1960	5,990	GAS	MV	04-25-91	<.005
Carter Ute 7-A	32N-09W-19CBA	1981	5,707	GAS	MV	02-05-91	<.005
Carter Ute 734	32N-09W-19CCA	1990	2,851	GAS	FL	02-04-91	<.005

Appendix 16c. Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings (U S. Geological Survey 1993a)

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
				COLORADO--Continued			
Carter Ute 7	32N-09W-19CCA	1960	5,464	GAS	MV	02-04-91	<0.005
S. Ute 19-1, 32-9	32N-09W-19DDA	1981	5,650	GAS	MV	04-25-91	<.005
S. Ute 20-5, 32-9	32N-09W-20CCB	1989	3,097	GAS	FL	04-25-91	.03
Bonds 1-1	32N-10W-01AAC	1987	2,750	GAS	FL	10-24-90	<.005
Bondad 3-1	32N-10W-01ADB	1963	2,414	DA	--	05-01-91	<.005
Bonds 1-E	32N-10W-01ADB	1980	7,485	GAS	DK	10-24-90	<.005
NE Cox Canyon 2-1	32N-10W-01ADB	1963	5,354	GAS	MV	10-24-90	<.005
Bonds 3-1	32N-10W-01BCA	1988	2,800	GAS	FL	10-26-90	.3
NE Cox Canyon 3-1	32N-10W-01BCA	1986	5,510	2GAS	MV/FL	10-26-90	.03
Bonds 1	32N-10W-01BDC	1965	7,620	GAS	DK	10-26-90	<.005
Bonds 2-1	32N-10W-01CBD	1988	2,906	GAS	FL	10-26-90	<.005
NE Cox Canyon 1-1	32N-10W-01CBD	1963	5,608	GAS	MV	10-26-90	.9
Bonds 2-E	32N-10W-01CCA	1983	7,693	GAS	DK	10-26-90	<.005
Bonds 3-E	32N-10W-01DCB	1983	7,665	GAS	DK	10-26-90	.01
Cedar Hill 32-10, 7	32N-10W-12AAA	1956	5,223	GAS	MV	10-22-90	<.005
S. Ute 1-12, 2E	32N-10W-12ADB	1985	7,732	GAS	DK	10-11-90	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
S. Ute 1-12, 1	32N-10W-12BDA	1980	7,732	GAS	DK	05-02-91	9
Carter Ute 5	32N-10W-12CBD	1958	5,922	GAS	MV	05-03-91	<.005
S. Ute 1-12, 1E	32N-10W-12CCA	1984	8,217	GAS	DK	05-03-91	280
S. Ute 1-12, 3E	32N-10W-12DCA	1985	7,704	GAS	DK	12-10-90	80
						03-05-91	350
Sever 1	32N-10W-13ADB	1958	5,418	GAS	MV	10-31-90	<.005
Carter Ute 105	32N-10W-24DAD	1988	2,987	GAS	FL	02-05-91	.005
Bondad 33-9, 24-6	33N-09W-06BBD	1960	5,315	GAS	MV	05-03-91	<.005
Clovis A-1	33N-09W-06DCD	1987	3,050	GAS	FL	04-24-91	.09
Bondad 33-9, 13	33N-09W-06DDB	1956	5,490	GAS	MV	04-24-91	<.005
Alva Short PLA6, B-1	33N-09W-18BDB	1988	3,080	GAS	FL	04-25-91	.005
Bondad 33-9, 14	33N-09W-18BDB	1958	5,454	GAS	MV	04-25-91	<.005
Koon 3-E	33N-09W-19BCA	1983	7,587	GAS	DK	11-01-90	<.005
Bondad 33-9, 31	33N-09W-19BCA	1961	5,224	GAS	MV	11-01-90	<.005
Koon 1-E	33N-09W-19CAC	1983	7,587	GAS	DK	12-05-90	2
S. Ute 33-9, 30-1	33N-09W-30BDB	1978	5,480	2GAS	MV/PC	05-01-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
Spatter 2	33N-09W-31BDB	1956	5,050	GAS	MV	10-23-90	0.05
Spatter 4	33N-09W-31BDC	1973	7,387	GAS	DK	10-23-90	<.005
Spatter 1	33N-09W-31CCA	1954	7,661	DA	--	05-02-91	38
Bryce 1	33N-09W-31CCD	1938	2,240	DA	--	10-10-90	1,200
Bryce 1-X	33N-09W-31CCD	1942	4,835	PA	--	05-03-91	200
Spatter 3	33N-09W-31DBB	1957	5,300	PA	--	10-23-90	<.005
Animas 1-1	33N-10W-01BDA	1961	7,500	2GAS	DK/MV	11-05-90	<.005
S. Ute 3-1	33N-10W-01BDB	1990	2,681	GAS	FL	11-05-90	<.005
Animas 2-1	33N-10W-01CDA	1980	5,170	GAS	MV	11-21-90	470
						03-26-91	120
Bondad 33-10 Com 104	33N-10W-01DAC	1990	2,610	GAS	FL	11-19-90	<.005
Bondad 33-10-1, 9	33N-10W-01DDB	1956	5,250	GAS	MV	11-19-90	.01
Medina A-PLA6, 1	33N-10W-11DCA	1990	2,602	GAS	FL	11-23-90	2
Bondad 33-10, 5	33N-10W-11DX	1956	5,215	GAS	MV	11-23-90	.01
Bondad 33-10, 103	33N-10W-12BAC	1989	2,532	GAS	FL	11-21-90	<.1
Bondad 33-10, 12	33N-10W-12BAC	1956	5,156	GAS	MV	11-21-90	.03

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
Elmer Dunkel 1	33N-10W-12DBA	1990	2,782	GAS	FL	11-19-90	0.005
Bondad 33-10, 10	33N-10W-12DBD	1956	5,230	GAS	MV	11-19-90	.03
Davies A-PLA 6-1	33N-10W-13BAC	1989	2,540	GAS	FL	11-21-90	<.005
Bondad 33-10, 7	33N-10W-13BBD	1957	5,161	GAS	MV	11-20-90	35
Ute B-1	33N-10W-13DBD	1961	5,252	GAS	MV	11-01-90	.01
Bondad 33-10, 17	33N-10W-14DBD	1960	5,294	GAS	MV	11-23-90	<.005
S. Ute 33-10, 23-2	33N-10W-23AAC	1980	5,350	GAS	MV	11-23-90	2
Craig 1-E	33N-10W-24AAC	1984	7,600	GAS	DK	11-01-90	14
Ute C-2	33N-10W-24AAC	1984	5,350	GAS	MV	11-01-90	25
S. Ute 33-10, 24-3	33N-10W-24BAC	1990	2,605	GAS	FL	10-31-90	5
S. Ute 33-10, 24-1	33N-10W-24BAC	1964	5,311	GAS	MV	11-21-90	<.005
Craig 2-E	33N-10W-24BDB	1984	7,657	GAS	DK	11-21-90	.005
Craig 3-E	33N-10W-24CBD	1985	7,875	GAS	DK	10-30-90	21
S. Ute 33-10, 24-2	33N-10W-24CDB	1980	5,443	GAS	MV	10-30-90	.005
Craig 1	33N-10W-24DBC	1975	7,585	GAS	DK	10-31-90	65
Ute C-1	33N-10W-24DBD	1963	5,260	GAS	MV	10-31-90	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
Sharp 3-E	33N-10W-25AAD	1983	7,559	GAS	DK	10-31-90	0.01
Bondad 33-10, 1-25	33N-10W-25ABD	1955	2,392	DA	--	05-02-91	<.005
Bondad 33-10, 3	33N-10W-25ABD	1955	5,199	GAS	MV	10-31-90	430
						03-05-91	220
Sharp 1-E	33N-10W-25BAC	1980	7,651	GAS	DK	10-30-90	.005
Sharp 2-E	33N-10W-25CAC	1983	7,623	GAS	DK	10-30-90	.1
Sharp 1	33N-10W-25DBC	1972	7,518	GAS	DK	10-30-90	<.005
M.F. Sharp 1	33N-10W-25DDB	1990	2,595	GAS	FL	10-30-90	<.005
S. Ute A-3	33N-10W-26DAC	1965	7,662	GAS	DK	10-29-90	<.005
S. Ute 1-26	33N-10W-26DAC	1957	5,382	GAS	MV	10-29-90	<.005
S. Ute A-2	33N-10W-35DAB	1965	7,845	GAS	DK	11-23-90	<.005
Bondad Ute 1-36	33N-10W-36BBD	1989	3,300	GAS	FL	11-23-90	2
Bondad 33-10, 6	33N-10W-36BDB	1956	5,318	GAS	MV	10-29-90	<.005
Bondad 33-10, 24	33N-10W-36DAC	1966	7,418	GAS	DK	10-10-90	320
Bondad 33-10, 18	33N-10W-36DBD	1957	5,190	GAS	MV	10-25-90	<.005
Wheeler 7U-1	34N-09W-07CAC	1986	2,621	GAS	FL	04-23-91	25

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
Koshak B-1	34N-09W-08BDB	1989	2,740	GAS	FL	11-05-90	14
Koshak A-1	34N-09W-08DBC	1988	2,555	GAS	FL	11-05-90	.02
Isgar A-1	34N-09W-18BDA	1989	2,595	GAS	FL	04-25-91	.07
Beaston 4-30	34N-09W-30BAC	1989	3,053	GAS	FL	04-24-91	<.005
Fee 30-1	34N-09W-30BDB	1960	7,991	GAS	MV	04-24-91	3
Dowler 1-A	34N-09W-30CAC	1981	5,796	GAS	MV	04-24-91	<.005
Beaston 2-31	34N-09W-31BDB	1959	5,600	PA	--	04-24-91	.09
MIR 31-1	34N-09W-31DBC	1988	2,879	GAS	FL	04-24-91	<.005
MIR 1-31	34N-09W-31DCB	1959	7,920	GAS	DK	04-24-91	.01
S. Ute Mobil 1-24	34N-10W-24DCA	1990	2,721	GAS	FL	04-23-91	<.005
Bondad 34-10, 7	34N-10W-24DDB	1962	5,300	GAS	MV	04-23-91	<.005
S. Ute Mobil 2-25	34N-10W-25BAC	1990	2,805	GAS	FL	04-24-91	<.005
Bondad 34-10, 5	34N-10W-25BDB	1962	5,330	GAS	MV	04-23-91	<.005
S. Ute Mobil 1-25	34N-10W-25DCA	1991	2,590	GAS	FL	04-23-91	20
Bondad 34-10, 4-25	34N-10W-25DDB	1960	5,382	GAS	MV	04-23-91	<.005
Bondad 34-10, 2	34N-10W-35DCA	1957	5,226	PA	--	11-23-90	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			COLORADO--Continued				
S. Ute Mobil 36-1	34N-10W-36ADB	1990	2,717	GAS	FL	11-19-90	0.01
Bondad 34-10, 3X	34N-10W-36BDB	1962	5,185	GAS	MV	11-05-90	<.005
Bondad 34-10, 3	34N-10W-36BDB	1958	5,170	PA	--	11-05-90	<.005
Animas 1	34N-10W-36CX	1981	5,200	GAS	MV	11-23-90	<.005
Bondad 34-10, 1	34N-10W-36DBD	1959	7,620	2GAS	DK/MV	11-05-90	<.005
			NEW MEXICO				
Coldiron Com A-1M	30N-11W-02BDB	1982	7,027	2GAS	DK/MV	03-15-91	<.005
Calloway 1	30N-11W-03AAC	1954	2,369	PA		03-14-91	<.005
Zella Calloway 1	30N-11W-03AAC	1962	6,986	GAS	DK	03-14-91	<.005
Lester 1	30N-11W-03ADB	1975	4,760	2GAS	MV/PC	03-15-91	.7
Lester 1-A	30N-11W-03BBD	1980	4,701	GAS	MV	03-14-91	.007
Sexton 1	30N-11W-03BBD	1954	2,197	GAS	PC	03-14-91	460
						03-27-91	1,100
Fee 3A	30N-11W-03CAC	1980	4,722	GAS	MV	04-04-91	.005
Bandy 1	30N-11W-03CDA	1954	2,230	GAS	PC	04-04-91	<.005
Fee 3	30N-11W-03DAC	1983	5,010	2GAS	MV/PC	04-30-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Coldiron Com A-1M	30N-11W-02BCA	1982	7,027	2GAS	DK/MV	03-15-91	<0.005
Hampton 2	30N-11W-03DCA	1953	2,285	PA	--	04-04-91	.006
Haynie 2	30N-11W-04ABD	1980	6,860	2GAS	DK/MV	03-25-91	<.005
Haynie 1	30N-11W-04ACA	1954	2,238	PA	--	04-01-91	<.005
Bobbie Herrera 1	30N-11W-04CAC	1979	2,350	2GAS	PC/FL	04-01-91	<.005
Fee 4	30N-11W-04DAC	1980	4,863	GAS	MV	04-04-91	<.005
Ona Magee 1	30N-11W-04DDB	1961	6,778	GAS	DK	04-04-91	.1
Roberts 1	30N-11W-04DDB	1954	2,167	GAS	PC	04-30-91	21
Thomas 1	30N-11W-09AAC	1953	2,154	GAS	PC	04-01-91	<.005
Fee 9-A	30N-11W-09ABD	1981	4,812	GAS	MV	04-04-91	<.005
Hampton D-1	30N-11W-10ABD	1962	6,906	GAS	DK	04-05-91	<.005
Hampton 3	30N-11W-10ABD	1956	4,757	GAS	MV	04-05-91	<.005
Hampton 3-A	30N-11W-10BBD	1977	4,842	GAS	MV	04-04-91	<.005
Scott 7	31N-10W-03ABC	1955	5,365	GAS	MV	12-14-90	.06
Scott 12	31N-10W-03ACA	1975	2,979	GAS	PC	12-13-90	.02

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Scott 13	31N-10W-03BDB	1975	2,904	GAS	PC	12-14-90	16
Scott 7-A	31N-10W-03BCD	1976	5,425	GAS	MV	12-13-90	.9[a]
						03-27-91	---[a]
Lucerne A-6	31N-10W-03CCA	1978	3,255	PA	--	12-12-90	130
Lucerne A-3	31N-10W-03CCA	1955	5,656	GAS	MV	12-12-90	49
Wood Com A-1	31N-10W-04ABD	1984	2,694	GAS	FL	12-05-90	.4
Usselman Com 1	31N-10W-04ABD	1954	5,075	GAS	MV	12-05-90	.008
Usselman Com B-1	31N-10W-04ACA	1977	2,970	GAS	PC	12-07-90	.005
Usselman Com 1-A	31N-10W-04BCD	1978	5,182	GAS	MV	12-04-90	<.005
Usselman Com C-1	31N-10W-04BCD	1978	2,984	GAS	PC	12-04-90	<.005
Scott 6	31N-10W-04CAC	1954	5,417	GAS	MV	12-11-90	<.005
Scott 10	31N-10W-04CCA	1975	2,957	GAS	PC	12-11-90	<.005
Scott 6-A	31N-10W-04DBD	1977	5,535	GAS	MV	12-11-90	97
						04-15-91	370
Lucerne A-10	31N-10W-04DDB	1978	3,115	GAS	PC	12-13-90	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Marcotte Com C-1	31N-10W-05ABD	1979	2,854	GAS	PC	04-30-91	<0.005
Marcotte Com 1	31N-10W-05ADB	1953	5,160	GAS	MV	01-17-91	2
McEwen Com 1-A	31N-10W-05BBC	1976	5,400	GAS	MV	01-24-91	<.005
McEwen Com B-1	31N-10W-05BBB	1978	3,098	GAS	PC	01-24-91	.005
McEwen Com 1	31N-10W-05CDB	1953	5,167	GAS	MV	01-18-91	.2
McEwen Com C-1	31N-10W-05CDC	1979	2,885	GAS	PC	01-18-91	.03
Marcotte Com 1-A	31N-10W-05DAC	1978	5,151	GAS	MV	12-11-90	<.005
Sammons Com G-1	31N-10W-06AAC	1978	2,888	GAS	PC	02-06-91	<.005
Sammons Com I-1	31N-10W-06ABD	1985	2,734	GAS	FL	02-06-91	<.005
Sammon Com A-1	31N-10W-06ABD	1953	5,084	GAS	MV	02-06-91	<.005[b]
Primo 1-A	31N-10W-06BX	1975	5,114	2GAS	MV/PC	02-07-91	<.005
Primo Federal 1	31N-10W-06CAC	1953	5,135	GAS	MV	03-04-91	<.005
Flaherty 1	31N-10W-06CBD	1978	2,900	GAS	PC	03-04-91	<.005
Sammons Com A-1A	31N-10W-06DDB	1976	5,150	GAS	MV	02-07-91	<.005
Sammons Com H-1	31N-10W-06DDB	1978	2,869	GAS	PC	02-07-91	2

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year com-pleted	Total depth (ft)	Well type and status	Pro-ducing forma-tion(s)	Sampling date	Maximum soil-gas-methane concen-tration (mg/L_g)
			NEW MEXICO--Continued				
Hutchin B-1	31N-10W-07ACA	NC	2,810	WOC	FL	02-07-91	<0.005
Hutchin LS-1	31N-10W-07ACA	1954	5,128	GAS	MV	02-07-91	<.005
Hutchin LS-2	31N-10W-07ACA	1980	2,819	GAS	PC	02-07-91	.008
Larcher 1A	31N-10W-07BAC	1976	5,200	GAS	MV	03-04-91	<.005
Larcher 4	31N-10W-07BDB	1977	2,875	GAS	PC	02-07-91	<.005
Larcher 310	31N-10W-07CAB	1990	2,632	GAS	FL	03-07-91	<.005
Larcher 1	31N-10W-07CAC	1953	5,071	GAS	MV	03-04-91	400
						03-27-91	550
Larcher 3	31N-10W-07CDB	1977	2,735	GAS	PC	03-07-91	<.005
Hutchin 1-A	31N-10W-07DDB	1978	5,200	2GAS	MV/PC	02-28-91	<.005
Marcotte Pool 1	31N-10W-08ACA	1953	5,247	GAS	MV	02-27-91	<.005
Boyd Com 1-A	31N-10W-08BAC	1976	5,175	GAS	MV	01-18-91	<.005
Boyd Com C-1	31N-10W-08BBD	1979	2,801	GAS	PC	02-07-91	.1
Boyd Com 1	31N-10W-08CCA	1953	7,436	GAS	MV	02-28-91	16
Boyd Com B-1	31N-10W-08CCA	1977	2,786	GAS	PC	02-28-91	.02

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Scott 14	31N-10W-08DAC	1975	2,969	GAS	PC	02-27-91	<0.005
Marcotte 1-A	31N-10W-08DCA	1979	5,438	GAS	MV	02-27-91	.008
Lucerne A-2	31N-10W-09ABD	1954	5,360	GAS	MV	12-12-90	<.005
Lucerne A-7	31N-10W-09ADB	1978	3,133	GAS	PC	12-12-90	<.005
Lucerne A-1A	31N-10W-09BAC	1979	5,488	GAS	MV	12-11-90	<.005
Scott 11	31N-10W-09BAC	1975	2,996	GAS	PC	12-11-90	.008
Lucerne A-1	31N-10W-09CBD	1954	5,353	GAS	MV	02-27-90	<.005
Lucerne A-4A	31N-10W-10BAC	1978	5,668	2GAS	MV/PC	12-12-90	<.005
Scott 22	31N-10W-17AAC	1976	2,961	GAS	PC	02-28-91	.3
Scott 4	31N-10W-17ADB	1952	5,341	GAS	MV	02-28-91	<.005
Scott 9	31N-10W-17BAC	1975	2,968	GAS	PC	02-28-91	<.005
Hudson 5-A	31N-10W-17BDB	1977	5,427	GAS	MV	03-07-91	.009
McCoy Com A-1	31N-10W-18ADB	1952	5,005	GAS	MV	02-19-91	<.005
McCoy Com A-1A	31N-10W-18BDB	1977	4,988	GAS	PC	02-11-91	180
McCoy B-1	31N-10W-18BDB	1983	2,640	GAS	PC	02-11-91	.3

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Caneple Com C-1	31N-10W-18CAC	1972	2,584	GAS	PC	02-11-91	<0.005
Caneple Com 1	31N-10W-18CDB	1954	4,950	GAS	MV	02-11-91	<.005
Crandell 7	31N-10W-18DAC	1978	2,802	PA	--	02-19-91	<.005
Caneple Com 1-A	31N-10W-18DAC	1976	5,200	GAS	MV	02-19-91	<.005
Crandell 1	31N-10W-19AAC	1951	5,246	GAS	MV	02-19-91	<.005
Crandell 4	31N-10W-19AAC	1969	2,775	GAS	PC	02-19-91	.2
Crandall 2-A	31N-10W-19BAC	1976	5,218	GAS	MV	02-19-91	.3
Crandell 6	31N-10W-19BAC	1969	2,696	GAS	PC	02-19-91	560
Crandell 2	31N-10W-19CCA	1953	5,070	GAS	MV	02-15-91	460
Crandell 5	31N-10W-19CCA	1969	2,714	GAS	PC	02-15-91	240
Pierce 2-A	31N-10W-30BCA	1977	5,343	GAS	MV	02-13-91	<.005
Pierce 5	31N-10W-30BCA	1969	2,730	GAS	PC	02-13-91	.04
Mudge LS-8	31N-11W-12AAC	1954	5,250	GAS	MV	03-07-91	<.005
Mudge LS-8A	31N-11W-12DAC	1979	5,325	GAS	MV	03-07-91	<.005
Ridenour Com A-1	31N-11W-13ACA	1989	2,772	GAS	FL	03-07-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Larcher 2	31N-11W-13ACA	1976	2,705	GAS	PC	03-12-91	<0.005
Ridenour Com 1	31N-11W-13ADB	1954	5,057	GAS	MV	03-07-91	<.005
Randleman 3	31N-11W-13BBD	1970	2,578	GAS	PC	03-12-91	<.005
Randleman 1-A	31N-11W-13BCA	1976	5,063	GAS	MV	03-12-91	<.005
Randleman 1	31N-11W-13CAC	1951	4,980	GAS	MV	03-12-91	<.005
Randleman 2	31N-11W-13CCA	1970	2,633	PA	--	05-01-91	<.005
Ridenour Com 1-A	31N-11W-13DDB	1977	4,950	GAS	MV	02-11-91	<.005
Canepele Com B-1	31N-11W-13DDB	1971	2,569	GAS	PC	02-11-91	<.005
Neil LS-1A	31N-11W-14DBD	1957	5,011	GAS	MV	03-12-91	100
Neal Com 2-E	31N-11W-14DCA	1984	7,160	GAS	DK	03-12-91	<.005
Neil LS-10	31N-11W-14DDB	1972	2,716	GAS	PC	03-12-91	<.005
Nye LS-1	31N-11W-23AAC	1953	5,062	GAS	MV	03-12-91	.02
Mudge LS-31	31N-11W-23AAC	1972	2,596	GAS	PC	03-12-91	<.005
Mudge LS-7A	31N-11W-23BDB	1978	5,182	GAS	MV	03-13-91	<.005
Mudge LS-50	31N-11W-23BDB	1981	2,599	GAS	PC	03-13-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Mudge LS-37	31N-11W-23CAC	1972	2,567	GAS	PC	03-13-91	<0.005
Mudge LS-7	31N-11W-23CCA	1955	4,945	GAS	MV	03-13-91	<.005
Nye LS-1A	31N-11W-23DCA	1979	5,022	GAS	MV	02-11-91	8
Mudge LS-32	31N-11W-23DCA	1972	2,490	GAS	PC	02-11-91	120
Jensen 1	31N-11W-24AAC	1970	2,547	GAS	PC	02-08-91	<.005
Ruple 1-A	31N-11W-24ABD	1976	5,043	GAS	MV	02-08-91	<.005
Turner 1	31N-11W-24BDC	1953	4,911	GAS	MV	02-08-91	20
Turner 3	31N-11W-24BDX	1970	2,494	GAS	PC	02-08-91	.01
Turner 1-A	31N-11W-24CCA	1976	4,950	GAS	MV	02-12-91	<.005
Turner 2	31N-11W-24CDB	1969	2,574	GAS	PC	02-12-91	.6
Ruple 2	31N-11W-24DCA	1970	2,546	GAS	PC	02-15-91	<.005
Ruple 1-X	31N-11W-24DCX	1951	4,951	GAS	MV	02-15-91	140
Bruington 2	31N-11W-25AAC	1969	2,647	GAS	PC	02-13-91	.005
Bruington 1	31N-11W-25ACA	1953	4,969	GAS	MV	02-12-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Bruington 3	31N-11W-25BAC	1970	2,520	GAS	PC	02-08-91	500
						03-27-91	520
Bruington 1-A	31N-11W-25BCA	1977	5,018	GAS	MV	02-15-91	<.005
Zachary Pool 1	31N-11W-25CAC	1955	4,890	GAS	MV	02-14-91	.9
Heaton LS-28	31N-11W-25CAC	1972	2,650	GAS	PC	02-14-91	<.005
Heaton LS-26	31N-11W-25DAC	1971	2,743	GAS	PC	02-13-91	<.005
Zachary 1-A	31N-11W-25DBD	1980	5,274	GAS	MV	02-13-91	46
Randleman Pool 1	31N-11W-26ABD	1957	4,775	GAS	MV	02-12-91	<.005
Randleman 2	31N-11W-26ABD	1975	2,543	GAS	PC	02-12-91	<.005
Randleman 1-A	31N-11W-26BCD	1979	5,031	2GAS	MV/PC	03-13-91	180
Wilmuth Pool 1	31N-11W-26CDB	1958	4,793	PA	--	02-12-91	.3
Wilmuth 2	31N-11W-26CDB	1985	2,470	GAS	PC	02-12-91	55
Wilmuth 1-A	31N-11W-26DDC	1986	5,072	2GAS	MV/PC	02-14-91	<.005
Calloway Pool 1	31N-11W-27ABD	1953	4,890	GAS	MV	03-13-91	<.005
Federal 100-A	31N-11W-27CCA	1984	5,200	GAS	MV	05-01-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Federal 1	31N-11W-27CDB	1983	2,670	GAS	FL	03-13-91	<0.005
Calloway 1-A	31N-11W-27DCA	1988	5,109	GAS	MV	03-13-91	<.005
Heaton Com B-3E	31N-11W-33ABD	1983	7,040	GAS	DK	03-25-91	170
Heaton LS-6	31N-11W-33ABD	1956	4,944	2GAS	MV/PC	03-25-91	<.005
Myra Cummings 1	31N-11W-33CDA	1962	6,937	GAS	DK	04-01-91	<.005
Oliver 2	31N-11W-33CDB	1954	2,394	GAS	PC	04-01-91	<.005
Oliver 3	31N-11W-33DCA	1954	2,367	GAS	PC	03-25-91	<.005
Heaton 1-A	31N-11W-33DDB	1978	4,982	GAS	MV	04-01-91	<.005
Calloway LS-2	31N-11W-34ADC	1957	4,704	2GAS	MV/PC	03-14-91	<.005
Turner A-1A	31N-11W-34BAC	1981	5,020	GAS	MV	03-13-91	<.005
Flood 1	31N-11W-34BAC	1957	2,474	GAS	PC	03-13-91	<.005
Turner A-1	31N-11W-34CAC	1957	4,670	2GAS	MV/PC	04-30-91	570
Calloway LS-3	31N-11W-34DCA	1974	2,421	PA	--	04-30-91	<.005
Wallace Com 1	31N-11W-35ADA	1957	4,867	GAS	MV	02-14-91	<.005
Wallace Com 3	31N-11W-35ADB	1978	2,652	GAS	PC	02-14-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Wallace Com 2	31N-11W-35BAC	1958	2,388	GAS	PC	02-15-91	0.1
F.J. Titt 2	31N-11W-35CCA	1964	7,030	GAS	MV	03-14-91	<.005
Alston 1	31N-11W-35CDB	1951	5,028	GAS	PC	03-15-91	<.005
F.J. Titt 2-A	31N-11W-35DCA	1978	4,987	2GAS	MV/PC	03-15-91	.6
Beaver Lodge Com 2-A	31N-11W-36BAC	1978	5,189	GAS	MV	02-13-91	.2
Pubco State Com 4	31N-11W-36CBD	1990	2,469	GAS	FL	03-15-91	390
Pubco State Com 1	31N-11W-36CBD	1955	4,860	GAS	MV	03-15-91	<.005
Stull 1	32N-10W-10CBD	1956	5,480	GAS	MV	02-04-91	<.005
Stull 100	32N-10W-10DBD	1989	2,675	GAS	FL	02-04-91	<.005
San Juan 32-9, 300	32N-10W-11CAA	1990	3,247	GAS	FL	03-08-91	.1
San Juan 32-9, 55	32N-10W-11CAD	1957	5,900	GAS	MV	03-08-91	<.005
San Juan 32-9, 48	32N-10W-14CAC	1957	6,030	GAS	MV	03-08-91	<.005
Heizer 1	32N-10W-15ABD	1955	5,265	GAS	MV	02-04-91	<.005
Heizer 100	32N-10W-15ACB	1989	2,702	GAS	FL	02-04-91	.005
Bonds Com 100	32N-10W-15CCA	1990	2,717	GAS	FL	02-05-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Bonds Pool 1	32N-10W-15CCA	1956	5,320	GAS	MV	02-05-91	22
Burroughs Com A-2	32N-10W-16ACA	1958	5,754	GAS	MV	02-06-91	<.005
Burroughs Com A-100	32N-10W-16ACD	1989	3,099	GAS	FL	02-06-91	<.005
El Paso Com C-4	32N-10W-16CDB	1956	5,637	GAS	MV	02-01-91	<.005
Burroughs Com A-2A	32N-10W-16DCA	1979	5,825	GAS	MV	02-01-91	<.005
Payne 3	32N-10W-20ACA	1954	5,555	PA	--	01-28-91	<.005
Payne 3-E	32N-10W-20ADD	1990	7,900	GAS	DK	02-01-91	.2
Payne 6	32N-10W-20DAC	1984	3,121	GAS	FL	01-28-91	5
Payne 1-A	32N-10W-20DDB	1978	5,725	GAS	MV	01-28-91	<.005
Holmberg Com D-1	32N-10W-21ABD	1989	3,300	GAS	FL	01-28-91	280
Sullivan Com B-1	32N-10W-21ABD	1954	5,610	GAS	MV	01-28-91	<.005
Payne 2-A	32N-10W-21BBD	1980	7,800	2GAS	DK/MV	01-28-91	<.005
Payne Federal 8	32N-10W-21CAC	1984	7,810	GAS	FL	01-28-91	<.005
Payne 2	32N-10W-21CAC	1954	5,609	GAS	MV	01-28-91	<.005
Sullivan Com B-1A	32N-10W-21DDB	1977	5,300	GAS	MV	01-18-91	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Payne 4	32N-10W-22ACA	1954	5,750	GAS	MV	02-05-91	<0.005
Sullivan Com 1-A	32N-10W-22BBD	1981	5,217	GAS	MV	01-14-91	<.005
Sullivan Com 1	32N-10W-22CCA	1954	5,300	GAS	MV	01-16-91	<.005
Payne 4-A	32N-10W-22DDA	1980	8,400	2GAS	DK/MV	03-08-91	560
San Juan 32-9, 80	32N-10W-23CCA	1973	3,894	DA	--	03-08-91	<.005
San Juan 32-9, 27	32N-10W-23CDB	1955	6,265	GAS	MV	03-08-91	<.005
Payne 11	32N-10W-27AAC	1987	8,425	GAS	DK	03-08-91	<.005
Payne 5	32N-10W-27AAC	1954	6,287	GAS	MV	03-08-91	.005
Keys Com E-1	32N-10W-27BAC	1972	2,601	GAS	FL	01-16-91	<.005
Keys Com A-1A	32N-10W-27BAD	1977	5,375	GAS	MV	01-16-91	<.005
Keys Com A-2	32N-10W-27BDB	1981	7,461	GAS	DK	01-16-91	.6
Keys Com G-1R	32N-10W-27CAC	1988	2,960	GAS	FL	01-14-91	120
Keys Com A-1	32N-10W-27CAC	1953	5,243	GAS	MV	01-14-91	.09
Payne Federal 5-A	32N-10W-27DCA	1976	5,770	2GAS	MV/PC	01-17-91	<.005
Holmberg Com 1	32N-10W-28ABD	1954	5,370	PA	--	01-03-91	.006

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year com-pleted	Total depth (ft)	Well type and status	Pro-ducing forma-tion(s)	Sampling date	Maximum soil-gas-methane concen-tration (mg/L_g)
			NEW MEXICO--Continued				
Holmberg Com A-1	32N-10W-28ABD	1972	2,679	GAS	FL	01-14-91	<0.005
Holmberg Com C-1	32N-10W-28AX	1988	3,029	GAS	FL	01-14-91	<.005
Schneider Com 1-A	32N-10W-28BCA	1977	5,525	GAS	MV	01-25-91	.006
Schneider Com 1	32N-10W-28CBD	1953	5,410	GAS	MV	01-22-91	<.005
Schneider Com B-1	32N-10W-28CCA	1976	3,050	GAS	FL	01-24-91	10
Schneider Com C-1	32N-10W-28CCA	1984	7,630	GAS	DK	01-22-91	.2
Schneider Com B-1S	32N-10W-28CCA	1981	2,853	GAS	FL	01-22-91	.1
Holmberg Com 1-A	32N-10W-28DDB	1978	5,270	GAS	MV	02-26-91	<.005
Scott 100	32N-10W-29ADB	1987	2,980	GAS	FL	01-25-91	<.005
Scott 1	32N-10W-29ADB	1952	5,504	GAS	MV	01-25-91	<.005
Scott LS-3A	32N-10W-29DAC	1978	5,741	GAS	MV	01-25-91	.008
Scott 2-A	32N-10W-31DAC	1976	5,416	2GAS	MV/PC	02-06-91	.05
Valentine Com 1	32N-10W-32AAC	1953	5,289	GAS	MV	01-22-91	<.005
Valentine Com B-1	32N-10W-32AAC	1976	2,960	GAS	PC	01-22-91	.006
State Com BW-1	32N-10W-32ABD	1981	2,713	GAS	FL	01-23-91	2

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Valentine Com 1-A	32N-10W-32BBD	1976	5,381	GAS	MV	01-25-91	<0.005
Valentine Com C-1	32N-10W-32BCA	1978	3,070	PA	--	01-25-91	<.005
State Com BX-1	32N-10W-32CAC	1982	2,878	GAS	FL	01-24-91	29
Martinez A-1	32N-10W-32CDB	1953	5,290	GAS	MV	01-24-91	<.005[c]
Martinez Com H-1	32N-10W-32CDB	1973	3,020	GAS	PC	01-24-91	<.005
Martinez Com A-1A	32N-10W-32DBD	1978	5,358	GAS	MV	01-24-91	240
						03-06-91	530
Carr Com 1	32N-10W-32DBD	1978	2,955	GAS	PC	01-23-91	<.005
Ealum Com C-1	32N-10W-33ACA	1982	2,805	PA	--	01-03-91	<.005
Ealum Com C-1R	32N-10W-33ACA	1987	2,955	GAS	FL	01-03-91	<.05
Ealum Com 1	32N-10W-33ADB	1953	5,320	PA	--	01-03-91	<.005
Cahn Com 1	32N-10W-33BAC	1977	2,812	PA	--	01-23-91	<.005
Cahn Com 2	32N-10W-33BCA	1976	2,946	PA	--	01-23-91	<.005
Ealum Com 1-A	32N-10W-33BCA	1976	5,400	GAS	MV	01-23-91	<.005
Compton Com 1	32N-10W-33CBC	1979	3,000	PA	--	01-23-91	.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Cahn Com 1-S	32N-10W-33CBD	1988	2,983	GAS	FL	01-22-91	<0.005
Uptegrove Com 1	32N-10W-33CBD	1953	5,270	GAS	MV	01-22-91	<.005
Gardner Com 1	32N-10W-33DAC	1979	2,926	PA	--	12-07-90	.006
Uptegrove Com 1-A	32N-10W-33DAC	1977	5,250	GAS	MV	12-07-90	<.005
Scott 18	32N-10W-34AAC	1977	3,154	PA	--	04-02-91	<.005
Scott 102	32N-10W-34AAC	1988	3,005	GAS	FL	12-14-90	<.005
Scott 5	32N-10W-34ADA	1954	5,315	GAS	MV	12-14-91	<.005[d]
Leeper Com B-1	32N-10W-34BAD	1977	2,851	PA	--	03-27-91	1
Jaquez Com F-1	32N-10W-34BAD	1984	7,426	GAS	DK	01-16-91	610
						03-06-91	460
Leeper Com 1-A	32N-10W-34BAD	1976	5,308	GAS	MV	01-16-91	13
Leeper Com D-1Y	32N-10W-34CAC	1984	2,685	GAS	FL	12-07-90	6
Leeper Com D-1	32N-10W-34CBC	1984	663	DA	--	05-01-91	<.005
Leeper Com C-1	32N-10W-34CDA	1977	3,089	GAS	PC	01-17-91	<.005
Leeper Com 1	32N-10W-34CDB	1953	5,065	GAS	MV	12-07-90	<.005

Gas-well records and maximum methane concentrations measured in soil gas adjacent to gas-well casings--Continued

Gas-well lease and number	Land-net location	Year completed	Total depth (ft)	Well type and status	Producing formation(s)	Sampling date	Maximum soil-gas-methane concentration (mg/L_g)
			NEW MEXICO--Continued				
Scott 5-A	32N-10W-34DAD	1977	5,464	GAS	MV	12-14-90	<0.005
Scott 19	32N-10W-34DCA	1976	3,022	GAS	PC	01-17-91	<.005

[a]Maximum concentration measured adjacent to cathodic-protection well was 560 mg/L_g.

[b]Maximum concentration measured adjacent to cathodic-protection well was 7 mg/L_g.

[c]Maximum concentration measured adjacent to cathodic-protection well was 10 mg/L_g.

[d]Maximum concentration measured adjacent to cathodic-protection well was 30 mg/L_g.

Molecular-composition and methane-isotope data for gas from well water, open-field soil seeps, soil adjacent to gas-well casings, and gas-well production casings at selected sites

[Numbers in parentheses in the "Site description" column in the "Well-Water Gas" sections are site numbers in tables 1 and 2 and on plate 1; letter designations in parentheses in "Site description" column in "Gas-Well Production Gas" sections indicate producing formation: DK, Dakota Sandstone; FL, Fruitland Formation coals; MV, Mesaverde Group; PC, Pictured Cliffs Sandstone; gas wetness, W, is defined as the percentage of methane (C_1) divided by the sum of the percentages of methane, ethane (C_2), propane (C_3), iso-butane plus n-butane (C_4), and iso-pentane plus n-pentane (C_5): $W = C_1/(C_1+C_2+C_3+C_4+C_5)$; $\delta^{13}C_1$, delta carbon-13 of methane; δD_1, delta deuterium of methane; $\delta^{13}C_1$ values are reported relative to the Peedee belemnite marine carbonate standard; δD_1 values are reported relative to Standard Mean Ocean Water; <, less than; --, no data; IS, insufficient percentage of methane for reliable determination]

Site description	Land-net location	Date sampled	Air (percent)	Air-free percentage: Carbon dioxide	Methane	Ethane	Propane	iso-Butane	n-Butane	iso-Pentane	n-Pentane	Gas wetness, W (fraction)	$\delta^{13}C_1$ (per mil)	δD_1 (per mil)
COLORADO														
Well-Water Gas														
Robert Kinslow (70)	32N-09W-18CBB	11-07-90	40.1	0.00	98.81	1.20	<0.01	<0.01	<0.01	<0.01	<0.01	0.988	-52.15	-150
Carl Weston (58)	33N-09W-31CCC	11-16-90	41.0	.32	98.00	1.66	<.01	<.01	<.01	<.01	<.01	.983	-41.73	-139
Maurice Walter (59)	32N-10W-01AAD	11-14-90	78.5	.00	99.67	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-25.20	--
Terry Obery (36)	33N-10W-13DDC	11-15-90	55.6	.81	99.19	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-30.73	--
Gerald Brown (42)	33N-10W-25ACB	11-29-90	89.9	62.4	37.62	<.01	<.01	<.01	<.01	<.01	<.01	1.00	IS	--
John Gamble (43)	33N-10W-25ADB	11-29-90	57.5	2.17	95.39	2.45	<.01	<.01	<.01	<.01	<.01	.975	-36.96	-158
Patty Haneman (39)	33N-10W-25BAC	11-30-90	68.7	.00	98.21	1.79	<.01	<.01	<.01	<.01	<.01	.982	-41.96	-178
Jack Kloepfer (52)	33N-10W-36ACD	11-16-90	91.6	1.44	85.77	12.80	<.01	<.01	<.01	<.01	<.01	.870	-41.49	--
Charles Weekly (4)	34N-09W-07ADC	11-15-90	70.7	.00	100.0	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-59.66	-162
Ron Ollier (14)	34N-10W-36CAB	11-15-90	40.7	.00	100.0	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-37.16	--
Open-Field Soil-Seep Gas														
Junior Bonds	32N-09W-06BCD	11-14-90	15.0	3.15	95.88	0.72	0.24	<.01	<.01	<.01	<.01	.990	-37.84	--

Appendix 16d. Molecular-composition and methane-isotope data for gas from well water, open-field soil seeps, soil adjacent to gas-well casings, and gas-well production casings at selected sites (U.S. Geological Survey 1993a)

Molecular-composition and methane-isotope data for gas from well water, open-field soil seeps, soil adjacent to gas-well casings, and gas-well production casings at selected sites--Continued

Site description	Land-net location	Date sampled	Air (percent)	Air-free percentage: Carbon dioxide	Methane	Ethane	Propane	iso-Butane	n-Butane	iso-Pentane	n-Pentane	Gas wetness, W (fraction)	$\partial^{13}C_1$ (per mil)	∂D_1 (per mil)
COLORADO--Continued														
Soil Gas Adjacent to Gas-Well Caring														
S. Ute 1-12, 3E	32N-10W-12DCA	03-05-91	77.4	10.8	86.66	2.47	<0.01	<0.01	<0.01	<0.01	<0.01	0.972	-41.01	--
Animas 2-1	33N-10W-01CDA	03-26-91	76.6	8.45	90.32	.77	.47	<.01	<.01	<.01	<.01	.986	-41.81	-188
Bondad 33-10, 3	33N-10W-25ABD	10-31-90	70.3	10.5	77.72	8.70	2.19	.51	.30	<.01	<.01	.869	-35.87	--
Bondad 33-10, 24	33N-10W-36DAC	12-04-90	33.4	.84	88.09	6.35	3.66	.57	.48	<.01	<.01	.888	-42.73	--
Gas-Well Production Gas														
Ben Ute 3 (DK)	32N-09W-06BCA	03-05-91	17.3	2.99	97.01	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-32.79	-168
Bonds 1-1 (FL)	32N-10W-01AAC	04-02-91	.5	4.92	94.84	.23	<.01	<.01	<.01	<.01	<.01	.998	-42.22	-203
N.E. Cox Canyon 2-1 (MV)	32N-10W-01ADB	10-04-91	.6	2.97	96.39	.63	<.01	<.01	<.01	<.01	<.01	.994	-33.79	--
S. Ute 1-12, 3E (DK)	32N-10W-12DCA	03-05-91	1.5	2.76	97.03	.20	<.01	<.01	<.01	<.01	<.01	.998	-32.62	--
Animas 2-1 (MV)	33N-10W-01CDA	03-26-91	5.0	1.71	94.04	3.51	.62	.13	<.01	<.01	<.01	.957	-36.85	-179
Davies A-PLA 6-1 (FL)	33N-10W-13BAC	04-02-91	2.9	5.45	94.29	.26	<.01	<.01	<.01	<.01	<.01	.997	-42.37	--
Craig 1-E (DK)	33N-10W-24AAC	10-04-91	.8	3.90	95.74	.37	<.01	<.01	<.01	<.01	<.01	.996	-32.89	--
Ute C-2 (MV)	33N-10W-24AAC	04-02-91	6.7	2.46	94.30	2.94	.30	<.01	<.01	<.01	<.01	.967	-37.68	--
Craig 3-E (DK)	33N-10W-24CBD	03-05-91	1.5	4.06	95.73	.20	<.01	<.01	<.01	<.01	<.01	.998	-33.04	--
Bondad 33-10, 3 (MV)	33N-10W-25ABD	10-31-90	5.3	2.35	93.17	3.68	.67	.13	<.01	<.01	<.01	.954	-38.14	--
M.F. Sharp 1 (FL)	33N-10W-25DDB	04-03-91	.9	3.73	95.82	.44	<.01	<.01	<.01	<.01	<.01	.995	-41.91	--
Bondad 33-10, 24 (DK)	33N-10W-36DAC	12-04-90	21.4	2.93	97.09	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-32.99	--
Koshak B-1 (FL)	34N-09W-08BDB	11-05-90	3.1	.78	99.21	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-43.20	--
S. Ute Mobile 36-1 (FL)	34N-10W-36ADB	04-02-91	1.1	6.90	92.89	.21	<.01	<.01	<.01	<.01	<.01	.998	-43.56	--
Bondad 34-10, 3X (MV)	34N-10W-36BDB	04-02-91	2.2	2.17	96.26	1.42	.15	<.01	<.01	<.01	<.01	.984	-35.24	--
Bondad 34-10, 1 (DK)	34N-10W-36DBD	04-02-91	.8	2.87	96.95	.17	<.01	<.01	<.01	<.01	<.01	.998	-31.86	--

Molecular-composition and methane-isotope data for gas from well water, open-field soil seeps, soil adjacent to gas-well casings, and gas-well production casings at selected sites--Continued

Site description	Land-net location	Date sampled	Air (percent)	Air-free percentage: Carbon dioxide	Methane	Ethane	Propane	iso-Butane	n-Butane	iso-Pentane	n-Pentane	Gas wetness, W (fraction)	$\delta^{13}C_1$ (per mil)	δD_1 (per mil)
NEW MEXICO														
Well-Water Gas														
Charles Head (120)	31N-10W-04AAA	12-04-90	34.9	0.91	96.31	2.31	0.45	<0.01	<0.01	<0.01	<0.01	0.972	-40.82	-42
Marshall Johnson (124)	31N-10W-04BBD	11-30-90	88.6	66.7	33.33	<.01	<.01	<.01	<.01	<.01	<.01	1.00	IS	--
D.H. Water Co. (127)	31N-10W-04BDA	12-03-90	97.0	22.0	77.97	<.01	<.01	<.01	<.01	<.01	<.01	.984	-38.11	-114
D.H. Water Co. (128)	31N-10W-04BDA	11-30-90	67.4	.00	98.37	1.56	<.01	<.01	<.01	<.01	<.01	1.00	IS	--
M. Shackleford (174)	31N-11W-25CBB	12-04-90	93.8	13.9	74.11	12.0	<.01	<.01	<.01	<.01	<.01	.861	IS	--
Patricia Johnson (73)	32N-10W-10CDD	11-07-90	26.8	.00	99.97	<.01	<.01	<.01	<.01	<.01	<.01	1.00	-67.71	-208
Open-Field Soil-Seep Gas														
Benson Leeper	31N-10W-05AAA	03-26-91	27.1	2.25	96.98	.77	<.01	<.01	<.01	<.01	<.01	.992	-40.98	--
Lanier Clark	32N-10W-34BCB	03-26-91	50.5	.99	98.52	.48	<.01	<.01	<.01	<.01	<.01	.995	-43.99	--
Soil Gas Adjacent to Gas-Well Casing														
Sexton 1	30N-11W-03BBD	03-27-91	6.1	1.35	86.94	7.57	2.77	.50	.64	.16	<.01	.881	-39.25	--
Scott 7-A[1]	31N-10W-03BCD	03-05-91	41.0	.47	98.78	.75	<.01	<.01	<.01	<.01	<.01	.993	-43.86	--
Scott 6-A	31N-10W-04DBD	04-15-91	4.9	.00	93.61	4.24	1.56	.27	.33	<.01	<.01	.936	-40.57	--
Larcher 1	31N-10W-07CAC	03-27-91	38.3	6.03	80.83	8.23	3.47	.55	.68	.21	<.01	.860	-34.82	--
Bruington 3	31N-11W-25BAC	03-27-91	.9	.36	89.59	6.35	2.54	.42	.61	.14	<.01	.899	-40.31	--
Martinez Com A-1A	32N-10W-32DBD	03-06-91	32.3	2.10	97.25	.65	<.01	<.01	<.01	<.01	<.01	.993	-43.81	--
Jaquez Com F-1	32N-10W-34BAD	03-06-91	22.0	1.37	89.45	6.23	2.18	.26	.50	<.01	<.01	.907	-38.61	--

Molecular-composition and methane-isotope data for gas from well water, open-field soil seeps, soil adjacent to gas-well casings, and gas-well production casings at selected sites--Continued

Site description	Land-net location	Date sampled	Air (percent)	Air-free percentage: Carbon dioxide	Methane	Ethane	Propane	iso-Butane	n-Butane	iso-Pentane	n-Pentane	Gas wetness, W (fraction)	$\partial^{13}C_1$ (per mil)	∂D_1 (per mil)
NEW MEXICO--Continued														
Gas-Well Production Gas														
Sexton 1 (PC)	30N-11W-03BBD	03-27-91	29.7	0.64	87.66	7.57	2.83	0.50	0.64	0.16	0.01	0.882	-39.72	--
Scott 7-A (MV)	31N-10W-03BCD	03-05-91	1.3	4.57	93.88	.40	.29	.24	.47	.09	.08	.984	-42.69	--
Wood Com A-1 (PC)	31N-10W-04ABD	03-27-91	1.3	3.14	94.48	1.67	.56	.14	<.01	<.01	<.01	.975	-42.42	--
Usselmann Com 1 (MV)	31N-10W-04ABD	03-27-91	1.2	.85	85.76	8.57	3.36	.54	.78	.15	<.01	.865	-41.55	-206
Scott 6-A (MV)	31N-10W-04DBD	04-15-91	2.2	1.74	88.55	6.30	2.31	.40	.57	.07	.06	.901	-42.03	--
Marcotte Com 1 (MV)	31N-10W-05ADB	04-02-91	.9	.93	85.13	8.79	3.53	.59	.87	.09	.09	.859	-41.82	--
Larcher 1 (MV)	31N-10W-07CAC	03-27-91	2.1	.77	83.67	9.30	4.20	.75	1.08	.11	.11	.843	-41.80	--
Bruington 3 (PC)	31N-11W-25BAC	03-27-91	1.6	.25	89.70	6.34	2.55	.43	.60	.13	<.01	.899	-40.27	-193
Bruington 1-A (MV)	31N-11W-25BCA	04-02-91	1.1	.60	84.84	9.12	3.61	.61	.94	.20	.10	.853	-42.19	-203
Pubco State Com 4 (FL)	31N-11W-36CBD	04-02-91	1.2	.17	90.29	5.89	2.53	.45	.55	.07	.06	.904	-41.95	--
Martinez Com A-1A (MV)	32N-10W-32DBD	03-06-91	1.7	.86	84.89	9.00	3.57	.62	.87	<.01	<.01	.856	-41.75	--
Ealum Com C-1R (FL)	32N-10W-33ACA	04-03-91	1.0	4.21	95.46	.32	<.01	<.01	<.01	<.01	<.01	.997	-43.09	--
Jaquez Com F-1 (DK)	32N-10W-34BAD	03-06-91	1.9	2.87	96.44	.45	.23	<.01	<.01	<.01	<.01	.993	-42.62	-208
Leeper Com 1-A (MV)	32N-10W-34BAD	04-03-91	.9	.95	86.14	8.38	3.09	.52	.75	.09	.08	.870	-41.11	-204

[1]Sample collected adjacent to cathodic-protection well.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N517
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 1 Archuleta
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *
TOTA Se	11.3	

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	3.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

Appendix 17a. Water quality data, San Juan River, 24 March 1992 (U S Bureau of Indian Affairs 1993)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N518
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 2 Blanco
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N519
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 3 Bloomfield
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N520
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By:

Date Collected: 03/24/92
Field Number: 4 Lee Acres
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	<1.0	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	<1.0	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	<1.0	50.0*	Ra 228 :		
Sulfates :		250**	Silver :	<1.0	100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N521
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 5 Bondad
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.3	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N522
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 6 Aztec - F
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.5	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	8.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N523
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 7 Flora Vista
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	130.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N524
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: DWM

Date Collected: 03/24/92
Field Number: 8 Farmington(Miller)
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	
Heptachlor :	
Heptachlo Ep:	
4, 4' DDE :	
Dieldrin:	
4,4'DDD :	
4,4'DDT :	
Endosul I:	
Endosul II :	
Endosul SO4:	
Endrin Aldh:	
Aldrin :	

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N525
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 9 - 371
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N527
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 11 La Plata
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N528
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Rwm

Date Collected: 03/24/92
Field Number: 12 Kirtland
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.5	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev. 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N529
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By:

Date Collected: 03/24/92
Field Number: 13 Hogback
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	20.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N530
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 14 Chaco Wash
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N531
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 15 Shiprock
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	8.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev. 2/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N532
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 16 Mancos
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N533
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 17 Four Corners
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	<1.0	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	<1.0	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	2.4	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	<2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL 5 (Rev. 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N534
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 18 Aneth
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	4.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev. 8/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N535
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92
Field Number: 19 McElmo
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N537
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 21 Bluff
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	44.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev. 8/80)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N538
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 22 Mexican Hat
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.8	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	8.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N541
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 1 Archuleta Total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	<1.0	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	11.3	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	11.3	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	23.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N542
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 2 Blanco Total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	<1.0	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	10.9	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	10.9	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	12.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N543
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By:

Date Collected: 03/24/92
Field Number: 3 Bloomfield total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	5.4	50.0*
Mercury :	<0.2	2.00*
Selenium:	5.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	11.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N544
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 4 Lee Acres total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	14.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N545
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92 total
Field Number: 5 Bondad
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.4	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	7.5	50.0*
Mercury :	<0.2	2.00*
Selenium:	7.5	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	41.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N546
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 6 Aztec total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	2.3	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	10.0	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	10.0	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	46.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N547
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Rwm

Date Collected: 03/24/92
Field Number: 7 Flora Vista total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	3.9	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	5.9	50.0*
Mercury :	<0.2	2.00*
Selenium:	5.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	132.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N548
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Rwm

Date Collected: 03/24/92
Field Number: 8 Miller total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	5.4	50.0*
Mercury :	<0.2	2.00*
Selenium:	5.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	30.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N549
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92
Field Number: 9 371 Total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	15.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N551
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92
Field Number: 11 La Plata Total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	4.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	20.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N552
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92 total
Field Number: 12 Kirtland
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	3.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.3	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	28.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N553
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 13 Hogback total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	50.0	5000

OTHER TESTS-TEST 4

Chlordane :
Heptachlor :
Heptachlo Ep:
4, 4' DDE :

Dieldrin:
4,4'DDD :
4,4'DDT :
Endosul I:

Endosul II :
Endosul SO4:
Endrin Aldh:
Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N554
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 14 Chaco Wash total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	<1.0	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	<1.0	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	<1.0	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	60.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N555
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92 total
Field Number: 15 Shiprock
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	3.2	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	20.0	5000

OTHER TESTS-TEST 4

Chlordane :
Heptachlor :
Heptachlo Ep:
4, 4' DDE :

Dieldrin:
4,4'DDD :
4,4'DDT :
Endosul I:

Endosul II :
Endosul SO4:
Endrin Aldh:
Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N556
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Raum

Date Collected: 03/24/92
Field Number: 16 Mancos total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	16.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	34.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N557
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 17 Four Corners total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	6.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	30.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N558
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 18 Aneth total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Spc Cond. :		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filt. :		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000**				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	1.8	50.0*	PCB :		0
Sodium :		20-250**	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150**	Copper :		---	Gr Alph:		15
Boron :		1.0**	Lead :	<1.0	50.0*	Gr Beta:		50
Chlorides :		250**	Mercury :	<0.2	2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	<1.0	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TESTS

	mg/l			ug/l			ug/l	
Hrdn CaCO3 :		0-50	Aluminum:		50-200	Molybde:		---
Alk.as CaCO3:		---	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	16.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N559
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: [illegible]

Date Collected: 03/24/92 total
Field Number: 19 McElmo
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	10.2	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	15.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev. 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N551
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: DWM

Date Collected: 03/24/92
Field Number: 21 Bluff total
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	7.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	4.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	4.3	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	31.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N540
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: San Juan West
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	48.2	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	43.4	50.0*
Mercury :	<0.2	2.00*
Selenium:	44.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	44.0	5000

OTHER TESTS-TEST 4

Chlordane :
Heptachlor :
Heptachlo Ep:
4, 4' DDE :

Dieldrin:
4,4'DDD :
4,4'DDT :
Endosul I:

Endosul II :
Endosul SO4:
Endrin Aldh:
Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N539
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: San Juan East
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	4.9	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.3	50.0*
Mercury :	0.88	2.00*
Selenium:	5.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
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: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N560
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 20 Montezuma
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	7.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	15.2	50.0*
Mercury :	<0.2	2.00*
Selenium:	15.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	147.5	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
:
: CHECK SAMPLE REPORT ATTACHED.
:
:
: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

TEST 3 CHECK SAMPLE REPORT

FY 92 LAB NO	ARSENIC ug/L		SELENIUM ug/L		LEAD ug/L		MERCURY ug/L		ZINC ug/L	
N526		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	2.0	2.6	2.0	2.2	10.0	10.5				
N536		<1.0		3.0		<1.0				
Dupli		<1.0		2.7		<1.0				
Spike	2.0	1.8	2.0	4.3	10.0	9.8				
N550		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	10.0	10.8	10.0	9.8	10.0	9.7				
N560		7.7		15.2		15.1				
Dupli		6.9		14.9		15.4				
Spike	10.0	17.7	10.0	24.8	10.0	24.6				
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										

NREL-5c (5/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N550
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Rim

Date Collected: 03/24/92
Field Number: 10 Colo. Ex. St.
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:

CHECK SAMPLE REPORT ATTACHED.

* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

TEST 3 CHECK SAMPLE REPORT

FY 92 LAB NO	ARSENIC ug/L		SELENIUM ug/L		LEAD ug/L		MERCURY ug/L		ZINC ug/L	
N526		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	2.0	2.6	2.0	2.2	10.0	10.5				
N536		<1.0		3.0		<1.0				
Dupli		<1.0		2.7		<1.0				
Spike	2.0	1.8	2.0	4.3	10.0	9.8				
N550		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	10.0	10.8	10.0	9.8	10.0	9.7				
N560		7.7		15.2		15.1				
Dupli		6.9		14.9		15.4				
Spike	10.0	17.7	10.0	24.8	10.0	24.6				
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										

NREL-5c (5/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N536
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: Rum

Date Collected: 03/24/92
Field Number: 20 Montezuma
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	9.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:
Heptachlor :	4,4'DDD :
Heptachlo Ep:	4,4'DDT :
4, 4' DDE :	Endosul I:

Endosul II :
Endosul SO4:
Endrin Aldh:
Aldrin :

Cation - Anion Balance:
:
: CHECK SAMPLE REPORT ATTACHED.
:
:
: * THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

TEST 3 CHECK SAMPLE REPORT

FY 92 LAB NO	ARSENIC ug/L		SELENIUM ug/L		LEAD ug/L		MERCURY ug/L		ZINC ug/L	
N526		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	2.0	2.6	2.0	2.2	10.0	10.5				
N536		<1.0		3.0		<1.0				
Dupli		<1.0		2.7		<1.0				
Spike	2.0	1.8	2.0	4.3	10.0	9.8				
N550		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	10.0	10.8	10.0	9.8	10.0	9.7				
N560		7.7		15.2		15.1				
Dupli		6.9		14.9		15.4				
Spike	10.0	17.7	10.0	24.8	10.0	24.6				
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										

NREL-5c (5/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 92N526
Date Received: 03/31/92
Date Analysis Reported: 05/06/92
Checked By: RWM

Date Collected: 03/24/92
Field Number: 10 Colo. Ex. St.
Submitter : NIIP
Location: NIIP-Farmington, NM
Collector's Name: Raymond Smith
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 3539 East 30th Street
: Northwest Energy Bldg, Rm 103
: Farmington, NM 87401
ATTENTION : Robert M. Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Spc Cond. :		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filt. :		500
Res. Susp. :		---
Calcium :		75-2000**
Magnesium :		50-150**
Sodium :		20-250**
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150**
Boron :		1.0**
Chlorides :		250**
Fluorides :		4.0 *
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TESTS

	mg/l	
Hrdn CaCO3 :		0-50
Alk.as CaCO3:		---
S.A.R. :		---
Turbidity :		OTU

	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TESTS-TEST 4

Chlordane :	Dieldrin:	Endosul II :
Heptachlor :	4,4'DDD :	Endosul SO4:
Heptachlo Ep:	4,4'DDT :	Endrin Aldh:
4, 4' DDE :	Endosul I:	Aldrin :

Cation - Anion Balance:
:
:
: CHECK SAMPLE REPORT ATTACHED.
:
: * THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARD.

NREL-5 (Rev 9/90)

TEST 3 CHECK SAMPLE REPORT

FY 92 LAB NO	ARSENIC ug/L		SELENIUM ug/L		LEAD ug/L		MERCURY ug/L		ZINC ug/L	
[redacted]		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	2.0	2.6	2.0	2.2	10.0	10.5				
N536		<1.0		3.0		<1.0				
Dupli		<1.0		2.7		<1.0				
Spike	2.0	1.8	2.0	4.3	10.0	9.8				
N550		<1.0		<1.0		<1.0				
Dupli		<1.0		<1.0		<1.0				
Spike	10.0	10.8	10.0	9.8	10.0	9.7				
N560		7.7		15.2		15.1				
Dupli		6.9		14.9		15.4				
Spike	10.0	17.7	10.0	24.8	10.0	24.6				
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										
Dupli										
Spike										

NREL-5c (5/92)

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

MAY 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	5-19-92	8.1	8.4	0.27	245	<1.0	<1.0	<1.0	5.2	<0.2	<0.2
Blanco	San Juan	5-19-92	9.2	8.0	0.28	174	<1.0	<1.0	<1.0	6.6	<0.2	<0.2
Bloomfield	San Juan	5-19-92	9.7	8.0	0.29	185	<1.0	<1.0	<1.0	11.2	<0.2	<0.2
Lee Acres	San Juan	5-19-92	9.7	8.1	0.29	154	<1.0	<1.0	<1.0	4.4	<0.2	<0.2
Bondad	Animas	5-18-92	15.1	8.3	0.21	199	<1.0	<1.0	<1.0	13.1	<0.2	<0.2
Aztec	Animas	5-18-92	15.2	8.2	0.23	235	<1.0	<1.0	<1.0	19.4	<0.2	<0.2
Flora Vista	San Juan	5-19-92	14.4	8.0	0.26	151	<1.0	<1.0	<1.0	14.5	<0.2	<0.2
Farmington-Miller	Animas	5-19-92	16.2	8.1	0.26	132	<1.0	<1.0	<1.0	18.9	<0.2	<0.2
Hiway 371 Brdg	San Juan	5-27-92	17.5	8.1	0.28	213	<1.0	-	<1.0	-	<0.2	-
CO ST BS ST	LaPlata	5-18-92	8.5	7.7	0.12	241	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2
La Plata	LaPlata	5-18-92	17.9	8.4	1.13	177	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2
Kirtland	San Juan	5-20-92	11.6	8.2	-	193	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2
Hogback	San Juan	5-26-92	13.1	8.5	0.55	183	<1.0	-	<1.0	-	<0.2	-
Chaco Wash	Tributary	5-20-92	-	-	-	-	-	-	-	-	-	-
Shiprock	San Juan	5-26-92	15.9	8.4	0.31	200	2.4	-	<1.0	-	<0.2	-
Mancos River	Tributary	5-26-92	19.0	8.1	0.75	170	2.4	-	<1.0	-	<0.2	-
Four Corners	San Juan	5-26-92	19.5	8.1	0.34	182	3.1	-	<1.0	-	<0.2	-
Aneth	San Juan	5-27-92	15.6	8.3	0.26	199	2.3	-	<1.0	-	<0.2	-
McElmo Creek	Tributary	5-27-92	17.0	8.2	0.80	192	1.9	-	<1.0	-	<0.2	-
Montezuma Cr.	Tributary	5-27-92	17.1	8.2	0.39	220	1.8	-	<1.0	-	<0.2	-
Bluff	San Juan	5-27-92	18.3	8.2	0.39	238	1.1	-	<1.0	-	<0.2	-
Mexican Hat	San Juan	5-27-92	21.8	8.3	0.37	230	<1.0	-	<1.0	-	<0.2	-
(Control samples)												
1. San Juan Total	-	-	-	-	-		37.8	48.5	33.8	45.5	0.85	3.25

Appendix 17b. Water quality data, San Juan River, May 1992-April 1993 (U S Bureau of Indian Affairs 1993)

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

MAY 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation
Archuleta	2.1	3.8	<2.0	76.0	Clear & Hot	Water-clear
Blanco	1.4	2.9	<2.0	30.0	Clear & Hot	Water-clear
Bloomfield	2.3	4.9	27.0	27.0	Clear, Hot & Breezy	Water-clear
Lee Acres	2.2	5.6	93.0*	26.0	Partly Cloudy & Breezy	Water-clear
Bondad	3.5	5.5	46.0	96.0	Partly Cloudy & Sprinkling	Water-clear
Aztec	3.5	7.1	20.0	94.0	Partly Cloudy & Hot	Water-clear
Flora Vista	3.5	6.1	55.0	93.0	Partly Cloudy & Very Warm	Water-clear
Farmington-Miller	3.6	6.2	21.0	104.0	Partly Cloudy & Very Warm	Water-clear
Hiway 371 Brdg	4.3	-	2.0	-	Partly Cloudy & Very Warm	Water-clear
CO ST BS ST	4.2	6.4	2.0	21.0	Partly Cloudy & Very Warm	Water-clear
La Plata	5.4	9.9	6.0	22.0	Partly Cloudy & Very Warm	Water-clear
Kirtland	4.2	8.4	45.0*	40.0	Partly Cloudy & Very Warm	Water-clear
Hogback	4.9	-	75.0*	41.0	Partly Cloudy & Very Warm	Water-clear
Chaco Wash	-	-	-	-	Partly Cloudy & Very Warm	Wash is Dry
Shiprock	5.2	-	41.0	-	Partly Cloudy & Very Warm	Water-clear
Mancos River	6.5	-	<2.0	-	Partly Cloudy & Very Warm	Water-clear
Four Corners	4.3	-	5.0	-	Partly Cloudy & Very Warm	Water-clear
Aneth	3.8	-	4.0	-	Clear & Very Warm	Water-Muddy
McElmo Creek	5.3	-	4.0	-	Clear & Very Warm	Water-Muddy
Montezuma Cr.	5.0	-	23.0	-	Clear & Very Warm	Water-Muddy
Bluff	5.1	-	2.0	-	Clear & Hot	Water-Muddy
Mexican Hat	<1.0	-	8.0	-	Clear & Hot	Water-Muddy
(Control samples)						
1. San Juan Total	40.0	59.2	21.0	45.0	-	-

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

JUNE 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	6-23-92	14.7	8.49	0.27	192	1.5	2.1	<1.0	3.7	<0.2	<0.2
Blanco	San Juan	6-23-92	12.8	7.71	0.28	196	1.3	1.8	<1.0	2.3	<0.2	<0.2
Bloomfield	San Juan	6-23-92	13.8	8.05	0.30	205	1.3	1.3	<1.0	7.6	<0.2	<0.2
Lee Acres	San Juan	6-23-92	17.6	8.12	0.33	188	1.4	1.7	<1.0	2.5	<0.2	<0.2
Bondad	Animas	6-23-92	14.8	8.14	0.22	204	<1.0	1.6	4.2	17.8	<0.2	<0.2
Aztec	Animas	6-23-92	15.2	7.84	0.24	218	1.1	1.7	<1.0	15.8	<0.2	<0.2
Flora Vista	San Juan	6-23-92	14.8	7.63	0.25	210	<1.0	1.4	<1.0	23.9	<0.2	<0.2
Farmington-Miller	Animas	6-23-92	18.8	8.66	0.26	205	<1.0	1.8	<1.0	15.9	<0.2	<0.2
Hiway 371 Brdg	San Juan	6-23-92	18.2	8.54	0.23	193	1.2	2.3	<1.0	9.5	<0.2	<0.2
CO ST BS ST	LaPlata	6-23-92	19.4	8.14	0.16	236	<1.0	1.1	<1.0	<1.0	<0.2	<0.2
La Plata	LaPlata	6-23-92	21.4	7.81	3.00	212	1.4	1.5	<1.0	<1.0	<0.2	<0.2
Kirtland	San Juan	6-23-92	18.3	8.59	0.21	185	1.5	1.8	<1.0	6.7	<0.2	<0.2
Hogback	San Juan	6-24-92	15.8	8.20	0.31	166	1.2	1.9	<1.0	1.7	<0.2	<0.2
Chaco Wash	Tributary	6-23-92	25.0	8.63	1.12	166	1.2	4.3	<1.0	<1.0	<0.2	<0.2
Shiprock	San Juan	6-25-92	18.7	8.35	0.35	179	1.4	1.5	<1.0	4.7	<0.2	<0.2
Mancos River	Tributary	6-24-92	26.1	8.49	1.25	162	1.3	2.4	<1.0	<1.0	<0.2	<0.2
Four Corners	San Juan	6-25-92	19.5	8.29	0.37	159	1.7	2.4	<1.0	4.5	<0.2	<0.2
Aneth	San Juan	6-24-92	23.5	8.33	0.35	204	1.8	2.5	<1.0	3.9	<0.2	<0.2
McElmo Creek	Tributary	6-24-92	28.9	8.30	1.67	178	1.3	2.7	<1.0	<1.0	<0.2	<0.2
Montezuma Cr.	Tributary	6-24-92	24.2	8.28	0.38	192	1.8	2.6	<1.0	6.1	<0.2	<0.2
Bluff	San Juan	6-24-92	21.8	8.23	0.37	150	1.8	3.2	<1.0	6.8	<0.2	<0.2
Mexican Hat	San Juan	6-24-92	22.2	8.27	0.37	177	2.0	3.2	<1.0	5.7	<0.2	<0.2
(Control samples)												
1. San Juan East	-	-	-	-	-	-	23.1 (20)	-	19.7 (20)	-	<0.2 (-)	-
2. San Juan West	-	-	-	-	-	-	44.8 (40)	-	40.0 (40)	-	<0.2 (-)	-
Chinde Wash	-	-	-	-	-	-	-	-	-	-	-	-
Gallegos W.(6/09/92)	-	-	-	-	-	-	15.8	18.0	<1.0	<1.0	<0.2	<0.2
Gallegos W.(6/15/92)	-	-	-	-	-	-	-	-	-	-	-	-
Ojo Amarillo	-	-	-	-	-	-	19.0*	17.8	<1.0	<1.0	<0.2	<0.2
Slim Mustache	-	-	-	-	-	-	91.2	100.4	<1.0	<1.0	<0.2	<0.2

Navajo Indian Irrigation Project
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JUNE 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation
Archuleta	<1.0	<1.0	4.0	33.0	Clear & Warm	Water-Clear
Blanco	<1.0	<1.0	<2.0	31.0	Clear & Warm	Water-Clear
Bloomfield	<1.0	<1.0	<2.0	34.0	Clear & Warm	Water-Clear
Lee Acres	<1.0	<1.0	<2.0	31.0	Clear & Warm	Water-Clear
Bondad	<1.0	<1.0	2.0	130.0	Clear & Warm	Water-Clear
Aztec	<1.0	<1.0	12.0	92.0	Clear & Warm	Water-Clear
Flora Vista	<1.0	<1.0	10.0	103.0	Clear & Warm	Water-Clear
Farmington-Miller	<1.0	<1.0	38.0	90.0	Clear & Warm	Water-Clear
Hiway 371 Brdg	<1.0	<1.0	15.0	68.0	Partly Cloudy & Warm	Water-Clear
CO ST BS ST	<1.0	<1.0	<2.0	20.0	Clear & Warm	Water-Clear
La Plata	<1.0	<1.0	11.0	20.0	Clear & Warm	Water-Clear
Kirtland	<1.0	<1.0	10.0	38.0	Partly Cloudy & Warm	Water-Clear
Hogback	<1.0	<1.0	<2.0	40.0	Clear & Hot	Water-Clear
Chaco Wash	<1.0	<1.0	<2.0	38.0	Partly Cloudy & Warm	Water-Murky
Shiprock	<1.0	<1.0	10.0	33.0	Clear & Hot	Water-Clear
Mancos River	<1.0	<1.0	20.0	21.0	Clear & Hot	Water-Clear,Decreas
Four Corners	<1.0	<1.0	8.0	46.0	Cloudy & Cool	Water-Clear
Aneth	<1.0	<1.0	2.0	37.0	Clear & Hot	Water-Murky
McElmo Creek	<1.0	1.0	<2.0	20.0	Clear & Hot	Water-Murky
Montezuma Cr.	<1.0	<1.0	2.0	40.0	Clear & Hot	Water-Clear
Bluff	<1.0	<1.0	4.0	50.0	Clear & Hot	Water-Clear
Mexican Hat	<1.0	<1.0	<2.0	45.0	Clear & Hot	Water-Clear
(Control samples)						
1. San Juan East	27.7 (24)	-	16.0 (20)	-	-	-
2. San Juan West	47.6 (48)	-	77.0* (40)	-	-	-
Chinde Wash	7.0*	5.1	-	-	-	-
Gallegos W.(6/09/92)	12.0*	10.7	26.0	48.0	-	-
Gallegos W.(6/15/92)	7.4	3.66	-	-	-	-
Ojo Amarillo	5.3	28.1	11.0	60.0	-	-
Slim Mustache	5.7	112.0	11.0	60.0	-	-

Navajo Indian Irrigation Project
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JULY 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	7-23-92	11.8	8.89	0.24	189	1.4	1.6	7.0	27.5	<0.2	<0.2
Blanco	San Juan	7-23-92	15.2	8.51	0.27	207	1.3	1.7	5.2	19.8	<0.2	0.45
Bloomfield	San Juan	7-25-92	16.1	8.10	0.36	201	1.5	52.0	2.5	126.0	0.45*	<0.2
Lee Acres	San Juan	7-25-92	16.3	8.19	0.38	191	1.6	3.9	3.8	13.4	0.58*	0.45
Bondad	Animas	7-23-92	20.1	8.97	0.35	165	1.3	1.5	6.2	23.6	<0.2	<0.2
Aztec	Animas	7-23-92	21.4	8.40	0.43	179	1.3	2.2	4.1	20.1	<0.2	<0.2
Flora Vista	San Juan	7-23-92	22.2	8.46	0.47	177	2.0	3.4	5.2	25.3	<0.2	<0.2
Farmington-Miller	Animas	7-25-92	18.9	8.12	0.45	168	1.9	38.1	4.4	47.6	<0.2	<0.2
Hiway 371 Brdg	San Juan	7-25-92	18.7	8.29	0.44	183	<1.0	8.1	5.2	25.5	<0.2	<0.2
CO ST BS ST	LaPlata	7-25-92	16.2	7.91	0.39	218	3.1	3.9	4.8	8.1	<0.2	<0.2
La Plata	LaPlata	7-25-92	17.3	8.24	1.12	182	1.6	4.9	<1.0	4.0	<0.2	<0.2
Kirtland	San Juan	7-25-92	20.4	8.23	0.47	158	<1.0	2.3	1.0	10.7	<0.2	<0.2
Hogback	San Juan	7-24-92	20.9	8.43	0.52	182	1.1	2.0	<1.0	3.0	<0.2	<0.2
Chaco Wash	Tributary	7-24-92	22.4	7.77	1.48	210	6.4	275.0	<1.0	164.0	<0.2	1.25
Shiprock	San Juan	7-24-92	21.0	8.49	0.57	198	1.6	1.8	<1.0	<1.0	0.3*	<0.2
Mancos River	Tributary	7-24-92	20.7	8.38	1.52	202	1.0	3.9	<1.0	<1.0	<0.2	<0.2
Four Corners	San Juan	7-24-92	21.0	8.25	0.65	188	1.6	39.8	<1.0	28.7	<0.2	<0.2
Aneth	San Juan	7-24-92	21.6	8.41	0.83	155	1.6	6.5	<1.0	2.4	<0.2	<0.2
McElmo Creek	Tributary	7-24-92	21.0	8.36	1.22	156	1.1	98.0	<1.0	84.2	<0.2	<0.2
Montezuma Cr.	Tributary	7-24-92	21.6	8.40	0.77	194	1.7	72.8	<1.0	61.6	<0.2	<0.2
Bluff	San Juan	7-24-92	22.0	8.32	0.86	153	1.2	44.2	<1.0	141.6	<0.2	<0.2
Mexican Hat	San Juan	7-24-92	23.0	8.34	0.65	160	1.2	14.3	<1.0	21.8	<0.2	<0.2
											<0.2	<0.2
(Control samples)												
1. San Juan East			-	-	-	-	18.2 (20)	-	20.5 (20)	-	<0.2 (-)	-
2. San Juan West			-	-	-	-	33.2 (40)	-	39.1 (40)	-	0.35 (-)	-

Navajo Indian Irrigation Project
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JULY 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation
Archuleta	3.2	3.9	38.0	143.0	Sprinkling & Cool	Water-Clear
Blanco	2.5	2.6	520.0	900.0	Raining & Cool	Water-Clear
Bloomfield	2.5	23.4	152.0	520.0	Raining & Cool	Water-Clear
Lee Acres	3.2	3.3	137.0	474.0	Raining & Cool	Water-Clear
Bondad	3.8*	3.2	70.0	310.0	Overcast, Cool & Humid	Water-Clear
Aztec	4.6*	4.1	256.0*	129.0	Overcast, Cool & Humid	Water-Clear
Flora Vista	3.1	5.3	34.0	135.0	Overcast, Cool & Humid	Water-Clear
Farmington-Miller	3.2	22.0	60.0	320.0	Overcast & Cool	Water-Murky
Hiway 371 Brdg	<1.0	2.8	68.0	188.0	Partly Cloudy & Cool	Water-Murky
CO ST BS ST	1.3*	<1.0	2.0	99.0	Partly Cloudy & Cool	Water-Clear
La Plata	<1.0	1.4	21.0	115.0	Partly Cloudy & Cool	Water-Murky
Kirtland	1.2*	<1.0	35.0	60.0	Partly Cloudy & Cool	Water-Murky
Hogback	1.1*	<1.0	7.0	58.0	Cloudy & Cool	Water-Murky
Chaco Wash	1.9*	1.4	30.0	1920.0	Partly Cloudy & Humid	Water-Very Muddy
Shiprock	2.5*	1.9	50.0	305.0	Cloudy & Cool	Water-Murky
Mancos River	3.2	6.8	3.0	61.0	Sprinkling & Cool	Water-Muddy
Four Corners	1.2	11.6	5.0	208.0	Overcast & Cool	Water-Muddy
Aneth	<1.0	5.6	16.0	49.0	Overcast & Cool	Water-Muddy
McElmo Creek	3.4	24.0	26.0	470.0	Overcast & Cool	Water-Muddy
Montezuma Cr.	<1.0	6.9	9.0	280.0	Overcast & Cool	Water-Muddy
Bluff	<1.0	45.7	52.0	870.0	Overcast & Cool	Water-Muddy
Mexican Hat	<1.0	32.5	68.0	500.0	Overcast & Cool	Water-Muddy
(Control samples)						
1. San Juan East	19.0 (24)	-	19.0 (20)	-	-	-
2. San Juan West	44.8 (48)	-	38.0 (40)	-	-	-

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Farmington, NM 87401

AUGUST 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	8-21-92	12.2	8.1	0.27	140	<1.0	1.6	<1.0	<1.0	<0.2	<0.2
Blanco	San Juan	8-21-92	15.3	8.2	0.29	150	1.9	2.4	<1.0	<1.0	<0.2	<0.2
Bloomfield	San Juan	8-21-92	20.1	8.6	0.36	120	2.9	3.8	<1.0	<1.0	<0.2	<0.2
Lee Acres	San Juan	8-21-92	22.7	8.8	0.40	87	3.9*	3.3	<1.0	1.8	<0.2	<0.2
Bondad	Animas	8-21-92	17.2	8.4	0.57	110	3.2	3.8	<1.0	2.6	<0.2	<0.2
Aztec	Animas	8-22-92	19.2	8.3	0.60	109	2.3	3.9	<1.0	8.3	<0.2	<0.2
Flora Vista	San Juan	8-22-92	23.8	8.5	0.65	133	1.7	3.8	<1.0	3.3	<0.2	<0.2
Farmington-Miller	Animas	8-22-92	19.6	8.2	0.71	106	1.8	4.1	<1.0	2.6	<0.2	<0.2
Hiway 371 Brdg	San Juan	8-22-92	19.0	8.2	0.47	130	1.0	2.3	<1.0	<1.0	<0.2	<0.2
CO ST BS ST	LaPlata	8-21-92	15.2	8.0	0.43	149	1.6	2.4	<1.0	1.0	<0.2	<0.2
La Plata	LaPlata	8-21-92	16.9	7.7	1.43	135	3.0	4.3	<1.0	<1.0	<0.2	<0.2
Kirtland	San Juan	8-22-92	25.1	9.1	0.52	44	1.1*	<1.0	<1.0	<1.0	<0.2	<0.2
Hogback	San Juan	8-21-92	26.5	8.5	0.60	28	<1.0	1.4	<1.0	<1.0	<0.2	<0.2
Chaco Wash	Tributary	8-21-92	-	-	-	-	-	-	-	-	-	-
Shiprock	San Juan	8-21-92	26.9	8.4	0.64	21	1.1	2.6	<1.0	<1.0	<0.2	<0.2
Mancos River	Tributary	8-21-92	27.6	8.1	1.61	58	3.7	7.6	<1.0	<1.0	<0.2	<0.2
Four Corners	San Juan	8-20-92	26.2	8.5	0.71	50	<1.0	1.6	3.8*	<1.0	<0.2	<0.2
Aneth	San Juan	8-20-92	26.6	8.2	1.22	62	1.2	3.3	<1.0	<1.0	<0.2	<0.2
McElmo Creek	Tributary	8-20-92	25.4	8.1	1.86	93	5.3	9.1	<1.0	<1.0	<0.2	<0.2
Montezuma Cr.	Tributary	8-20-92	23.5	8.4	0.97	115	1.9	6.4	<1.0	<1.0	<0.2	<0.2
Bluff	San Juan	8-20-92	22.4	8.4	0.84	140	26.9	43.9	<1.0	<1.0	<0.2	<0.2
Mexican Hat	San Juan	8-20-92	23.6	8.4	0.81	143	6.0*	3.9	<1.0	<1.0	<0.2	<0.2
(Control samples)												
1. San Juan East	-	-	-	-	-	-	23.3 (20)	-	19.8 (20)	-	<0.2 (-)	-
2. San Juan West	-	-	-	-	-	-	45.0 (40)	-	46.3 (40)	-	<0.2 (-)	-

Navajo Indian Irrigation Project
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AUGUST 1992 RIVER SAMPLING (CON

(T=Total)
(ppb=parts per billion)

NOTE: Water not as high as last month.

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation
Archuleta	<1.0	1.1	10.0	125.0	Clear & Hot	Water-Clear
Blanco	1.4*	1.0	10.0	70.0	Clear & Hot	Water-Clear
Bloomfield	1.3	1.6	6.0	98.0	Clear & Hot	Water-Clear
Lee Acres	1.0	1.5	30.0	100.0	Clear & Hot	Water-Clear
Bondad	2.0	2.1	20.0	162.0	Partly Cloudy & Cool	Water-Clear
Aztec	2.3*	1.7	10.0	130.0	Clear & Warm	Water-Cloudy
Flora Vista	2.1	2.4	22.0	102.0	Clear & Warm	Water-Clear
Farmington-Miller	2.1	2.5	10.0	107.0	Clear & Warm	Water-Clear
Hiway 371 Brdg	<1.0	<1.0	8.0	76.0	Clear & Warm	Water-Murky
CO ST BS ST	<1.0	1.0	7.0	86.0	Partly Cloudy & Cool	Water-Clear,Low
La Plata	1.2	1.9	25.0	95.0	Partly Cloudy & Cool	Water-Clear,Low
Kirtland	1.3	1.7	23.0	100.0	Clear & Hot	Water-Clear
Hogback	1.2	1.6	4.0	114.0	Clear & Hot	Water-Clear
Chaco Wash	-	-	-	-	-	Dry Wash
Shiprock	1.8	2.5	270.0*	100.0	Clear & Hot	Water-Murky
Mancos River	3.8	4.1	340.0*	104.0	Clear & Hot	Water-Murky
Four Corners	2.4	3.7	1370.0*	76.0	Clear & Warm	Water-Murky
Aneth	2.9	2.9	80.0	95.0	Clear & Warm	Water-Murky
McElmo Creek	3.5	3.7	246.0*	90.0	Clear & Warm	Water-Murky
Montezuma Cr.	3.8*	3.6	13.0	102.0	Clear & Warm	Water-Murky
Bluff	3.4	4.1	41.0	96.0	Clear & Hot	Water-Muddy
Mexican Hat	5.6	6.9	11.0	90.0	Clear & Hot	Water-Muddy
(Control samples)						
1. San Juan East	25.1 (24)	-	20.0 (20)	-	-	-
2. San Juan West	47.7 (48)	-	39.0 (40)	-	-	-

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SEPTEMBER 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	9-17-92	14.3	8.8	0.27	182	2.0*	1.7	<1.0	5.6	<0.2	0.22
Blanco	San Juan	9-17-92	14.6	8.3	0.29	179	2.2*	1.8	<1.0	3.9	<0.2	<0.2
Bloomfield	San Juan	9-17-92	19.8	8.6	0.37	152	2.2	2.5	<1.0	6.0	<0.2	<0.2
Lee Acres	San Juan	9-17-92	19.7	9.0	0.41	150	2.3	2.5	<1.0	5.6	<0.2	<0.2
Bondad	Animas	9-17-92	19.1	8.7	0.51	219	2.5*	2.2	<1.0	13.0	<0.2	<0.2
Aztec	Animas	9-17-92	22.4	8.4	0.56	209	1.1	1.6	5.1*	1.0	<0.2	<0.2
Flora Vista	San Juan	9-17-92	21.8	8.6	0.62	196	1.3	1.5	2.0	9.0	<0.2	<0.2
Farmington-Miller	Animas	9-18-92	20.0	8.4	0.66	154	1.6	2.0	2.3	14.8	<0.2	<0.2
Hiway 371 Brdg	San Juan	9-18-92	19.0	8.6	0.57	160	2.3	2.5	1.0	5.5	<0.2	<0.2
CO ST BS ST	LaPlata	9-18-92	19.2	8.3	0.43	161	2.3	2.9	<1.0	2.8	<0.2	<0.2
La Plata	LaPlata	9-18-92	19.9	8.1	1.47	174	3.0	3.7	1.3*	<1.0	<0.2	<0.2
Kirtland	San Juan	9-18-92	19.0	9.0	0.57	155	1.6	2.2	2.1	4.4	<0.2	<0.2
Hogback	San Juan	9-18-92	19.5	8.9	0.60	134	<1.0	1.4	<1.0	1.6	<0.2	<0.2
Chaco Wash	Tributary	9-18-92	-	-	-	-	-	-	-	-	-	-
Shiprock	San Juan	9-18-92	19.8	8.6	0.65	155	<1.0	1.1	1.4	3.9	<0.2	<0.2
Mancos River	Tributary	9-19-92	17.6	7.9	1.14	160	1.3	90.0	<1.0	172.0	<0.2	0.5
Four Corners	San Juan	9-19-92	17.2	8.0	1.01	170	1.2	200.0	<1.0	309.0	<0.2	0.5
Aneth	San Juan	9-19-92	17.9	8.2	0.70	157	<1.0	130.0	2.4	280.0	<0.2	0.5
McElmo Creek	Tributary	9-19-92	16.9	8.5	1.29	147	1.4	76.0	2.6	98.0	<0.2	2.2
Montezuma Cr.	Tributary	9-19-92	17.8	8.5	0.91	138	1.1	73.0	1.1	97.0	<0.2	0.22
Bluff	San Juan	9-19-92	17.8	8.5	0.77	121	1.1	49.3	<1.0	31.5	<0.2	<0.2
Mexican Hat	San Juan	9-19-92	17.8	8.3	0.91	138	1.4	94.8	<1.0	105.6	<0.2	0.22
Hydro Plant	San Juan	9-20-92	7.6	8.1	0.29	164	1.0*	<1.0	11.2*	<1.0	<0.2	<0.2
(Control samples)												
1. San Juan East	-	-	-	-	-	-	20.6 (20)	-	18.0 (20)	-	<0.2 (-)	-
2. San Juan West	-	-	-	-	-	-	41.4 (40)	-	37.1 (40)	-	<0.2 (-)	-

Navajo Indian Irrigation Project
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Farmington, NM 87401

SEPT 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

Note:Utah Area,Heav Rain Night Before.

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation
Archuleta	<1.0	<1.0	4.0	43.0	Partly Cloudy & Hot	Water-Clear, Low
Blanco	<1.0	<1.0	10.0	30.0	Partly Cloudy & Hot	Water-Clear, Low
Bloomfield	<1.0	<1.0	<2.0	47.0	Partly Cloudy & Hot	Water-Murky, algae
Lee Acres	<1.0	<1.0	2.0	30.0	Partly Cloudy & Hot	Water-Murky, algae
Bondad	<1.0	<1.0	11.0	60.0	Partly Cloudy & Hot	Water-Clear, Low
Aztec	<1.0	<1.0	23.0	51.0	Partly Cloudy & Hot	Water-Clear, Low
Flora Vista	<1.0	<1.0	55.0	217.0	Partly Cloudy & Hot	Water-Clear, Low
Farmington-Miller	<1.0	<1.0	22.0	36.0	Overcast & Cool	Water-Clear
Hiway 371 Brdg	<1.0	<1.0	64.0	115.0	Overcast & Cool	Water-Clear
CO ST BS ST	<1.0	<1.0	10.0	61.0	Cloudy & Cool	Water-Clear,Very Lo
La Plata	<1.0	<1.0	137.0*	38.0	Cloudy & Cool	Water-Clear,Very Lo
Kirtland	<1.0	<1.0	110.0*	31.0	Overcast & Cool & Windy	Water-Clear
Hogback	<1.0	<1.0	2.0	39.0	Overcast & Cool	Water-Murky
Chaco Wash	-	-	-	-	-	Wash is Dry
Shiprock	<1.0	<1.0	18.0	24.0	Overcast & Cool	Water-Clear
Mancos River	1.3*	<1.0	2.0	1470.0	Overcast & Cool	Water-Very Muddy
Four Corners	4.0*	<1.0	21.0	1080.0	Overcast & Cool	Water-Very Muddy
Aneth	1.8*	<1.0	200.0	1820.0	Overcast & Cool	Water-Very Muddy
McElmo Creek	1.5*	<1.0	120.0	410.0	Overcast & Cool	Very Muddy,Hi-Runof
Montezuma Cr.	1.6*	<1.0	14.0	470.0	Overcast & Cool	Water-Very Muddy
Bluff	1.9*	<1.0	26.0	180.0	Overcast & Cool	Muddy, Raining-East
Mexican Hat	2.1*	<1.0	10.0	500.0	Overcast & Cool	Water-Very Muddy
Hydro Plant	1.6*	1.1	27.0*	4.0	Overcast & Cold	Water-Clear
(Control samples)						
1. San Juan East	25.0 (24)	-	8.0 (20)		-	-
2. San Juan West	48.0 (48)	-	30.0 (40)		-	-

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

OCT 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Weather Condition	Observation (Water)
Archuleta	<1.0	<1.0	<2.0	55.0	Cloudy & Cold	Clear
Blanco	<1.0	<1.0	<2.0	<2.0	Partly Cloudy & Cool	Clear, Raining-East
Bloomfield	<1.0	<1.0	<2.0	17.0	Cloudy, Breezy & Cool	Clear
Lee Acres	<1.0	<1.0	<2.0	24.0	Cloudy, Breezy & Cool	Murky, Raining-East
Bondad	<1.0	<1.0	65.0	*35.0	Cloudy & Cold	Clear
Aztec	<1.0	<1.0	<2.0	28.0	Cloudy & Cold	Clear
Flora Vista	<1.0	<1.0	26.0	*15.0	Cloudy, Breezy & Warm	Clear
Farmington-Miller	<1.0	<1.0	<2.0	30.0	Cloudy, Breezy & Cool	Clear, Raining-East
Hiway 371 Brdg	<1.0	<1.0	<2.0	10.0	Cloudy, Breezy & Cool	Clear, Raining-East
CO ST BS ST	<1.0	<1.0	<2.0	<2.0	Partly Cloudy & Cool	Clear
La Plata	<1.0	<1.0	<2.0	2.0	Partly Cloudy,Breezy & Cool	Clear
Kirtland	<1.0	<1.0	17.0	19.0	Overcast, Breezy & Cool	Clear,Rain-East&Wes
Hogback	<1.0	<1.0	20.0	* 3.0	Overcast & Cool	Clear
Chaco Wash	1.1	1.1	<2.0	17.0	Overcast, Breezy & Cool	Clear, Rain-West
Shiprock	<1.0	<1.0	31.0	* 4.0	Overcast, Cool & Sprinkling	Cloudy, Rain-West
Mancos River	<1.0	<1.0	<2.0	14.0	Overcast, Cool & Sprinkling	Murky,Taken 5miabo
Four Corners	<1.0	<1.0	<2.0	17.0	Overcast, Cool & Sprinkling	Cloudy, Rain-West
Aneth	<1.0	<1.0	39.0	*10.0	Overcast & Cool	Cloudy
McElmo Creek	<1.0	<1.0	<2.0	41.0	Overcast & Cool	Muddy
Montezuma Cr.	<1.0	<1.0	69.0	*20.0	Overcast & Cool	Cloudy
Bluff	<1.0	<1.0	28.0	*14.0	Overcast & Cool	Murky
Mexican Hat	<1.0	<1.0	<2.0	62.0	Overcast & Cool	Muddy
Hydro Plant	<1.0	<1.0	10.0	10.0	Overcast & Cool	Clear
Navajo Dam	<1.0	<1.0	<2.0	27.0	Overcast & Cool	Clear
Gobernador	<1.0	<1.0	<2.0	150.0	Clear & Cool	Clear
(Control samples)						
1. San Juan East	2.8	-	10.0	-	-	-
(LOW STD)	(2.4)	-	(2.0)	-	-	-
2. Chinle Wash	13.9	-	<2.0	-	-	-
(High STD)	(12.0)	-	(10.0)	-	-	-
3. Comb Wash	<1.0	-	<2.0	-	-	-
(BLANK)	(0.0)	-	(0.0)	-	-	-

Note:Utah Area,Heav Rain Night Before.

Navajo Indian Irrigation Project
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OCTOBER 1992
RIVER SAMPLING
(CONT)

SAMPLE SITE	Turbidity (NTU)	Iron (DIS)	Iron(T) (DIS)
Archuleta	3.4	<10.0	195.0
Blanco	4.0	15.0	130.0
Bloomfield	13.0	10.0	1000.0
Lee Acres	18.0	<10.0	3190.0
Bondad	3.0	1005.0	* 260.0
Aztec	8.0	10.0	670.0
Flora Vista	4.5	85.0	265.0
Farmington-Miller	2.5	<10.0	150.0
Hiway 371 Brdg	18.0	<10.0	1950.0
CO ST BS ST	0.27	<10.0	50.0
La Plata	3.0	20.0	205.0
Kirtland	12.0	60.0	760.0
Hogback	10.0	15.0	760.0
Chaco Wash	9.0	<10.0	265.0
Shiprock	14.0	70.0	950.0
Mancos River	57.0	10.0	1655.0
Four Corners	17.0	20.0	1120.0
Aneth	27.0	40.0	1260.0
McElmo Creek	170.0	10.0	4875.0
Montezuma Cr.	27.0	130.0	1290.0
Bluff	30.0	55.0	1325.0
Mexican Hat	110.0	<10.0	4455.0
Hydro Plant	2.8	<10.0	90.0
Navajo Dam	1.7	<10.0	<10.0
Gobernador	2.2	<10.0	55.0
(Control samples)			
1. San Juan East	-	-	-
(LOW STD)	-	-	-
2. Chinle Wash	-	-	-
(High STD)	-	-	-
3. Comb Wash	-	-	-
(BLANK)	-	-	-

Navajo Indian Irrigation Project
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NOVEMBER 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	11-21-92	8.0	8.8	0.28	167	1.9	2.0	4.4	10.6	<0.2	<0.2
Blanco	San Juan	11-22-92	4.1	7.1	0.30	164	1.9	2.1	4.4	7.5	<0.2	<0.2
Bloomfield	San Juan	11-22-92	5.0	8.3	0.37	162	2.0	2.6	4.0	7.8	<0.2	<0.2
Lee Acres	San Juan	11-22-92	4.8	8.3	0.41	140	1.9	2.5	7.9	7.9	<0.2	<0.2
Bondad	Animas	11-21-92	6.9	8.2	0.59	181	1.4	1.8	4.4	8.5	<0.2	<0.2
Aztec	Animas	11-22-92	2.8	8.3	0.61	183	1.6	1.7	<1.0	2.0	<0.2	<0.2
Flora Vista	San Juan	11-22-92	3.6	8.4	0.66	127	1.6	*1.4	<1.0	2.1	<0.2	<0.2
Farmington-Miller	Animas	11-22-92	4.6	8.2	0.68	166	1.7	*1.3	2.0	2.3	<0.2	<0.2
Hiway 371 Brdg	San Juan	11-22-92	4.7	8.3	0.49	150	1.5	1.8	<1.0	3.8	<0.2	<0.2
CO ST BS ST	LaPlata	11-22-92	2.8	8.1	0.41	124	1.5	1.6	1.7	10.6	<0.2	<0.2
La Plata	LaPlata	11-22-92	3.2	8.2	1.46	115	4.2	4.6	<1.0	3.6	<0.2	<0.2
Kirtland	San Juan	11-22-92	6.1	8.3	0.58	140	1.4	1.7	3.2	*2.3	<0.2	<0.2
Hogback	San Juan	11-22-92	6.2	8.5	0.62	181	1.3	1.8	2.5	2.6	<0.2	<0.2
Chaco Wash	Tributary	11-22-92	11.5	8.3	1.47	148	3.0	8.0	1.5	2.6	<0.2	<0.2
Shiprock	San Juan	11-22-92	6.4	8.4	0.66	158	1.4	1.8	2.2	3.5	<0.2	<0.2
Mancos River	Tributary	11-22-92	6.5	8.3	1.93	119	4.2	5.1	1.1	1.9	<0.2	<0.2
Four Corners	San Juan	11-23-92	4.4	7.8	0.74	-	1.3	2.2	1.9	3.0	<0.2	<0.2
Aneth	San Juan	11-23-92	5.2	7.9	1.15	-	5.6	* 4.2	<1.0	1.6	<0.2	<0.2
McElmo Creek	Tributary	11-23-92	4.0	7.8	2.54	-	28.2	*15.5	<1.0	<1.0	<0.2	<0.2
Montezuma Cr.	Tributary	11-23-92	4.6	8.0	0.89	-	3.8	* 2.1	<1.0	1.1	<0.2	<0.2
Bluff	San Juan	11-23-92	4.6	7.9	0.85	-	3.5	* 2.3	<1.0	<1.0	<0.2	<0.2
Mexican Hat	San Juan	11-23-92	5.4	8.0	0.88	-	3.7	* 2.3	<1.0	<1.0	<0.2	<0.2
Hydro Plant	San Juan	11-21-92	7.1	7.8	0.32	163	<1.0	14.1	<1.0	<1.0	<0.2	<0.2
Navajo Dam	Nav. Dam	11-21-92	10.6	7.9	0.23	199	1.1	1.1	<1.0	<1.0	<0.2	<0.2
Gobernador	Tributary	11-21-92	9.2	7.9	1.16	159	8.31	* 4.7	<1.0	<1.0	<0.2	<0.2
(Control samples)												
1. San Juan East	-	-	-	-	-	-	2.2	-	2.0	-	<0.2	-
(LOW STD)							(2.0)	-	(2.0)	-	(0.0)	-
2. Chinle Wash	-	-	-	-	-	-	8.8	-	10.5	-	<0.2	-
(High STD)							(10.0)	-	(10.0)	-	(0.0)	-
3. Comb Wash	-	-	-	-	-	-	<1.0	-	<1.0	-	<0.2	-
(BLANK)							(0.0)	-	(0.0)	-	(0.0)	-

Navajo Indian Irrigation Project
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NOVEMBER 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)

Note:Utah Area,Redo Probe Malfunction

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Weather Condition	Observation (Water)
Archuleta	<1.0	<1.0	14.0	14.0	3.9	Cloudy & Cold	Floating Soap Suds
Blanco	<1.0	<1.0	<2.0	<2.0	4.2	Cloudy & Cold	Clear
Bloomfield	<1.0	<1.0	<2.0	3.0	14.0	Cloudy & Cold	Clear
Lee Acres	<1.0	<1.0	444.0	*21.0	14.0	Cloudy & Cold	Clear
Bondad	<1.0	<1.0	89.0	*38.0	4.4	Cloudy & Cold	Clear
Aztec	1.8	*1.1	8.0	40.0	6.0	Cloudy & Cold	Clear
Flora Vista	1.0	*<1.0	30.0	*20.0	6.2	Cloudy & Cold	Clear
Farmington-Miller	<1.0	<1.0	260.0	*15.0	6.1	Cloudy & Cold	Clear
Hiway 371 Brdg	<1.0	<1.0	55.0	*21.0	15.0	Cloudy & Cold	Clear
CO ST BS ST	<1.0	<1.0	<2.0	<2.0	0.51	Cloudy & Cold	Clear,partially ice cov
La Plata	2.7	*2.6	29.0	*2.0	8.2	Cloudy & Cold	Clear,partially ice cov
Kirtland	1.3	*<1.0	277.0	*10.0	9.3	Cloudy & Cold	Clear
Hogback	1.3	*<1.0	27.0	* 9.0	14.0	Cloudy & Cold	Clear
Chaco Wash	1.8	*<1.0	25.0	40.0	160.0	Cloudy & Cold	Murky
Shiprock	1.6	*1.1	7.0	11.0	19.0	Cloudy & Cold	Clear
Mancos River	7.5	9.5	3.0	16.6	34.0	Cloudy & Cold	Clear
Four Corners	2.3	*2.1	10.0	* 7.0	21.0	Clear & Cold	Clear
Aneth	<1.0	<1.0	54.0	*10.0	12.0	Clear & Cold	Clear
McElmo Creek	3.4	*<1.0	<2.0	10.0	33.0	Clear & Cold	Clear
Montezuma Cr.	<1.0	<1.0	<2.0	17.0	20.0	Clear & Cold	Clear
Bluff	<1.0	<1.0	20.0	*10.0	23.0	Clear & Cold	Clear
Mexican Hat	<1.0	<1.0	75.0	*28.0	22.0	Clear & Cold	Clear
Hydro Plant	<1.0	<1.0	<2.0	3.0	24.0	Cloudy & Cold	Clear
Navajo Dam	<1.0	<1.0	14.0	* 6.0	1.9	Cloudy & Cold	Clear
Gobernador	<1.0	<1.0	246.0	* 2.0	5.9	Cloudy & Cold	Murky
(Control samples)							
1. San Juan East	2.5	-	<2.0	-	-	-	-
(LOW STD)	(2.4)	-	(2.0)	-	-	-	-
2. Chinle Wash	11.7	-	<2.0	-	-	-	-
(High STD)	(12.0)	-	(10.0)	-	-	-	-
3. Comb Wash	<1.0	-	4.0	-	-	-	-
(BLANK)	(0.0)	-	(0.0)	-	-	-	-

Navajo Indian Irrigation Project
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DECEMBER 1992 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	12-17-92	5.5	7.7	0.30	193	1.1	1.2	2.0	1.1*	<0.2	<0.2
Blanco	San Juan	12-17-92	3.4	7.0	0.35	200	1.1	1.3	2.6	<1.0*	<0.2	<0.2
Bloomfield	San Juan	12-19-92	3.8	7.5	0.39	171	1.0	1.3	1.7	<1.0*	<0.2	<0.2
Lee Acres	San Juan	12-19-92	3.8	7.8	0.42	170	1.1	1.3	<1.0	1.1	<0.2	<0.2
Bondad	Animas	12-19-92	0.0	7.9	0.11	181	<1.0	1.2	<1.0	2.0	<0.2	<0.2
Aztec	Animas	12-17-92	1.1	7.6	0.66	177	<1.0	1.0	<1.0	2.5	<0.2	<0.2
Flora Vista	San Juan	12-19-92	1.2	7.9	0.69	156	<1.0	1.0	<1.0	<1.0	<0.2	<0.2
Farmington-Miller	Animas	12-19-92	0.0	7.6	0.75	152	1.5	1.1*	<1.0	1.2	<0.2	<0.2
Hiway 371 Brdg	San Juan	12-19-92	0.0	7.5	0.50	192	1.1	1.7	<1.0	1.6	<0.2	<0.2
CO ST BS ST	LaPlata	12-19-92	0.0	7.5	0.41	181	1.2	1.5	<1.0	1.5	<0.2	<0.2
La Plata	LaPlata	12-19-92	0.0	7.7	0.17	178	2.6	2.4*	<1.0	<1.0	<0.2	<0.2
Kirtland	San Juan	12-20-92	0.1	7.6	0.59	173	<1.0	1.0	<1.0	<1.0	<0.2	<0.2
Hogback	San Juan	12-20-92	0.6	7.7	0.62	194	<1.0	1.6	<1.0	<1.0	<0.2	<0.2
Chaco Wash	Tributary	12-20-92	-	-	-	-	---	---	---	---	---	---
Shiprock	San Juan	12-20-92	0.5	7.7	0.63	180	<1.0	2.1	<1.0	<1.0	<0.2	<0.2
Mancos River	Tributary	12-20-92	0.6	7.8	2.00	167	4.0	4.0	<1.0	<1.0	<0.2	<0.2
Four Corners	San Juan	12-18-92	0.1	7.9	0.69	183	<1.0	1.2	<1.0	<1.0	<0.2	<0.2
Aneth	San Juan	12-18-92	0.2	7.9	0.44	172	<1.0	1.2	<1.0	<1.0	<0.2	<0.2
McElmo Creek	Tributary	12-18-92	0.2	7.8	3.08	196	8.4	10.5	<1.0	<1.0	<0.2	<0.2
Montezuma Cr.	Tributary	12-18-92	0.1	7.9	0.83	187	<1.0	1.2	<1.0	<1.0	<0.2	<0.2
Bluff	San Juan	12-18-92	0.1	7.9	0.86	199	<1.0	1.2	<1.0	<1.0	<0.2	<0.2
Mexican Hat	San Juan	12-18-92	0.0	7.8	0.87	180	<1.0	1.3	<1.0	<1.0	<0.2	<0.2
Hydro Plant	San Juan	12-17-92	6.4	7.3	0.40	221	1.2	1.6	<1.0	<1.0	<0.2	<0.2
Navajo Dam	Nav. Dam	12-17-92	7.4	7.1	0.28	219	1.2	1.0*	<1.0	<1.0	<0.2	<0.2
Gobernador	Tributary	12-17-92	3.1	7.3	1.12	219	12.6	5.6*	<1.0	<1.0	<0.2	<0.2
(Control samples)												
1. San Juan East	-	-	-	-	-	-	2.4	-	<1.0	-	<0.2	-
(LOW STD)							(2.0)		(2.0)		(0.0)	
2. Chinle Wash	-	-	-	-	-	-	11.4	-	8.1	-	<0.2	-
(High STD)							(10.0)		(10.0)		(0.0)	
3. Comb Wash	-	-	-	-	-	-	<1.0	-	<1.0	-	<0.2	-
(BLANK)							(0.0)		(0.0)		(0.0)	

Navajo Indian Irrigation Project
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DECEMBER 1992 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)
(*)= Total < Filtered

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Aluminum (T) (ppb)	Iron (Dis.)(T) (ppb)	Weather Condition
Archuleta	<1.0	<1.0	110.0	24.0*	5.7	200.0	100.0	Cloudy & Cold
Blanco	<1.0	<1.0	146.0	<2.0*	7.4	350.0	300.0	Cloudy & Cold
Bloomfield	<1.0	<1.0	230.0	<2.0*	8.4	500.0	385.0	Cloudy & Cold
Lee Acres	<1.0	<1.0	<2.0	<2.0	8.7	500.0	380.0	Cloudy & Cold
Bondad	<1.0	<1.0	61.0	53.0*	4.4	1100.0	940.0	Cloudy & Cold
Aztec	<1.0	<1.0	11.0	35.0	6.0	450.0	296.0	Cloudy & Cold
Flora Vista	<1.0	<1.0	188.0	2.0*	6.0	300.0	300.0	Cloudy & Cold
Farmington-Miller	<1.0	<1.0	60.0	<2.0*	5.8	400.0	285.0	Cloudy & Cold
Hiway 371 Brdg	<1.0	<1.0	<2.0	<2.0	13.0	800.0	780.0	Cloudy & Cold
CO ST BS ST	<1.0	<1.0	<2.0	20.0	0.6	<100.0	40.0	Cloudy & Cold
La Plata	<1.0	1.0	<2.0	<2.0	9.5	440.0	365.0	Cloudy & Cold
Kirtland	<1.0	<1.0	<2.0	10.0	13.0	550.0	490.0	Cloudy & Cold
Hogback	<1.0	<1.0	5.0	11.0	24.0	2520.0	1500.0	Cloudy & Cold
Chaco Wash	---	---	---	---	---	---	---	Cloudy & Cold
Shiprock	<1.0	<1.0	118.0	21.0*	40.0	2600.0	2200.0	Snowing & Cold
Mancos River	1.3	<1.0*	4.0	4.0	31.0	670.0	620.0	Overcast & Cold
Four Corners	1.2	<1.0*	80.0	5.0	20.0	800.0	650.0	Overcast & Cold
Aneth	<1.0	<1.0	<2.0	<2.0	18.0	680.0	540.0	Overcast & Cold
McElmo Creek	<1.0	<1.0	<2.0	10.0	33.0	1000.0	850.0	Overcast & Cold
Montezuma Cr.	<1.0	<1.0	10.0	10.0	17.0	700.0	560.0	Snowing & Cold
Bluff	<1.0	<1.0	4.0	5.0	16.0	800.0	600.0	Snowing & Cold
Mexican Hat	<1.0	<1.0	20.0	20.0	20.0	700.0	575.0	Snowing & Cold
Hydro Plant	<1.0	<1.0	<2.0	14.0	8.0	600.0	525.0	Cloudy & Cold
Navajo Dam	<1.0	<1.0	<2.0	16.0	5.4	580.0	490.0	Cloudy & Cold
Gobernador	<1.0	<1.0	<2.0	<2.0	1.7	180.0	35.0	Cloudy & Cold
(Control samples)								
1. San Juan East	2.4	-	<2.0	-	0.16	-	-	-
(LOW STD)	(2.4)		(2.0)					-
2. Chinle Wash	12.1	-	<2.0	-	0.15	-	-	-
(High STD)	(12.0)		(10.0)					-
3. Comb Wash	<1.0	-	<2.0	-	0.14	-	-	-
(BLANK)	(0.0)		(0.0)					-

DECEMBER 1992 RIVER SAMPLING (CONT)	Some samples were taken @ different points, because of weather conditions.
SAMPLE SITE	Observation (Water)
Archuleta	Clear
Blanco	Clear
Bloomfield	Clear
Lee Acres	Clear
Bondad	Clear,taken on side,snow drift
Aztec	Clear
Flora Vista	Clear,taken on side,snow drift
Farmington-Miller	Clear,taken on side,snow drift
Hiway 371 Brdg	Clear,taken on side,snow drift
CO ST BS ST	Clear, had to break thru ice
La Plata	Clear, had to break thru ice
Kirtland	Clear
Hogback	Clear
Chaco Wash	Frozen Solid, No Sample
Shiprock	Clear,taken on side,snow drift
Mancos River	Clear, taken 5 mi above
Four Corners	Clear,taken on side,snow drift
Aneth	Clear
McElmo Creek	Clear, had to break thru ice
Montezuma Cr.	Clear,taken on side,snow drift
Bluff	Clear
Mexican Hat	Clear,taken on side,snow drift
Hydro Plant	Clear
Navajo Dam	Clear
Gobernador	Clear, had to break thru ice
(Control samples)	
1. San Juan East	-
(LOW STD)	-
2. Chinle Wash	-
(High STD)	-
3. Comb Wash	-
(BLANK)	-

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

JANUARY 1993 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan	01-22-93	5.2	7.62	0.20		1.1	1.1	<1.0	<1.0	<0.2	<0.2
Blanco	San Juan	01-22-93	5.4	8.01	0.23		1.3	1.1	<1.0	1.9	<0.2	<0.2
Bloomfield	San Juan	01-22-93	5.9	7.65	0.32		1.3	5.0	<1.0	3.8	<0.2	<0.2
Lee Acres	San Juan	01-22-93	5.9	7.71	0.35		1.2	5.9	<1.0	6.0	<0.2	<0.2
Bondad	Animas	01-22-93	0.67	7.82	0.44		<1.0	1.2	2.15	5.1	<0.2	<0.2
Aztec	Animas	01-22-93	0.58	7.80	0.48		<1.0	1.6	1.5	4.1	<0.2	<0.2
Flora Vista	San Juan	01-22-93	0.82	7.75	0.53		1.0	2.1	1.3	4.3	<0.2	<0.2
Farmington-Miller	Animas	01-23-93	2.4	7.81	0.56		1.0	5.0	<1.0	4.5	<0.2	<0.2
Hiway 371 Brdg	San Juan	01-23-93	2.8	7.82	0.40		1.6	6.4	<1.0	5.6	<0.2	<0.2
CO ST BS ST	LaPlata	01-23-93	2.3	7.69	0.27		1.4	1.7	<1.0	2.6	<0.2	<0.2
La Plata	LaPlata	01-23-93	4.9	7.86	1.10		1.3	1.9	<1.0	1.2	<0.2	<0.2
Kirtland	San Juan	01-23-93	4.5	7.87	0.56		1.6	30.1	<1.0	12.9	<0.2	<0.2
Hogback	San Juan	01-23-93	4.6	7.94	0.61		1.2	52.3	<1.0	16.9	<0.2	<0.2
Chaco Wash	Tributary	01-21-93	4.4	8.30	0.48		2.7	593.6	<1.0	449.0	<0.2	0.95
Shiprock	San Juan	01-23-93	4.7	7.91	0.59		1.5	169.6	<1.0	113.6	<0.2	0.26
Mancos River	Tributary	01-21-93	3.6	8.07	1.10		<1.0	3.2	<1.0	<1.0	<0.2	<0.2
Four Corners	San Juan	01-21-93	4.4	8.02	0.62		1.3	249.6	<1.0	138.0	<0.2	0.26
Aneth	San Juan	01-21-93	4.1	7.94	0.64		1.3	299.2	<1.0	154.3	<0.2	<0.2
McElmo Creek	Tributary	01-21-93	4.8	8.11	2.00		<1.0	16.7	<1.0	5.8	<0.2	<0.2
Montezuma Cr.	Tributary	01-21-93	4.2	7.99	0.74		1.3	244.8	<1.0	130.0	<0.2	0.26
Bluff	San Juan	01-21-93	3.4	7.93	0.74		1.4	227.2	<1.0	139.7	<0.2	0.42
Mexican Hat	San Juan	01-21-93	3.8	7.94	0.75		1.45	228.8	<1.0	119.7	<0.2	0.50
Hydro Plant	San Juan	01-22-93	6.3	7.48	0.22		1.4	1.4	<1.0	<1.0	<0.2	<0.2
Navajo Dam	Nav. Dam	01-22-93	5.7	7.67	0.18		1.4	1.5	<1.0	<1.0	<0.2	<0.2
Gobernador	Tributary	01-22-93	7.5	7.70	0.83		1.4	25.1	<1.0	5.6	<0.2	<0.2
(Control samples)												
1. San Juan East	----	----	----	----	----	----	<1.0	----	<1.0	----	<0.2	----
(LOW STD)							(2.0)		(2.0)		(0.0)	
2. Chinle Wash	----	----	----	----	----	----	12.6	----	9.2	----	<0.2	----
(High STD)							(10.0)		(10.0)		(0.0)	
3. Comb Wash	----	----	----	----	----	----	<1.0	----	<1.0	----	<0.2	----
(BLANK)							(0.0)		(0.0)		(0.0)	

Navajo Indian Irrigation Project
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JANUARY 1993 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)
(*)= Total < Filtered

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Weather Condition	Observation (Water)
Archuleta	1.1	1.2	20.0	12.0*	6.6	Clear & Cold	Clear
Blanco	1.0	1.2	88.0	10.0*	8.6	Clear & Cold	Clear
Bloomfield	1.4	<1.0*	<2.0	20.0	140.0	Clear & Cold	Muddy
Lee Acres	1.4	<1.0*	10.0	27.6	180.0	Clear & Cold	Murky
Bondad	2.5	1.5*	87.0	115.0	32.0	Clear & Cold	Murky
Aztec	3.0	1.6*	14.0	57.0	46.0	Clear & Cold	Murky
Flora Vista	2.3	1.3*	67.0	50.0*	65.0	Clear & Cold	Murky
Farmington-Miller	2.1	<1.0*	3.0	60.0	155.0	Clear & Cold	Murky
Hiway 371 Brdg	1.9	<1.0*	<2.0	30.0	160.0	Clear & Cold	Murky
CO ST BS ST	<1.0	1.2	<2.0	10.0	2.1	Clear & Cold	Clear
La Plata	2.8	2.3*	50.0	18.0*	38.0	Clear & Cold	Murky
Kirtland	2.1	<1.0*	39.0	157.0	87.0	Clear & Cold	Very Muddy
Hogback	1.1	<1.0*	156.0	136.0*	30.0	Clear & Cold	Very Muddy
Chaco Wash	3.7	<1.0*	367.0	1200.0	1000.0+	Clear & Cold	Very Muddy, High Flow
Shiprock	<1.0	<1.0	53.0	445.0	1000.0+	Clear & Cold	Very Muddy
Mancos River	1.1	<1.0*	9.0	20.0	140.0	Clear & Cold	Muddy,road-muddy,taken 5mi u
Four Corners	3.4	<1.0*	40.0	772.0	1000.0+	Clear & Cold	Very Muddy
Aneth	2.6	<1.0*	180.0	840.0	1000.0+	Clear & Cold	Very Muddy
McElmo Creek	<1.0	<1.0	64.0	12.0*	85.0	Clear & Cold	Muddy, High Flow
Montezuma Cr.	3.3	<1.0*	302.5	753.0	1000.0+	Clear & Cold	Very Muddy
Bluff	2.9	<1.0*	55.0	785.0	1000.0+	Clear & Cold	Very Muddy, Lower Flow
Mexican Hat	3.2	<1.0*	160.0	840.0	1000.0+	Clear & Cold	Very Muddy, Lower Flow
Hydro Plant	<1.0	<1.0	6.0	16.0	6.0	Clear & Cold	Clear
Navajo Dam	<1.0	<1.0	147.0	3.0*	5.5	Clear & Cold	Clear
Gobernador	<1.0	<1.0	10.0	106.0	160.0	Clear & Cold	Muddy
(Control samples)							
1. San Juan East	<1.0	----	<2.0	----	----	----	----
(LOW STD)	(2.4)		(2.0)				
2. Chinle Wash	12.6	----	5.0	----	----	----	----
(High STD)	(12.0)		(10.0)				
3. Comb Wash	<1.0	----	<2.0	----	----	----	----
(BLANK)	(0.0)		(0.0)				

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FEBRUARY 1993 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan										<0.2	<0.2
Blanco	San Juan										<0.2	<0.2
Bloomfield	San Juan										<0.2	<0.2
Lee Acres	San Juan										<0.2	<0.2
Bondad	Animas										<0.2	<0.2
Aztec	Animas										<0.2	<0.2
Flora Vista	San Juan										<0.2	<0.2
Farmington-Miller	Animas										<0.2	<0.2
Hiway 371 Brdg	San Juan										<0.2	<0.2
CO ST BS ST	LaPlata										<0.2	<0.2
La Plata	LaPlata										<0.2	<0.2
Kirtland	San Juan										<0.2	<0.2
Hogback	San Juan										<0.2	<0.2
Chaco Wash	Tributary										<0.2	<0.2
Shiprock	San Juan										<0.2	<0.2
Mancos River	Tributary										<0.2	<0.2
Four Corners	San Juan										<0.2	<0.2
Aneth	San Juan										<0.2	<0.2
McElmo Creek	Tributary										<0.2	<0.2
Montezuma Cr.	Tributary										<0.2	<0.2
Bluff	San Juan										<0.2	<0.2
Mexican Hat	San Juan										<0.2	<0.2
Hydro Plant	San Juan										<0.2	<0.2
Navajo Dam	Nav. Dam										<0.2	<0.2
Gobernador	Tributary										<0.2	<0.2
(Control samples)												
1. San Juan East	----	----	----	----	----	----		----		----	<0.2	----
(LOW STD)							(2.0)		(2.0)		(0.0)	
2. Chinle Wash	----	----	----	----	----	----		----		----	<0.2	----
(High STD)							(10.0)		(10.0)		(0.0)	
3. Comb Wash	----	----	----	----	----	----		----		----	<0.2	----
(BLANK)							(0.0)		(0.0)		(0.0)	

Navajo Indian Irrigation Project
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Farmington, NM 87401

FEBRUARY 1993 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)
(*)= Total < Filtered

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Weather Condition	Observation (Water)
Archuleta							
Blanco							
Bloomfield							
Lee Acres							
Bondad							
Aztec							
Flora Vista							
Farmington-Miller							
Hiway 371 Brdg							
CO ST BS ST							
La Plata							
Kirtland							
Hogback							
Chaco Wash							
Shiprock							
Mancos River							
Four Corners							
Aneth							
McElmo Creek							
Montezuma Cr.							
Bluff							
Mexican Hat							
Hydro Plant							
Navajo Dam							
Gobernador							
(Control samples)							
1. San Juan East		----		----	----	----	----
(LOW STD)	(2.4)		(2.0)				
2. Chinle Wash		----		----	----	----	----
(High STD)	(12.0)		(10.0)				
3. Comb Wash		----		----	----	----	----
(BLANK)	(0.0)		(0.0)				

Navajo Indian Irrigation Project
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Farmington, NM 87401

MARCH 1993 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan										<0.2	<0.2
Blanco	San Juan										<0.2	<0.2
Bloomfield	San Juan										<0.2	<0.2
Lee Acres	San Juan										<0.2	<0.2
Bondad	Animas										<0.2	<0.2
Aztec	Animas										<0.2	<0.2
Flora Vista	San Juan										<0.2	<0.2
Farmington-Miller	Animas										<0.2	<0.2
Hiway 371 Brdg	San Juan										<0.2	<0.2
CO ST BS ST	LaPlata										<0.2	<0.2
La Plata	LaPlata										<0.2	<0.2
Kirtland	San Juan										<0.2	<0.2
Hogback	San Juan										<0.2	<0.2
Chaco Wash	Tributary										<0.2	<0.2
Shiprock	San Juan										<0.2	<0.2
Mancos River	Tributary										<0.2	<0.2
Four Corners	San Juan										<0.2	<0.2
Aneth	San Juan										<0.2	<0.2
McElmo Creek	Tributary										<0.2	<0.2
Montezuma Cr.	Tributary										<0.2	<0.2
Bluff	San Juan										<0.2	<0.2
Mexican Hat	San Juan										<0.2	<0.2
Hydro Plant	San Juan										<0.2	<0.2
Navajo Dam	Nav. Dam										<0.2	<0.2
Gobernador	Tributary										<0.2	<0.2
(Control samples)												
1. San Juan East	----	----	----	----	----	----		----		----	<0.2	----
(LOW STD)							(2.0)		(2.0)		(0.0)	
2. Chinle Wash	----	----	----	----	----	----		----		----	<0.2	----
(High STD)							(10.0)		(10.0)		(0.0)	
3. Comb Wash	----	----	----	----	----	----		----		----	<0.2	----
(BLANK)							(0.0)		(0.0)		(0.0)	

Navajo Indian Irrigation Project
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Farmington, NM 87401

MARCH 1993 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)
(*)= Total < Filtered

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Weather Condition	Observation (Water)
Archuleta							
Blanco							
Bloomfield							
Lee Acres							
Bondad							
Aztec							
Flora Vista							
Farmington-Miller							
Hiway 371 Brdg							
CO ST BS ST							
La Plata							
Kirtland							
Hogback							
Chaco Wash							
Shiprock							
Mancos River							
Four Corners							
Aneth							
McElmo Creek							
Montezuma Cr.							
Bluff							
Mexican Hat							
Hydro Plant							
Navajo Dam							
Gobernador							
(Control samples)							
1. San Juan East		----		----	----	----	----
(LOW STD)	(2.4)		(2.0)				
2. Chinle Wash		----		----	----	----	----
(High STD)	(12.0)		(10.0)				
3. Comb Wash		----		----	----	----	----
(BLANK)	(0.0)		(0.0)				

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

APRIL 1993 RIVER SAMPLING

SAMPLE SITE	RIVER	SAMPLE DATE	Temp C	pH	Ec dS/m	Redo mv	Arsenic (ppb)	Arsenic(T) (ppb)	Lead (ppb)	Lead(T) (ppb)	Mercury (ppb)	Mercury(T) (ppb)
Archuleta	San Juan										<0.2	<0.2
Blanco	San Juan										<0.2	<0.2
Bloomfield	San Juan										<0.2	<0.2
Lee Acres	San Juan										<0.2	<0.2
Bondad	Animas										<0.2	<0.2
Aztec	Animas										<0.2	<0.2
Flora Vista	San Juan										<0.2	<0.2
Farmington-Miller	Animas										<0.2	<0.2
Hiway 371 Brdg	San Juan										<0.2	<0.2
CO ST BS ST	LaPlata										<0.2	<0.2
La Plata	LaPlata										<0.2	<0.2
Kirtland	San Juan										<0.2	<0.2
Hogback	San Juan										<0.2	<0.2
Chaco Wash	Tributary										<0.2	<0.2
Shiprock	San Juan										<0.2	<0.2
Mancos River	Tributary										<0.2	<0.2
Four Corners	San Juan										<0.2	<0.2
Aneth	San Juan										<0.2	<0.2
McElmo Creek	Tributary										<0.2	<0.2
Montezuma Cr.	Tributary										<0.2	<0.2
Bluff	San Juan										<0.2	<0.2
Mexican Hat	San Juan										<0.2	<0.2
Hydro Plant	San Juan										<0.2	<0.2
Navajo Dam	Nav. Dam										<0.2	<0.2
Gobernador	Tributary										<0.2	<0.2
(Control samples)												
1. San Juan East	----	----	----	----	----	----		----		----	<0.2	----
(LOW STD)							(2.0)		(2.0)		(0.0)	
2. Chinle Wash	----	----	----	----	----	----		----		----	<0.2	----
(High STD)							(10.0)		(10.0)		(0.0)	
3. Comb Wash	----	----	----	----	----	----		----		----	<0.2	----
(BLANK)							(0.0)		(0.0)		(0.0)	

Navajo Indian Irrigation Project
304 North Auburn Suite B
Farmington, NM 87401

APRIL 1993 RIVER SAMPLING (CONT)

(T=Total)
(ppb=parts per billion)
(*)= Total < Filtered

SAMPLE SITE	Selenium (ppb)	Selenium(T) (ppb)	Zinc (ppb)	Zinc(T) (ppb)	Turbidity (NTU)	Weather Condition	Observation (Water)
Archuleta							
Blanco							
Bloomfield							
Lee Acres							
Bondad							
Aztec							
Flora Vista							
Farmington-Miller							
Hiway 371 Brdg							
CO ST BS ST							
La Plata							
Kirtland							
Hogback							
Chaco Wash							
Shiprock							
Mancos River							
Four Corners							
Aneth							
McElmo Creek							
Montezuma Cr.							
Bluff							
Mexican Hat							
Hydro Plant							
Navajo Dam							
Gobernador							
(Control samples)							
1. San Juan East		----		----	----	----	----
(LOW STD)	(2.4)		(2.0)				
2. Chinle Wash		----		----	----	----	----
(High STD)	(12.0)		(10.0)				
3. Comb Wash		----		----	----	----	----
(BLANK)	(0.0)		(0.0)				

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0088
Date Received: 10/29/92
Filtered: x Unfiltered:
Date Analysis Reported: 11/19/92
Checked By:

Date Collected: 10/27/92
Field Number: I-18 Pond
Submitter : NIIP-NAPI
Location: I-18 Pond
Collector's Name: Ernest Teller
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Bob Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.5	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:	<10.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

Appendix 17c. Water quality data, NIIP, October 1992-February 1993 (U S Bureau of Indian Affairs 1993)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0099 Total
Date Received: 10/29/92
Filtered: Unfiltered: x
Date Analysis Reported: 11/19/92
Checked By: RWM

Date Collected:
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: Ojo Wash
Collector's Name: Ernest Teller
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Bob Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	6.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	6.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	20.0	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:	740.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	62.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0114
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: I-18
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	24.4	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	15.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	7.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0115 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12-23-92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-13
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	9.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	4.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	16.8	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	27.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0116
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: I-25
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	11.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	20.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	30.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0117 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-25
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	7.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.8	50.0*
Mercury :	<0.2	2.00*
Selenium:	20.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	15.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0118
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: I-35
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	6.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	50.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0119 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-35
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	4.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	18.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0120
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	8.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	14.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	253.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0121 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	11.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	6.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	11.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	31.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0122
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	3.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.6	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0123 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: awm

Date Collected: 11/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	2.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	6.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORA...
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0124
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By:

Date Collected: 11/17/92
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	32.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	30.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	38.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0115 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12-23-92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-18
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	9.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	4.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	16.8	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	27.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0116
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: I-25
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	11.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	20.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	30.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0117 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-25
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	7.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.8	50.0*
Mercury :	<0.2	2.00*
Selenium:	20.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	15.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0118
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: I-35
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	6.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	3.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	50.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0119 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/17/92
Field Number: I-35
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	4.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.1	50.0*
Mercury :	<0.2	2.00*
Selenium:	2.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	18.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0120
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	8.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	14.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	253.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0121 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	11.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	6.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	11.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	31.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0122
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	3.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.6	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0123 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	2.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	6.3	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0124
Date Received: 11/23/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By:

Date Collected: 11/17/92
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	32.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	2.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	30.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	38.0	500

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
NREL-5 (Rev 10/92)

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0125 Total
Date Received: 11/23/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/24/92
Checked By: dwm

Date Collected: 11/17/92
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: NIIP
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite - B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	27.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	6.9	50.0*
Mercury :	<0.2	2.00*
Selenium:	31.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2
Lindane:		4.0
Methoxy:		100
Toxaphe:		5.0
2,4,D :		100
Silvex :		10.
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	11.0	500

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0181
Date Received: 11/27/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/23/92
Field Number: DWI-IF
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	
Nitrat/N:		
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	29.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.7	50.0*
Mercury :	<0.2	2.00*
Selenium:	12.5	50.0*
Silver :		100 *

	UT ug/l	EPA
--- :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	376.0	5000

OTHER TEST 4

4,4, DDT:	Heptachlor :
Dieldrin:	Heptachlor Ep:
Endosul I:	Hexachlorobenzene:
Endosul II:	Hexachlorocyclope:
Endosul SO4:	Pentachlorophenal:
Endrin Aldh:	Simazine:

Alachlor :	
Aldrin :	
Atrazine :	
Chlordane :	
4,4, DDD :	
4,4, DDE :	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0182 Total
Date Received: 11/27/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/23/92
Field Number: DWI-IN
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	12.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	12.4	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2(
Lindane:		4.0(
Methoxy:		100
Toxaphe:		5.0(
2,4,D :		100
Silvex :		10.(
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	2.0	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	1,020	500(

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0183
Date Received: 11/27/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: DW-M

Date Collected: 11/23/92
Field Number: DWI-2F
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	6.1	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0184 Total
Date Received: 11/27/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/23/92
Field Number: DWI-2N
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Bicarbonates:		150**	Nitrat/N:		10.0 *	Endrin :		0.20
Boron :		1.0**	Nitrit/N:		1.0 **	Lindane:		4.00
Calcium :		75-2000**	Phos Rec:		50 **	Methoxy:		100
Carbonates :		---				Toxaphe:		5.00
Chlorides :		250**	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Fluorides :		4.0 *				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	3.9	50.0*	PCB :		0
pH :		6.5-8.5	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Res. Filter :		500	Chromium:		100 *			
Res. Total :		---	Copper :		---	Gr Alph:		15
Res. Susp. :		---	Lead :	<1.0	50.0*	Gr Beta:		50
Sodium :		20-250**	Mercury :	<0.2	2.00*	Ra 226 :		
Sp. Conduct.:		5,500 uohms	Selenium:	<1.0	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TEST 1	mg/l		OTHER TEST 3	ug/l			ug/l	
Alk.as CaCO3:		---	Aluminum:		50-200	Molybde:		---
Hrdn. CaCO3 :		0-50	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :	0.14	OTU	Manganes:		50	Stronti:		---
						Zinc :	2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0185
Date Received: 11/27/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/23/92
Field Number: DW2-1F
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	47.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	22.8	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0186 Total
Date Received: 11/27/92
Filtered: X Unfiltered: ~~#~~
Date Analysis Reported: 12/23/92
Checked By: [illegible]

Date Collected: 11/23 92
Field Number: DW2-1N
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Bicarbonates:		150**	Nitrat/N:		10.0 *	Endrin :		0.2(
Boron :		1.0**	Nitrit/N:		1.0 **	Lindane:		4.0(
Calcium :		75-2000**	Phos Rec:		50 **	Methoxy:		100
Carbonates :		---				Toxaphe:		5.0(
Chlorides :		250**	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Fluorides :		4.0 *				Silvex :		10.(
Magnesium :		50-150**	Arsenic :	49.1	50.0*	PCB :		0
pH :		6.5-8.5	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Res. Filter :		500	Chromium:		100 *			
Res. Total :		---	Copper :		---	Gr Alph:		15
Res. Susp. :		---	Lead :	2.0	50.0*	Gr Beta:		50
Sodium :		20-250**	Mercury :	<0.2	2.00*	Ra 226 :		
Sp. Conduct.:		5,500 uohms	Selenium:	5.4	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TEST 1	mg/l		OTHER TEST 3	ug/l			ug/l	
Alk.as CaCO3:		---	Aluminum:		50-200	Molybde:		---
Hrdn. CaCO3 :		0-50	Iron Dis:		300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :	27	OTU	Manganes:		50	Stronti:		---
						Zinc :	312.0	500(

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0187
Date Received: 11/27/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: Rwm

Date Collected: 11/23/92
Field Number: DW2-2F
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2(
Lindane:		4.0(
Methoxy:		100
Toxaphe:		5.0(
2,4,D :		100
Silvex :		10.(
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	500(

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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:
:

* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0188 Total
Date Received: 11/27/92
Filtered: Unfiltered: x
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/23/92
Field Number: DW2-2N
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	17	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	662.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0189
Date Received: 11/27/92
Filtered: x Unfiltered:
Date Analysis Reported: 12/23/92
Checked By: RWM

Date Collected: 11/23/92
Field Number: DW3-1F
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	8.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	9.7	50.0*
Mercury :	<0.2	2.00*
Selenium:	11.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2C
Lindane:		4.0C
Methoxy:		100
Toxaphe:		5.0C
2,4,D :		100
Silvex :		10.C
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	500C

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :
Aldrin :	Dieldrin:	Heptachlor Ep:
Atrazine :	Endosul I:	Hexachlorobenzene:
Chlordane :	Endosul II:	Hexachlorocyclope:
4,4, DDD :	Endosul SO4:	Pentachlorophenal:
4,4, DDE :	Endrin Aldh:	Simazine:

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0190 Total
Date Received: 11/27/92
Filtered: X Unfiltered:
Date Analysis Reported: 12/23/92
Checked By:

Date Collected: 11/23/92
Field Number: DW3-1N
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Ernest Teller

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	4.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	<1.0	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.2(
Lindane:		4.0(
Methoxy:		100
Toxaphe:		5.0(
2,4,D :		100
Silvex :		10.(
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	0.20	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	3.0	500(

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0252
Date Received: 12/22/92
Filtered: x Unfiltered:
Date Analysis Reported: 01/21/93
Checked By: [illegible]

Date Collected: 12/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	43.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	8.8	50.0*
Silver :		100 *

	ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	0.18	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	7.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0253 Total
Date Received: 12/22/92
Filtered: Unfiltered: x
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Bicarbonates:		150**	Nitrat/N:		10.0 *	Endrin :		0.20
Boron :		1.0**	Nitrit/N:		1.0 **	Lindane:		4.00
Calcium :		75-2000**	Phos Rec:		50 **	Methoxy:		100
Carbonates :		---				Toxaphe:		5.00
Chlorides :		250**	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Fluorides :		4.0 *				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	51.7	50.0*	PCB :		0
pH :		6.5-8.5	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Res. Filter :		500	Chromium:		100 *			
Res. Total :		---	Copper :		---	Gr Alph:		15
Res. Susp. :		---	Lead :	<1.0	50.0*	Gr Beta:		50
Sodium :		20-250**	Mercury :	<0.2	2.00*	Ra 226 :		
Sp. Conduct.:		5,500 uohms	Selenium:	7.2	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TEST 1	mg/l		OTHER TEST 3	ug/l			ug/l	
Alk.as CaCO3:		---	Aluminum:	2,300	50-200	Molybde:		---
Hrdn. CaCO3 :		0-50	Iron Dis:	1,535	300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :	12	OTU	Manganes:		50	Stronti:		---
						Zinc :	31.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0254
Date Received: 12/22/92
Filtered: x Unfiltered:
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: Ojo Amarillo
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: Robert Krakow
Authorized By : Robert Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	38.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	14.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	0.23	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
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* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.

NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0255 Total
Date Received: 12/22/92
Filtered: Unfiltered: x
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: Ojo Amarillo
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Bob Krakow
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	49.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	13.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	15	OTU

OTHER TEST 3	ug/l	
Aluminum:	1,100	50-200
Iron Dis:	520.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	8.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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:
:

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** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0256
Date Received: 12/22/92
Filtered: x Unfiltered:
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: I-18
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Bob Krakow
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	49.5	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	5.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	0.22	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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:

* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0257 Total
Date Received: 12/22/92
Filtered: Unfiltered: x
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: I-18
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Bob Krakow
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	20.7	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	8.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	2.3	OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	50.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	14.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
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* THIS IS EPA STANDARDS.
** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0258
Date Received: 12/22/92
Filtered: x Unfiltered:
Date Analysis Reported: 01/21/93
Checked By: DWM

Date Collected: 12/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Bob Krakow
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Bicarbonates:		150**
Boron :		1.0**
Calcium :		75-2000**
Carbonates :		---
Chlorides :		250**
Fluorides :		4.0 *
Magnesium :		50-150**
pH :		6.5-8.5
Potassium :		1000-2000**
Res. Filter :		500
Res. Total :		---
Res. Susp. :		---
Sodium :		20-250**
Sp. Conduct.:		5,500 uohms
Sulfates :		250**

TEST NO.2	UT mg/l	EPA
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **
Phos Rec:		50 **

TEST NO.3	UT ug/l	EPA
Arsenic :	16.6	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.2	2.00*
Selenium:	1.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Alk.as CaCO3:		---
Hrdn. CaCO3 :		0-50
S.A.R. :		---
Turbidity :	0.67	OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	128.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0259 Total
Date Received: 12/22/92
Filtered: Unfiltered: x
Date Analysis Reported: 01/21/93
Checked By: RWM

Date Collected: 12/17/92
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: NIIP-Farmington, NM
Collector's Name: Bob Krakow
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Bicarbonates:		150**	Nitrat/N:		10.0 *	Endrin :		0.20
Boron :		1.0**	Nitrit/N:		1.0 **	Lindane:		4.00
Calcium :		75-2000**	Phos Rec:		50 **	Methoxy:		100
Carbonates :		---				Toxaphe:		5.00
Chlorides :		250**	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Fluorides :		4.0 *				Silvex :		10.0
Magnesium :		50-150**	Arsenic :	16.2	50.0*	PCB :		0
pH :		6.5-8.5	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Res. Filter :		500	Chromium:		100 *			
Res. Total :		---	Copper :		---	Gr Alph:		15
Res. Susp. :		---	Lead :	<1.0	50.0*	Gr Beta:		50
Sodium :		20-250**	Mercury :	<0.2	2.00*	Ra 226 :		
Sp. Conduct.:		5,500 uohms	Selenium:	2.7	50.0*	Ra 228 :		
Sulfates :		250**	Silver :		100 *	Uranium:		

OTHER TEST 1	mg/l		OTHER TEST 3	ug/l			ug/l	
Alk.as CaCO3:		---	Aluminum:	270.0	50-200	Molybde:		---
Hrdn. CaCO3 :		0-50	Iron Dis:	300.0	300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :	26	OTU	Manganes:		50	Stronti:		---
						Zinc :	88.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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* THIS IS EPA STANDARDS. ** UNOFFICIAL STANDARDS.
NREL-5 (Rev 10/92)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0317
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

Appendix 2a

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	
Phos Rec:		
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	10.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	38.2	50.0*
Silver :		100 *

	UT ug/l	EPA
--- :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	15.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
:
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* THIS IS EPA STANDARDS ** UNOFFICIAL STANDARDS

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0318 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By: RWM.

Date Collected: 01/27/93
Field Number: Ojo Wash
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA	TEST NO.2	UT mg/l	EPA	TEST NO.4	UT ug/l	EPA
Sp. Conduct.:		5,500 uohms	Phos Rec:		50 **	Endrin :		0.20
pH :		6.5-8.5	Nitrat/N:		10.0 *	Lindane:		4.00
Res. Total :		---	Nitrit/N:		1.0 **	Methoxy:		100
Res. Filter.:		500				Toxaphe:		5.00
Res. Susp. :		---	TEST NO.3	UT ug/l	EPA	2,4,D :		100
Calcium :		75-2000 **				Silvex :		10.0
Magnesium :		50-150 **	Arsenic :	4.4	50.0*	PCB :		0
Sodium :		20-250 **	Barium :		2000*			
Potassium :		1000-2000**	Cadmium :		5.0 *	TEST NO.5	UT pCi/l	EPA
Carbonates :		---	Chromium:		100 *			
Bicarbonates:		150 **	Copper :		---	Gr Alph:		15
Boron :		1.0 **	Lead :	<1.0	50.0*	Gr Beta:		50
Chlorides :		250 **	Mercury :		2.00*	Ra 226 :		
Fluorides :		4.0 *	Selenium:	32.4	50.0*	Ra 228 :		
Sulfates :		250 **	Silver :		100 *	Uranium:		

OTHER TEST 1	mg/l		OTHER TEST 3	ug/l			ug/l	
Hrdn. CaC03 :		0-50	Aluminum:	<100.0	50-200	Molybde:		---
Alk as CaC03:		---	Iron Dis:	2,300	300	Nickel :		---
S.A.R. :		---	Lithium :		---	Silica :		---
Turbidity :		OTU	Manganes:		50	Stronti:		---
						Zinc :	50.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0319
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	3.85	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	7.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	4,530	50-200
Iron Dis:	15.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	11.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :
Aldrin :	Dieldrin:	Heptachlor Ep:
Atrazine :	Endosul I:	Hexachlorobenzene:
Chlordane :	Endosul II:	Hexachlorocyclope:
4,4, DDD :	Endosul SO4:	Pentachlorophenal:
4,4, DDE :	Endrin Aldh:	Simazine:

Cation - Anion Balance:
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NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0320 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: Ojo Ponds
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :	2.8	4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	2.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	6.1	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	120.0	50-200
Iron Dis:	85.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	28.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:	Heptachlor :	
Aldrin :	Dieldrin:	Heptachlor Ep:	
Atrazine :	Endosul I:	Hexachlorobenzene:	
Chlordane :	Endosul II:	Hexachlorocyclope:	
4,4, DDD :	Endosul SO4:	Pentachlorophenal:	
4,4, DDE :	Endrin Aldh:	Simazine:	

Cation - Anion Balance:
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NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0321
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	5.3	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	27.7	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	55.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	16.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0322 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By: Rwm

Date Collected: 01/27/93
Field Number: Gallegos
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	3.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.6	50.0*
Mercury :		2.00*
Selenium:	14.3	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	19,000	50-200
Iron Dis:	12,850	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	60.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
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** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0323
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: I-18
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	5.4	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	23.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	10.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	4.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NREL-5 (Rev. 02/93)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0324 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: I-18
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	2.4	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	24.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	120.0	50-200
Iron Dis:	50.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	15.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NREL 5 (Rev 02/93)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0325
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: I-25
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	2.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	30.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	20.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	5.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0326 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By:

Date Collected: 01/27/93
Field Number: I-25
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.8	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	1.5	50.0*
Mercury :		2.00*
Selenium:	31.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	100.0	50-200
Iron Dis:	30.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	8.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0327
Date Received: 02/04/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: I-35
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.6	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	7.9	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	<100.0	50-200
Iron Dis:	30.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	3.0	5000

OTHER TEST 4

Alachlor :	
Aldrin :	
Atrazine :	
Chlordane :	
4,4, DDD :	
4,4, DDE :	

4,4, DDT:	
Dieldrin:	
Endosul I:	
Endosul II:	
Endosul SO4:	
Endrin Aldh:	

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0328 Total
Date Received: 02/04/93
Filtered: Unfiltered: x
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 01/27/93
Field Number: I-35
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Krakow
Authorized By : R. Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :		2.00*
Selenium:	7.2	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:	<100.0	50-200
Iron Dis:	40.0	300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	6.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0335
Date Received: 02/12/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 02/12/93
Field Number: DW1-1
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	
Phos Rec:		
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	4.6	50.0*
Silver :		100 *

	EPA
Lindane:	0.20
Methoxy:	4.00
Toxaphe:	100
2,4,D :	5.00
Silvex :	100
PCB :	10.0
	0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	410.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0336
Date Received: 02/12/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 02/12/93
Field Number: DW1-2
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	1.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	28.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0337
Date Received: 02/12/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 02/12/93
Field Number: DW2-1
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	7.55	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	6.25	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NREL-5 (Rev. 02/93)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0338
Date Received: 02/12/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: DWM

Date Collected: 02/12/93
Field Number: DW2-2
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	2.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	10.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0339
Date Received: 02/12/93
Filtered: Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 02/12/93
Field Number: DW 13-1
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	2.3	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :	4,4, DDT:
Aldrin :	Dieldrin:
Atrazine :	Endosul I:
Chlordane :	Endosul II:
4,4, DDD :	Endosul SO4:
4,4, DDE :	Endrin Aldh:

Heptachlor :	
Heptachlor Ep:	
Hexachlorobenzene:	
Hexachlorocyclope:	
Pentachlorophenal:	
Simazine:	

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

NREL-5 (Rev. 02/93)

NATURAL RESOURCES AND ENGINEERING LABORATORY
Navajo Area Office, Gallup, NM 87301

Lab Sample Number: 93N0340
Date Received: 02/12/93
Filtered: x Unfiltered:
Date Analysis Reported: 02/24/93
Checked By: RWM

Date Collected: 02/12/93
Field Number: DW 13-2
Submitter : NIIP-NAPI
Location: Farmington, NM
Collector's Name: R. Smith
Authorized By : Bob Krakow

SEND REPORT TO : Navajo Indian Irrigation Project
: 304 North Auburn, Suite B
: Farmington, NM 87401
: Phone: (505)325-1864
ATTENTION : Robert Krakow

ANALYSIS SHEET

TEST NO.1	UT mg/l	EPA
Sp. Conduct.:		5,500 uohms
pH :		6.5-8.5
Res. Total :		---
Res. Filter.:		500
Res. Susp. :		---
Calcium :		75-2000 **
Magnesium :		50-150 **
Sodium :		20-250 **
Potassium :		1000-2000**
Carbonates :		---
Bicarbonates:		150 **
Boron :		1.0 **
Chlorides :		250 **
Fluorides :		4.0 *
Sulfates :		250 **

TEST NO.2	UT mg/l	EPA
Phos Rec:		50 **
Nitrat/N:		10.0 *
Nitrit/N:		1.0 **

TEST NO.3	UT ug/l	EPA
Arsenic :	<1.0	50.0*
Barium :		2000*
Cadmium :		5.0 *
Chromium:		100 *
Copper :		---
Lead :	<1.0	50.0*
Mercury :	<0.20	2.00*
Selenium:	6.6	50.0*
Silver :		100 *

TEST NO.4	UT ug/l	EPA
Endrin :		0.20
Lindane:		4.00
Methoxy:		100
Toxaphe:		5.00
2,4,D :		100
Silvex :		10.0
PCB :		0

TEST NO.5	UT pCi/l	EPA
Gr Alph:		15
Gr Beta:		50
Ra 226 :		
Ra 228 :		
Uranium:		

OTHER TEST 1	mg/l	
Hrdn. CaC03 :		0-50
Alk as CaC03:		---
S.A.R. :		---
Turbidity :		OTU

OTHER TEST 3	ug/l	
Aluminum:		50-200
Iron Dis:		300
Lithium :		---
Manganes:		50

	ug/l	
Molybde:		---
Nickel :		---
Silica :		---
Stronti:		---
Zinc :	<2.0	5000

OTHER TEST 4

Alachlor :
Aldrin :
Atrazine :
Chlordane :
4,4, DDD :
4,4, DDE :

4,4, DDT:
Dieldrin:
Endosul I:
Endosul II:
Endosul SO4:
Endrin Aldh:

Heptachlor :
Heptachlor Ep:
Hexachlorobenzene:
Hexachlorocyclope:
Pentachlorophenal:
Simazine:

Cation - Anion Balance:
:
:
:

* THIS IS EPA STANDARDS.

** UNOFFICIAL STANDARDS.

Field #	Depth	Conductance µmho/cm	pH	As µg/l	Se µg/l
DH 1-6. Depth to water = 17'. Se in water sample = 49 µg/l					
DH 1-6	0–1'	900	7.50	8.90	1.99
DH 1-6	1–6'	1,010	7.80	2.30	7.60
DH 1-6	6–10'	3,000	7.90	3.80	30.60
DH 1-6	10–11.5'	4,400	7.80	3.20	140.00
DH 1-6	11.5–13.8'	4,300	7.80	15.30	150.50
DH 1-6	13.8–14.0'	4,200	7.90	36.10	9.70
Average		2,520	7.81	5.92	51.46
DH 1-9. Depth to water = 20'. Se in water sample = 20.7 µg/l					
DH 1-9	0–1'	620	7.90	4.60	1.99
DH 1-9	1–5'	950	7.90	2.50	9.90
DH 1-9	5–10'	5,000	7.70	37.40	70.00
DH 1-9	10–15'	5,300	7.70	18.10	106.00
DH 1-9	15–20	5,500	7.70	28.00	91.60
DH 1-9	18–22'	1,400	7.90	1.90	9.70
DH 1-9	22–28'	2,600	7.90	3.20	22.60
DH 1-9	28-34'	2,800	7.90	5.80	22.10
DH 1-9	34–40'	1,600	7.90	2.30	11.00
DH 1-9	40–44'	2,200	7.90	2.20	15.70
Average		2,928	7.84	10.46	37.10
DH 2-12. Depth to water = 17'. Se in water sample = 66.5 µg/l					
DH 2-12	0–1'	710	8.00	10.30	3.20
DH 2-12	1–6'	1,100	8.00	3.00	2.50
DH 2-12	6–10'	1,000	7.90	4.80	6.20
DH 2-12	10–14'	3,600	7.60	34.20	6.90
DH 2-12	14–18'	1,800	7.90	3.70	12.00
DH 2-12	18–22'	3,200	8.00	6.00	47.10
DH 2-12	22-26'	3,700	8.00	2.70	66.80
DH 2-12	26–30'	2,600	8.00	3.10	43.60
DH 2-12	30–33.7'	2,700	7.90	2.20	62.80
DH 2-12	33.9–36.1'	1,500	7.80	1.80	13.60
Average		2,316.90	7.91	7.09	28.28

Appendix 18a. Water quality data from soil drill holes (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

Field #	Depth	Conductance µmho/cm	pH	As µg/l	Se µg/l
DH 3-3. Depth to water = 18'. Se in water sample = 44.2 µg/l					
DH 3-3	0–1'	1,000	7.90	6.90	1.90
DH 3-3	1–6'	680	8.00	2.70	3.30
DH 3-3	6–10'	1,500	7.80	2.80	13.60
DH 3-3	10–14'	910	8.00	4.20	3.50
DH 3-3	14–18'	4,800	7.80	38.50	13.30
DH 3-3	18–24'	3,600	7.90	10.60	48.40
DH 3-3	24–28'	4,400	7.70	12.10	91.20
DH 3-3	28–30'	3,800	7.70	7.40	67.20
DH 3-3	30–34'	2,600	7.80	3.20	36.90
Average		2,660	7.86	10.06	31.68
DH 4-2. Depth to water = 24'. Se in water sample = 9 µg/l					
DH 4-2	0–1'	680	7.80	5.90	1.99
DH 4-2	1–6'	780	7.80	4.60	3.40
DH 4-2	6–10'	4,100	7.50	3.50	13.30
DH 4-2	10–14'	5,500	7.60	20.80	28.50
DH 4-2	14–17'	3,200	7.90	5.00	41.10
DH 4-2	17–21'	2,300	8.00	3.10	7.50
DH 4-2	21–25'	3,700	7.50	11.30	8.10
DH 4-2	25–29'	2,600	7.70	2.70	12.10
DH 4-2	29–32.4'	1,900	7.80	4.50	4.40
DH 4-2	14–16.9'	1,400	7.80	2.50	20.20
Average	0-32.4'	2,881	7.72	6.98	13.39
DRY					
DH 4-6	0–6'	520	8.00	4.50	3.10
DH 4-6	6–10'	1,600	8.00	2.90	12.00
DH 4-6	10–14'	2,600	8.00	2.90	24.80
DH 4-6	14–18'	2,000	8.10	4.60	43.60
DH 4-6	18–22'	2,700	8.00	3.50	69.60
DH 4-6	22–24'	2,400	8.10	2.90	51.20
DH 4-6	24–26'	1,000	8.00	2.40	18.80
Average		1,751	8.02	3.58	29.18

Field #	Depth	Conductance µmho/cm	pH	As µg/l	Se µg/l
	DH 5-8. Depth to water = 17. Se in water sample = 1.99 µg/l				
DH 5-8	0–1'	620	7.80	9.20	1.99
DH 5-8	1–6'	640	7.80	3.50	1.99
DH 5-8	6–10'	870	7.80	17.50	1.99
DH 5-8	10–14'	790	7.80	26.00	3.30
DH 5-8	14–18'	970	7.80	7.00	8.90
DH 5-8	18–23'	770	7.90	7.60	1.99
Average		791	7.82	11.60	3.42
		DRY			
DH 6-3	0–1'	460	8.00	2.70	3.00
DH 6-3	1–6'	1,100	8.00	2.70	5.60
DH 6-3	6–10'	3,500	7.80	11.20	14.70
DH 6-3	10–14'	2,200	7.90	3.10	23.90
DH 6-3	14–18'	1,700	8.00	1.40	15.90
DH 6-3	18–20'	1,500	7.90	1.20	12.90
Average		1,928	7.93	4.07	13.74
		DRY			
DH 7-3	0–1'	450	8.00	4.70	1.99
DH 7-3	1–6'	3,300	7.40	5.00	6.50
DH 7-3	6–10'	4,500	7.60	15.60	2.60
DH 7-3	10–14'	2,100	7.90	3.50	1.99
DH 7-3	14–18'	1,000	8.00	3.20	1.99
DH 7-3	18–22'	780	8.00	1.80	1.99
DH 7-3	22–23.5'	540	7.90	1.00	1.99
Average		2,148	7.28	5.37	2.93
		DRY			
DH 7-4	0–1'	270	8.00	2.30	1.99
DH 7-4	1–6'	380	7.90	1.70	1.99
DH 7-4	6–10'	1,700	7.70	2.40	13.60
DH 7-4	10–11.5'	790	7.90	1.30	13.90
Average		883	7.84	1.94	7.58

Field #	Depth	Conductance µmho/cm	pH	As µg/l	Se µg/l
		DRY			
DH 8-1	0–1'	520	7.80	3.60	1.99
DH 8-1	1–5.8'	1,400	7.80	1.80	1.99
DH 8-1	6–8.3'	2,600	7.80	1.30	30.10
DH 8-1	8.3–9.3'	3,100	7.90	2.50	40.20
DH 8-1	9.3–10.2'	7,300	8.30	16.50	41.40
DH 8-1	10.2–10.9'	4,000	8.00	0.99	69.20
DH 8-1	10.9–11.4'	4,400	7.90	0.99	87.80
DH 8-1	11.4–14.9'	2,900	7.90	0.99	51.70
Average		2,489	7.87	2.91	23.26
		DRY			
DH 9-1	0–1'	500	7.90	1.70	1.99
DH 9-1	1–6'	740	7.90	1.80	3.10
DH 9-1	6–10'	2,200	7.80	0.99	27.00
DH 9-1	10–14'	2,500	7.90	0.99	61.60
DH 9-1	14–16'	2,300	7.80	0.99	51.00
DH 9-1	16–18'	2,100	7.70	0.99	61.20
DH 9-1	18–20'	1,300	7.70	0.99	16.50
Average		1,720	7.83	1.23	31.46

	April 1991 Sampling						May 1991 Sampling						June 1991 Sampling		
BIA WELL ID	As	Cd	Cu	Pb	Se	Zn	As	Cd	Cu	Pb	Se	Zn	As	Se	Zn
1-02	1	<0.1	<4	1	<2	597	1.7	<0.1	<4	<1	9.5	30	2.4	8.4	20
1-03	<1	<0.1	<4	2.1	7.5	330	2.1	<0.1	<4	<1	6.5	52	1.9	6.4	7
1-04	<1	0.1	<4	<1	21.5	461	2.4	<0.1	<4	<1	3.6	54	2.2	4	20
1-05	<1	<0.1	<4	1.7	5	313	1.8	<0.1	<4	<1	15.7	161	1.7	16.1	27
1-06	1.4	<0.1	8	<1	48.6	293	2.7	<0.1	<4	<1	86	54	2.1	49.2	30
1-08	9.7	<0.1	<4	2	32.5	110	9.9	0.1	8	<1	40.1	180	5.4	34	17.3
1-09	4	0.4	<4	<1	20.7	1000	3.5	<0.1	8	<1	17.4	180	3.9	17.4	115
1-11	1.4	<0.1	<4	1.6	9	364	2.7	<0.1	<4	<1	7.9	95	4.0	8.7	25
2-01	2.2	0.6	<4	3.9	<2	1370	3.3	<0.1	<4	<1	<2	321	3.6	<2	2.6
2-03	1.2	0.4	4	1.8	20.1	1450	2.4	<0.1	<4	<1	25.7	105	3.3	4.6	11.7
2-05	3.5	0.2	12	5.2	114	2000	4.6	1.3	6	3.8	127	2620	2.8	110.8	32
2-09	<1	0.1	<4	<1	<2	534	2.5	<0.1	<4	<1	4.3	122	4.0	4	20.4
2-12	<1	<0.1	<4	<1	66.5	491	1.8	<0.1	<4	<1	65	213	3.2	22	6.8
3-03	2	0.1	10	1	2.7	515							3.2	44.2	<0.2
3-04	1.5	<0.1	<4	26.4	<2	3520	1.8	<0.1	<4	<1	5.3	245	3.3	4.6	11.7
4-02	1.2	<0.1	<4	<1	<2	396	1.4	<0.1	<4	<1	11	61	2.8	9	3
5-07													3.3	14.4	9100
5-08	1.4	<0.1	<4	6.6	<2	685	4.0	<0.1	<4	<1	<2	66	4.0	<2	31

Appendix 18b. Trace element concentrations (μg/l) found in groundwater from observation wells (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

LOCATION	WATER (µg/l)				SEDIMENTS	PERIPHYTON
Horn Canyon	April	May	June	Mean		
HC01	<2				0.082	---
HC02	<2				<.04	---
Ojo Amarillo Canyon						
OA05	7.8	6.2	7.3	7.1	0.104	2.072
OA06	17.1	18.5	25.2	20.2	0.612	1.556
OA08	7	5.4	17.0	9.8	<.040	0.420
OA09	<2	---	---	---	0.102	1.552
OA10	26.6	23.1	30.7	26.6	0.092	3.384
Gallegos Canyon						
SP01	12.5				1.632	1.100
SP02	2.1				1.580	1.180
SP03	11.8				<.040	2.840
SP04	36.8				<.040	---
SP05	3.5				<.040	0.812
SP06	12.5				2.688	---
SP07	23.0				0.852	---
SP08	115				2.952	---
SP09	24.4				3.210	---
SP10	13.2				9.680	---
SP11	25.9				---	---
SP12	27.8				3.096	---
SP13	15.6				0.884	---
SP14	11.2				<.040	---
SP16	14.6				---	---
SP17	13.8				0.100	---
SP18	23.5				---	---
SP20	15.9				<0.04	---
SP23	2.7				0.608	---
SP25	5.2				0.308	<.040

Appendix 18c. The concentration of selenium in seeps located on the Navajo Indian Irrigation Project for various ecosystem components. All data for solids are from April 1991 (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

BIA ID	LOCATION	APR 1991 As	APR 1991 Se	MAY 1991 As	MAY 1991 Se	JUN 1991 As	JUN 1991 Se
gsp02	Gallegos Canyon			15.3	4.3	33.9	5.7
gsp03	Gallegos Canyon			4.3	9.3	17.0	8.3
gsp04	Gallegos Canyon			12.5	36	18.4	6.3
gsp05	Gallegos Canyon	10.8	23.1	14.5	10.7	20.9	11.1
gsp06	Gallegos Canyon			1.9	12.9	19.5	14.6
gsp07	Gallegos Canyon			3.4	25.8	25.8	14.4
gsp08	Gallegos Canyon	7.3	22.9	7.2	23.1	36.2	21.4
gsp09	Gallegos Canyon	10.4	12.7	1.8	27.7	25.3	15.7
gsp10	Gallegos Canyon			3.5	14.5	2.3	9.3
gsp11	Gallegos Canyon	16.5	17.6	2.6	8.4	21.3	12.5
gsp12	Gallegos Canyon	9	37.3			29.8	6.6
gsp13	Gallegos Canyon			6.7	22	25.8	20.4
gsp14	Gallegos Canyon	5.9	23	2.6	15.5		
gsp15	Gallegos Canyon			3.2	7.6	10.2	11.8
gsp16	Gallegos Canyon	9.6	10.7	4.4	13	14.0	12
gsp17	Gallegos Canyon	1.9	25	2.2	22.5	19.8	20.4
gsp18	Gallegos Canyon	2	38.6				
gsp19	Gallegos Canyon	8.8	51.1				
gsp20	Gallegos Canyon	3.8	42.3	8.0	36.5	21.5	37.2
gsp21	Gallegos Canyon	6.6	36.1	6.0	30.5	38.8	31.1
gsp22	Gallegos Canyon	14.4	3.9			45.5	24.6
gsp23	Gallegos Canyon	6.1	14.6				
gsp24	Gallegos Canyon	3	4.6	8.8	30.9	11.8	22.1
gsp25	Gallegos Canyon	2.8	12.5	<1	15.5	7.5	21.1
HC01	Horn Canyon	7	<2				
HC02	Horn Canyon	<1	<2				
OA05	Ojo Amarillo Canyon		7.8	3.0	6.2	10.3	7.3
OA06	Ojo Amarillo Canyon	3.4	17.1	7.9	18.5	20.8	25.2
OA08	Ojo Amarillo Canyon	3.6	7	9.1	5.4	48.1	17.0
OA09	Ojo Amarillo Canyon	1.2	<2				
OA10	Ojo Amarillo Canyon	1.2	26.6	5.2	23.1	27.9	30.7
SP01	Gallegos Canyon	14.1	12.5				
SP02	Gallegos Canyon	2.2	2.1				
SP03	Gallegos Canyon	11	11.8				
SP04	Gallegos Canyon	1.6	36.9				
SP05	Gallegos Canyon	12.2	3.5				
SP06	Gallegos Canyon	13.1	12.5				
SP07	Gallegos Canyon	12.3	23				
SP08	Gallegos Canyon	11.8	115				
SP09	Gallegos Canyon	8.5	24.4				
SP10	Gallegos Canyon	4.1	13.2				
SP11	Gallegos Canyon	12.1	25.9				
SP12	Gallegos Canyon	13.3	27.8				
SP13	Gallegos Canyon	8.1	15.6				
SP14	Gallegos Canyon	<1	11.2				
SP15	Gallegos Canyon		25.8				
SP16	Gallegos Canyon	3.1	14.6				
SP17	Gallegos Canyon	3.6	13.8				
SP18	Gallegos Canyon	13.4	23.5				
SP19	Gallegos Canyon		14.5				
SP20	Gallegos Canyon	2.4	15.9				
SP21	Gallegos Canyon		9.3				
SP22	Gallegos Canyon		5.4				
SP23	Gallegos Canyon	1.5	2.7				
SP24	Gallegos Canyon		<2				
SP25	Gallegos Canyon	<1	5.2				

Appendix 18d. Arsenic and selenium concentrations (μg/l) found in seeps and springs (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

					DOI SAMPLING						BIA SAMPLING			
			APR 1990		AUG 1990		NOV 1990		APR 1991		MAY 1991		JUN 1991	
DOI ID	BIA ID	LOCATION	As	Se	As	Se	As	Se	As	Se	As	Se	As	Se
	L01	Morgan Lake								<2				
	-	Morgan Lake Intake							<1	<2				
	-	Morgan Lake Dam							<1	<2				
I-14		SE Pond Chinde Wash			4	<1								
I-13		SW Pond Chinde Wash	3	<1	17	<1	1	<1						
I-12	L02	NW Pond Block 3 (3-57A)			5	1			4.3	<2	8.5	<2		
I-11		West Avocet Pond			<1	<1								
I-10		Avocet Pond	7	<1	48	<1	5	<1						
	L03	Pond 3-69A							2.3	<2	<1	<2		
	L04	Pond 3-66A							3.9	<2	<1	<2		
I-6	L05	Pond Ojo Amarillo	<1	33					1.5	4.8	<1	<2		
	L06	Bullock Pond								12.3				
	L07	Pond N Block 1							<1	3.3				
	L08	Pond 1-18A							8.5	12.4	<1	9	15.1	8.6
I-3	L09	N Pond- Gallegos	3	5	2	2	1	5	11.4	17.9				
I-2	L10	Middle Pond - Gallegos	<1	25	1	16	<1	35	8.2	24.7	<1	<2	2.6	2.8
	L11	Pond 1-28B							3.1	15	<1	9.4	1	3.5
I-1	L12	S Pond - Gallegos	<1	7	2	<1	<1	3	1.9	2	<1	<2		
	L13	Pond Hammond Project							14.9	<2				
	L14	Pond Hammond Project							17.6	<2				
	L16	Cutter Reservoir								<2				
	L17	Pond Kutz Canyon							6.5	<2				
	L18	Pond 4-41A									<1	<2		
	L19	Pond 3-38A									<1	<2		
	L20	Pond 4-52A									2.4	<2		
	L21	Pond 4-34A									2.4	13.9		
	L22	Pond Cottonwood Arroyo									2.9	3.9		
	L23	Pond Cottonwood Arroyo									4.5	<2		
	L24	Pond Cottonwood Arroyo									6.7	2.1		

Appendix 18e. Arsenic and selenium concentrations (μg/l) found in ponds (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

			DOI SAMPLING						BIA SAMPLING					
			APR 1990		AUG 1990		NOV 1990		APR 1991		MAY 1991		JUN 1991	
DOI ID	BIA ID	LOCATION	As	Se	As	Se	As	Se	As	Se	As	Se	As	Se
	AC01	Armenta Canyon							16.9	2.7				
	CH01	Chaco Canyon								10.9				
R-9	CH02	Chaco Canyon	1	4	1	2	1	3		<2			<1	<2
	CL01	Canon Largo							13.4	2.3				
I-22A	D01	Hogback Project East Site	<1	21	<1	11	<1	12		2.5				
	D02	Block 2								2.5				
I-4	G01	Gallegos Canyon	<1	8	1	12	<1	15	1.2	6.5			2.2	9.2
	G02	Gallegos Canyon							<1	<2				
	G03	Gallegos Canyon							6.3	7.1				
	G04	Gallegos Canyon							<1	11.7				
	G05	Gallegos Canyon								3.5				
	G06	Gallegos Canyon								2				
	G07	Gallegos Canyon							<1	5.7				
	G08	Gallegos Canyon												
	G09	Gallegos Canyon							2.5	23.5				
	G10	Gallegos Canyon							4.8	<2				
	G11	Gallegos Canyon							9.4	<2				
	GW01	Chaco Canyon N Well Point								<2				
	GW02	Chaco Canyon S Well Point								<2				
	GW03	Ojo Amarillo N Well Point							dry					
	GW04	Ojo Amarillo N Well Point							14.1	21.2				
	GW05	Ojo Amarillo S Well Point								<2				
	GW06	Gallegos Canyon Well Point								6.4				
	GW07	Gallegos Canyon Well Point								2.7				
	GW08	Gallegos Canyon Well Point							1.8	2.8	3.9	<2	2.1	<2
	GW09	Gallegos Canyon Well Point								<2				
	GW10	Gallegos Canyon Well Point							1.9	2.2				
	GW11	Well by 5-9A							1.7	2.1				
	GW12	Kutz Canyon S Well Point							3.1	2.1				
	GW13	Kutz Canyon N Well Point							17.1	4.3				
	GW14	Canon Largo N Well Point							2.1	<2				
	GW15	Canon Largo S Well Point							9.6	3.1				
	GW16	Gallegos Canyon Well Point							5.7	11.8				
	GW17	Gallegos Canyon Well Point							<1	6.1				
	GW18	Chaco Canyon Well Point								<2				
	HC01	Horn Canyon							7	<2				
	HC02	Horn Canyon							<1	<2				
	K01	Kutz Canyon							3.7	25.5				
	OA01	Ojo Amarillo Canyon							2.4	16.8	12.2	17.9	27.6	27.1
	OA02	Ojo Amarillo Canyon							2.7	11.1				
	OA03	Ojo Amarillo Canyon							18.1	<2				
	OA04	Ojo Amarillo Canyon							1.8	4.5	2.0	13	2	6.4
	OA07	Ojo Amarillo Canyon							2.8	14.6	3.5	22.1	13.1	32.1
	OA11	Ojo Amarillo Canyon								19.5	7.7	21.1	30.8	30.0
	-	Well S. 4-25A									1.6	24.7	<1	30.5
	-	Well Dam Site									6.0	12.2	14.7	9.2
	-	Well Slim Mustache											45.2	10.8
	-	Well Ojo Amarillo Canyon									6.2	11.4		
I-7		Ojo Amarillo Canyon			<1	42								
I-8		Ojo Amarillo Canyon	<1	33			<1	67						
I-15		Chinde Wash			<1	1								
I-17		East Hammond W Drain	<1	<1	<1	<1	<1	<1						
I-21		Fruitland Project Site	1	<1	2	<1	1	<1						
I-23		Hogback Marsh	1	<1	1	<1	<1	<1						
I-24		Hogback Project West Site	1	2	1	2	<1	3						

Appendix 18f. Arsenic and selenium concentrations (μg/l) found in drainage channels and washes (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

LOCATION[1]			SOLIDS (mg/kg DW)			
DOI	BIA	WATER(μg/l)	SEDIMENTS	PERIPHYTON	MACROINVERTEBRATES	FISH
R-10	SJR01 L	< 2	<0.04	0.360	5.38	2.70
R-8	SJR02 L	< 2	0.124	1.288	5.33	
	SJR03 L	< 2	0.50	2.37	2.34	1.90
	SJR03 R	< 2	0.47	2.69	2.17	
	SJR04 L	< 2	0.74	1.51	1.00	
	SJR04 R	< 2	0.90	1.36	3.30	
	SJR05 L	< 2	0.38	1.38	4.58	2.13
	SJR05 R	< 2	0.74	3.98	4.25	
R-6	SJR06 L	< 2	0.69	1.72	3.69	1.83
	SJR06 R	< 2	0.44	1.62	5.94	
	SJR07 L	< 2	0.62	1.58	8.36	1.98
	SJR07 R	< 2	1.14	1.87	8.36	
	SJR08 L	< 2	0.32	2.77	< 1.00	
	SJR08 R	< 2	0.37	0.86	< 1.00	
	SJR09 L	< 2	0.80	1.36	2.31	
	SJR09 R	< 2	0.34	1.22	< 1	

[1] R = River left looking downstream
L = River right looking downstream (note: this is the project side)

Appendix 18g. The concentration of selenium in the San Juan River above, adjacent to, and below the Navajo Indian Irrigation Project for various ecosystem components. Data are from the BIA study conducted in April 1991 (Keller-Bliesner Engineering and Ecosystems Research Institute 1991)

LOCATION[1]			SOLIDS (mg/kg DW)			
DOI	BIA	WATER(μg/l)	SEDIMENTS	PERIPHYTON	MACROINVERTEBRATES	FISH
R-2	SJR10 L	< 2	0.90	1.81	< 1	2.46
	SJR10 R	< 2	0.84	1.56	13.4	
	SJR11 L	< 2	0.72	1.02	3.60	2.08
	SJR11 R	< 2	0.84	2.29	1.00	
	SJR12 L	< 2	0.92	2.01	---	2.41
	SJR12 R	< 2	0.66	1.70	---	
R-1	SJR13 L	< 2	0.10	1.95	7.50	2.81
	SJR13 R	< 2	0.27	1.29	5.49	
	SJR14 L	< 2	1.08	10.9	16.8	3.68
	MEAN ($\bar{x}$)	< 2	0.582	2.322	5.242	2.324
	S.D.	---	0.319	2.483	4.401	0.778

[1] R = River left looking downstream
L = River right looking downstream (note: this is the project side)

LOCATION					SOLIDS (mg/kg DW)			
DOI	WATER (µg/l)				SEDIMENT (<2 mm)	PLANTS	INVERTEBRATES	FISH
	Apr	Aug	Nov	Mean $\bar{x}$				
San Juan River								
R-1	< 1	< 1	< 1	< 1	0.10	—	—	5.36
R-2	< 1	< 1	< 1	< 1	<0.10	—	—	2.71
R-4	< 1	< 1	—	< 1	—	—	—	
R-6	< 1	< 1	< 1	< 1	0.10			2.09 (2.13)
R-8	< 1	< 1	—	< 1	—			
R-10	< 1	1	—	< 1	—			
R-11	< 1	2	< 1	1.3	0.10			2.47 (2.55)
Animas River								
R-3	< 1	< 1	< 1	< 1	—			—
LaPlata River								
R-5	< 1	< 1	< 1	< 1	0.20			

(1) Average of all fish (whole body).

Animas Physical /
Nutrient Properties

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Animas BC	May 12, '92	1325	13	8 3	8 7	84	212	not tested	not tested		0 02
Animas BC	June 24, '92	1430	15 2	8 6	8	48	180	108	not tested		0 02
Animas BC	July 13, '92	1650	16 3	8 9	7 9	68	250	not tested	not tested		0 02
Animas BC	Sept 30, '92	1380	16	7 9	8 4	128	455	352	0 45	0 01019	0 02
Animas BC	Nov 19, '92	1400	6 6	8 5	10 5	132	380	not tested	0 05	0 002126	0 02
Animas BC	April 20, '93	1455	10 8	9 5	9 9	140 7	300	240	0 061	0 02336	0 02
Animas BC	May 19, '93	1415	9	9 7	9 7	123 9	150	168	<0 01	< detection	0 02
Animas BC	June 22, '93	1240	10 3	10	8 7	58	150	110	<0 01	< detection	0 02
Animas BC	July 22, '93	1442	17 8	8 7	9 4	84	330	225	0 02	0 002868	0 02
Animas TC	June 22, '93	1200	12 3	8	8 4	48	115	88	<0 01	< detection	0 02
Animas TC	July 22, '93	1535	19 4	10	9 5	100	325	204	0 95	0 7521	0 02
Animas WS	June 24, '92	1400	15 3	8 6	8 3	56	171	134	not tested		0 02
Animas LaPosta	May 12, '92	1500	14 5	8 5	8 8	86	213	not tested	not tested		0 02
Animas LaPosta	Sept 30, '92	1110	13 8	8	9 2	142	440	340	0 04	0 000964	0 02
Animas LaPosta	Nov 19, '92	1330	7 2	8 1	11 1	136	390	not tested	0 03	0 0005464	0 02
Animas LaPosta	April 20, '93	1350	8 3	9 1	11 4	126	282	234	0 062	0 01045	0 02
Animas LaPosta	May 19, '93	1315	8 5	9 5	9 3	109 2	210	180	<0 01	< detection	0 02

Appendix 19. Nutrient properties and metals in surface water of the Animas, Florida, La Plata, Navajo, Piedra, Pine, and San Juan rivers and of Salt and Stollsteimer creeks (Southern Ute Indian Tribe 1993)

ANIMAS RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Animas BC	May 12 '92	8.3																							
Animas BC	June 24 '92	8.6	91	0.002	0.05	<0.005	0.001	<0.01	0.025	0.02	0.02	0.8	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	0.09*	0.0001	0.09	0.15
Animas BC	July 13 '92	8.9	104	<0.001	0.05	<0.005	0.001	<0.01	0.025	0.03*	0.02	0.19	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.07	0.15
Animas BC	Sept 30 '92	7.9	218	<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.11	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	0.001	0.01	<0.01	0.0001	0.04	0.15
Animas BC	Nov 19 '92	8.5	218	<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.04	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	0.001	0.01	<0.01	0.0001	0.02	0.15
Animas BC	April 20 '93	9.5	not tested	<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.97	1.5	<0.02	0.055	<0.0002	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.06	0.15
Animas BC	May 19 '93	9.7	114	0.002	0.05	<0.005	0.001	0.01	0.025	0.02	0.02	3.3	1.5	0.03	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.18	0.15
Animas BC	June 22 '93	10	60	0.002	0.05	<0.005	0.001	<0.01	0.025	0.02	0.02	1.11	1.5	0.03	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.15	0.15
Animas BC	July 22 '93	8.7	152		0.05		0.001		0.025		0.02		1.5		0.055		0.0001		0.1		0.01		0.0001		0.15
Animas TC	June 24 '92	8.6	58	0.002	0.05	<0.005	0.001	<0.01	0.025	0.01	0.02	0.43	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.07	0.15
Animca TC	July 22 '93	10	130		0.05		0.001		0.025		0.02		1.5		0.055		0.0001		0.1		0.01		0.0001		0.15
Animas WS	May 12 '92	8.5	94																						
Animas LaPosta	Sept 30 '92	8	210	<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.19	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	0.004	0.01	<0.01	0.0001	0.02	0.15
Animas LaPosta	Nov 19 '92	8.1	226	<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.08	1.5	<0.02	0.055	<0.0001	0.0001	<0.02	0.1	0.001	0.01	<0.01	0.0001	0.02	0.15
Animas LaPosta	April 20 '93	9.1		<0.001	0.05	<0.005	0.001	<0.01	0.025	<0.01	0.02	0.88	1.5	<0.02	0.055	0.0002*	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.07	0.15
Animas LaPosta	May 19 '93	9.5	166	0.005	0.05	<0.005	0.001	0.02	0.025	0.03	0.02	13	1.5	0.04	0.055	<0.0001	0.0001	<0.02	0.1	<0.001	0.01	<0.01	0.0001	0.22*	0.15

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

FLORIDA RIVER PHYSICAL /NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	DO mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Florida SC	June 24 '92	1215	17	8.8	7.7	122	240	138	not tested		0.02
Florida SC	July 14 '92	1695	24.6	8.6	7.4	224	460	not tested	<0.01	< detection	0.02
Florida SC	Sept 30 '92	1040	13.3	7.4	8.5	208	348	250	<0.01	< detection	0.02
Florida SC	Nov 18 '92	1544	7.3	8.3	9.7	210	280	not tested	<0.01	< detection	0.02
Florida SC	April 20 '93	1540	10.5	9.6	9.9	182.7	245	188	0.068	0.029439	0.02
Florida SC	May 19 '93	1445	12.3	10.7	9	182.7	200	146	<0.01	< detection	0.02
Florida SC	June 22 '93	1100	11.7	8.6	8.7	108	140	110	<0.01	< detection	0.02
Florida SC	July 22 '93	1640	23.4	7.9	7.2	188	410	228	0.09	0.09027	0.02
Florida 510	May 19 '93	1615	13.1	8.6	8.6	130?	190	not tested	<0.01	< detection	0.02
Florida 510	June 22 '93	1604	13.7	8.5	7.8	84	140	88	<0.01	< detection	0.02
Florida 510	July 22 '93	1030	14.2	9.3	8.3	196	315	214	0.3	0.101157	0.02

FLORIDA RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Florida SC	June 24 '92	8.8	131	0.002	0.05	<0.005	0.001402147	<0.01	0.25821340	<0.01	0.014892476	0.22	1	<0.02	0.005700826	<0.0001	0.0001	<0.02	0.117348714	<0.001	0.01	<0.01	0.000119474	0.01	0.045
Florida SC	July 14 '92	8.6	159.2	<0.001	0.05	<0.005	0.001834097	<0.01	0.302917982	<0.01	0.01759215	0.11	1	<0.02	0.00751689	<0.0001	0.0001	<0.02	0.136090836	0.002	0.01	<0.01	0.000167073	<0.01	0.045
Florida SC	Sept 30 '92	7.4	176	<0.001	0.05	<0.005	0.001768027	<0.01	0.328958114	<0.01	0.01916678	0.11	1	<0.02	0.00866746	<0.0001	0.0001	<0.02	0.146872937	<0.004	0.01	<0.01	0.000198639	<0.01	0.045
Florida SC	Nov 18 '92	8.3	158	<0.001	0.05	<0.005	0.001624418	<0.01	0.301046679	<0.01	0.017478778	0.03	1	<0.02	0.007436708	<0.0001	0.0001	<0.02	0.135810612	0.002	0.01	0.01	0.000164913	<0.01	0.045
Florida SC	April 20, 93	9.6	not tested	0.001	0.05	<0.005		<0.01		<0.01		1	1	<0.02		<0.0002	0.0001	<0.02		<0.001	0.01	<0.01		<0.01	0.045
Florida SC	May 19, 93	9.6	115	<0.001	0.05	<0.005	0.001274455	<0.01	0.233735554	<0.01	0.01342264	0.31	1	<0.02	0.004901063	<0.0001	0.0001	<0.02	0.10898927	<0.001	0.01	<0.01	9.89243E-05	<0.01	0.045
Florida SC	June 22 '93	9.8	70	0.001	0.05	<0.005	0.000867202	<0.01	0.15454999	<0.01	0.008717568	0.34	1	<0.02	0.002346953	<0.0001	0.0001	<0.02	0.072883071	<0.001	0.01	<0.01	4.08568E-05	0.01	0.045
Florida SC	July 22 '93	7.9	163		0.05		0.001864846		0.308927051	<0.01	0.017950349		1		0.00777446		0.0001		0.199552618		0.01		0.000173991		0.045
Florida 510	May 20 '93	8.8	107	<0.001	0.05	<0.005	0.001198147	<0.01	0.218775659	<0.01	0.012577676	0.82	1	<0.02	0.004281907	<0.0001	0.0001	<0.02	0.100019886	<0.001	0.01	<0.01	8.43539E-05	<0.01	0.045
Florida 510	June 22 '93	8.6	58	<0.001	0.05	<0.005	0.00073953	<0.01	0.132489424	<0.01	0.007423484	0.3	1	<0.02	0.001797951	<0.0001		<0.02	0.063176771	<0.001		<0.01	2.94219E-05	0.01	
Florida 510	July 22 '93	9.3	172		0.05		0.001736398		0.322724164		0.018793932		1		0.00838867				0.144329056				0.000180842		

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

LA PLATA RIVER PHYSICAL / NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
LaPlata 140	June 24, '92	1650	19 8	8 4	6 5	72	150	92	not tested		0 02
LaPlata 140	April 20, '93	1050	4 3	7.9	9.3	79 8	130	106	0.068	0 0006237	0 02
LaPlata 140	May 19, '93	1115	9 1	8 1	9 8	52 5	88	68	<0 01	0.0001056	0 02
LaPlata 140	June 22, '93	1415	12 7	8 3	7 9	46	80	48	<0 01	0 0002166	0 02
LaPlata 140	July 22, '93	1230	17 5	7 7	7 2	82	180	180	0.055	0.0295	0 02
LaPlata RM	June 24, '92	1560	23.3	8 6	6 3	160	650	428	not tested		0 02
LaPlata RM	July 13, '92	1525	19 5	8 7	8 7	196	780	not tested	not tested		0 02
LaPlata RM	Sept 30, '92	1500	20.3	8	7 7	242	1220	988	<0 01	< detection	0 02
LaPlata RM	Nov. 19, '92	1500	10 8	8 5	9 4	254	1200	not tested	<0 01	< detection	0 02
LaPlata RM	April 20, '93	1145	7.3	9 5	10 7	155 4	328	278	0.06	0 01919	0 02
LaPlata RM	May 19, '93	1200	11 4	9.5	9 2	105	247	188	<0 01	< detection	0 02
LaPlata RM	June 22, '93	1455	18 6	9 8	7 5	144	440	302	<0 01	0 003462	0 02
LaPlata RM	July 22, '93	1313	20 2	8.6	7 4	206	900	661	0 1	0.04438	0.02

LA PLATA RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
LaPlata 140 n	Jue 24 '92	8.4	79	0.002	0.05	<0.005	0.0001	<0.01	0.025	0.01	0.01	0.07	1	<0.02	0.043	<0.0001	0.00005	<0.02	0.1	<0.001	0.02	<0.01	0.0001	0.01	0.14
LaPlata 140 s	May 19 '93	9.5	156	<0.001	0.05	<0.005	0.0001	<0.01	0.025	<0.01	0.01	0.48	1	<0.02	0.043	<0.0001	0.00005	<0.02	0.1	<0.001	0.02	<0.01	0.0001	0.01	0.14
LaPlata 140 n	Jue 22 '93	8.3	10	<0.001	0.05	<0.005	0.0001	<0.01	0.025	<0.01	0.01	0.12	1	<0.02	0.043	<0.0001	0.00005	<0.02	0.1	<0.001	0.02	<0.01	0.0001	0.01	0.14
LaPlata 140 d	July 22 '93	7.7	66		0.05		0.0001		0.025		0.01		1		0.043		0.00005		0.1		0.02		0.0001		0.14
LaPlata RM n	Jue 24 '92	8.6	316	0.003	0.05	<0.005	0.0001	<0.01	0.025	0.01	0.01	0.18	1	<0.02	0.043	<0.0001	0.00005	<0.02	0.1	<0.001	0.02	<0.01	0.0001	0.01	0.14
LaPlata RM s	July 13 '92	8.7	370.7	0.001	0.05	<0.005	0.0001	<0.01	0.025	<0.01	0.01	2.51	1	<0.02	0.043	0.0003	0.00005	<0.02	0.1	<0.001	0.02	0.02	0.0001	0.05	0.14
LaPlata RM c	Sep 30 '92	8	670	<0.001	0.05	<0.005	0.0001	0.02	0.025	0.01	0.01	0.04	1	<0.02	0.043	<0.0001	0.00005	<0.02	0.1	0.003	0.02	<0.01	0.0001	<0.01	0.14
LaPlata RM v	Nov 19 '92	8.5	not tested	<0.001	0.05	<0.005	0.0001	<0.01	0.025	<0.01	0.01	<0.02	1	<0.02	0.043	<0.0001	0.0005	<0.02	0.1	0.002	0.02	<0.01	0.0001	0.06	0.14
LaPlata RM	April 20 '93	9.5	not tested	0.004	0.05	<0.005	0.0001	0.01	0.025	0.02	0.01	14	1	<0.02	0.043	0.0003	0.0005	<0.02	0.1	<0.005	0.02	<0.01	0.0001	0.03	0.14
LaPlata RM	May 19 '93	8.1	37	<0.001	0.05	<0.005	0.0001	<0.01	0.025	0.03*	0.01	4.61*	1	<0.02	0.043	<0.0001	0.0005	<0.02	0.1	<0.001	0.02	<0.01	0.0001	0.01	0.14
LaPlata RM	June 22 '93	9.8	187	<0.001	0.05	<0.005	0.0001	<0.01	0.025	<0.01	0.01	0.19	1	<0.02	0.043	<0.0001	0.0005		0.1		0.02		0.0001		0.14
LaPlata RM	July 22 '93	8.6	495		0.05		0.0001		0.025		0.01		1		0.043		0.0005								

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

NAVAJO RIVER PHYSICAL/NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Navajo	June 23, '92	1230	17 1	8 3	8 3	160	15	84	not tested		0 02
Navajo	July 15, '92	1000	16.1	8 4	7.9	90	22	not tested	not tested		0 02
Navajo	Sept 29, '92	1018	10 2	8.3	9 2	95	230	200	<0 01	< detection	0 02
Navajo	Nov 18 '92	1000	2 8	7 8	11 9	86	207	not tested	<0 01	< detection	0.02
Navajo	April 21, '93	1125	7	8 8	11 7	157 5	250	208	0 068	0 005702	0.02
Navajo	May 20, '93	1100	11 5	8 8	8 7	92 4	240	196	<0.01	< detection	0 02
Navajo	June 23, '93	1100	12 1	7 6	9 8	46	115	98	<0 01	< detection	0.02
Navajo	July 21, '93	1210	20	8 9	8 5	76	240	159	<0 01	< detection	0 02

NAVAJO RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Navajo	June 23, '92	8.3	61	0.002	0.05	<0.01	0.0004	<0.02	0.025	0.02*	0.014	1.15	1.2	<0.04	0.005	<0.0001	0.00005	<0.04	0.05	<0.002	0.01	<0.02	0.0001	0.02	0.05
Navajo	July 15 '92	8.4	87.1	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.014	0.13	1.2	<0.02	0.005	<0.0001	0.00005	<0.02	0.05	0.001	0.01	<0.01	0.0001	<0.01	0.05
Navajo	Sept. 29 '92	8.3	96	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.014	0.13	1.2	<0.02	0.005	<0.0001	0.00005	<0.02	0.05	0.001	0.01	<0.01	0.0001	<0.01	0.05
Navajo	Nov. 18 '92	7.8	114	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.014	0.05	1.2	<0.02	0.005	<0.0001	0.00005	<0.02	0.05	<0.001	0.01	<0.01	0.0001	<0.01	0.05
Navajo	April 21, '93	8.8	not tested	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.014	4.6	1.2	<0.02	0.005	<0.0002	0.00005	<0.02	0.05	<0.001	0.01	<0.01	0.0001	<0.02	0.05
Navajo	May 20 '93	8.8	118	0.001	0.05	<0.005	0.0004	0.01	0.025	<0.01	0.014	7.3	1.2	<0.02	0.005	<0.0001	0.00005	<0.02	0.05	0.002	0.01	<0.01	0.0001	0.02	0.05
Navajo	June 23 '93	7.6	55	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.014	1.26	1.2	<0.02	0.005	<0.0001	0.00005	<0.02	0.05	<0.001	0.01	<0.01	0.0001	<0.01	0.05
Navajo	July 21, '93	8.9	73		0.05		0.0004		0.025		0.014		1.2		0.005		0.00005		0.05		0.01		0.0001		0.05

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

PIEDRA RIVER PHYSICAL / NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Piedra 160	June 23, '92	1650	14.7	8	8 6	54	92	60	X		0.02
Piedra 160	Sept. 29, '92	1515	15 8	7 9	8 2	68	223	170	<0.01	< detection	0 02
Piedra 160	Nov. 18, '92	1300	5.6	8 8	10	90	210	not tested	<0 01	< detection	0 02
Piedra 160	April 21, '93	1450	8.7	9 6	11 2	130 2	145	130	0 031	0.01235	0 02
Piedra 160	May 20, '93	1510	7.9	8 5	9 6	56 7	75	80	<0.01	< detection	0.02
Piedra 160	June 23, '93	1455	11.6	7.3	9 6	26	60	54	<0 01	< detection	0 02
Piedra 160	July, 20 '93	1240	18 3	8 9	6 9	74	240	159	0 25	0 054	0 02
Piedra FG	June 23, '92	1500	18.4	8 4	8	62	122	82	<0 01	< detection	0 02
Piedra FG	July 15, '92	1675	21.8	8 9	7 4	92	250	not tested	<0 01	< detection	0 02
Piedra FG	Sept 29, '92	1412	16 3	8 7	8 4	88	250	186	<0 01	< detection	0 02
Piedra FG	Nov 18, '92	1200	5.6	8 3	10 2	96	235	not tested	<0 01	< detection	0 02
Piedra FG	April 21, '93	1400	9.6	9	11 4	102 9	165	130	0 045	0 006812	0 02
Piedra FG	May 20, '93	1345	10 1	7 8	8 7	58 8	95	96	<0 01	< detection	0 02
Piedra FG	June 23, '93	1300	12 1	7 4	9 2	32	370	58	<0 01	< detection	0 02
Piedra FG	July 20, '93	1519	22	9	7 3	94	290	180	0 88	0 2751	0 02

PIEDRA RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Piedra 160	June 23 '92	8	46	0.002	0.05	<0.005	0.0004	<0.01	0.025	0.01	0.016	0.32	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.02	0.05
Piedra 160	Sept 29 '92	7.9	90	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	0.13	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra 160	Nov 18 '92	8.8	102	0.002	0.05	<0.005	0.0004	<0.01	0.025	0.03	0.016	0.12	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra 160	April 21, '93	9.6	not tested	0.003	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	1.7*	1.5	<0.02	0.004	<0.0002	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra 160	May 20 '93	8.5	38	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	2	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra 160	June 23, '93	7.3	22	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	0.27	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.01	0.05
Piedra 160	July 20 '93	8.9	77		0.05		0.0004		0.025		0.016		1.5		0.004		0.00005		0.05		0.02		0.0001		0.05
Piedra FG	June 23, '92	8.4	56	<0.001	0.05	<0.005	0.0004	<0.01	0.025	0.02*	0.016	0.26	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	July 15, '92	8.9	91.4	0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	0.29	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.02	0.05
Piedra FG	Sept 29 '92	8.7	92	<0.01	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	0.09	1.5	<0.02	0.004	<0.0001	0.00005	<0.02	0.05	0.004	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	Nov 18 '92	8.3	116	0.002	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	1	1.5	<0.02	0.004	<0.0002	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	April 21 '93	9	not tested	<0.001	0.05	<0.005	0.0004	<0.01	0.025	0.01	0.016	1	1.5	<0.02	0.004	<0.0002	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	May 20 '93	7.8	41	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	1	1.5	<0.02	0.004	<0.0002	0.00005	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	June 23 '93	7.4	< detection	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.016	0.26	1.5	<0.02	0.004	<0.0001	0.00005	0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
Piedra FG	July20 '93	9	396		0.05		0.0004		0.025		0.016		1.5		0.004		0.00005		0.05		0.02		0.0001		0.05

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

PINL RIVER PHYSICAL/NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	AD IUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Pine Downs	May 12 '92	1875	19	8 6	7 4	88	195	not tested	not tested		0 02
Pine Downs	July 14 '92	680	12 7	8 4	8 4	100	159	not tested	<0 01	< detection	0 02
Pine 160	April 21 '93	1535	11 4	10 1	9 3	142 8	128	96	0 065	0 168	0 02
Pine 160	May 20 '93	1545	13 1	9 5	8 9	88 2	100	76	<0 01	< detection	0 02
Pine 160	June 23 '93	1530	14 1	8 6	9 2	34	70	54	<0 01	< detection	0 02
Pine 160	July 23 '93	948	12 1	8 2	8 4	42	60	53	0 02	0 000687	0 02
Pine WTP	May 12 '92	1795	16 1	8 1	8 6	62	91	not tested	not tested		0 02
Pine WTP	June 24 '92	1080	13 2	8 2	8 3	56	72	56	not tested		0 02
Pine WTP	Sept 29 '92	1604	18 3	8	7 8	44	85	40	0 011	0 0003464	0 02
Pine WTP	Nov 18 '92	1350	8 4	8 9	9 8	72	100	not tested	0 018	0 002576	0 02
Pine LaBoca	June 23 '92	930	16 8	8	7 5	130	20	not tested	<0 01	< detection	0 02
Pine LaBoca	July 14 '92	1420	20 9	8 6	7 5	116	200	not tested	0 04	0 0067	0 02
Pine LaBoca	Sept 30 '92	950	11 9	7 1	8 5	100	160	122	<0 01	< detection	0 02
Pine LaBoca	Nov 18 '92	1460	8 5	8 6	10 1	130	195	not tested	<0 01	< detection	0 02
Pine LaBoca	April 21 '93	1619	11 8	9 8	11	151 2	145	102	0 15	0 2004	0 02
Pine LaBoca	May 19 '93	1605	17	10 1	7 6	134 4	190	138	<0 01	< detection	0 02
Pine LaBoca	June 23 '93	920	10 8	9 1	9 9	68	90	52	<0 01	< detection	0 02
Pine LaBoca	July 23 '93	925	15 8	9	7 2	108	not tested	117	0 08	0 02299	0 02
Pine 2 (RC)	July 14 '92	740	13 5	8 6	7 9	94	150	not tested	not tested		0 02
Pine 3	July 14 '92	780	13 8	8 6	8 2	96	160	not tested	<0 01	< detection	0 02

PINE RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Pine Downs	May 12 92	8.6	not tested	not tested		not tested		not tested		not tested		not tested		not tested		not tested		not tested		not tested		not tested		not tested	
Pine Downs	July 14 92	8.4	62	<0.001	0.05	<0.005	0.000776268	<0.01	0.011	<0.01	0.007966819	1.1*	1	<0.02	0.001976148	<0.0001	0.00001	<0.02	0.068461453	<0.0001	0.01	<0.01	0.000140671	0.01	0.045
Pine Downs	April 20 93	not tested	not tested	0.002	0.05	<0.005		<0.01	0.011	<0.01		0.22	1	<0.02		<0.0001	0.00001	<0.02		<0.001	0.01	<0.01		<0.01	0.045
Pine WTP	May 12 '92	8.1	not tested																						
Pine WTP	June 24 92	8.2	43	0.002	0.05	<0.005	0.000684671	<0.01	0.011	0.07*	0.005748688	0.09	1	<0.02	0.00117660	<0.0001	0.00001	<0.02	0.060926509	<0.001	0.01	<0.01	7.49648E-05	0.13*	0.045
Pine WTP	Sept 29 92	8	18	<0.001	0.05	<0.005	0.000295098	<0.01	0.011	<0.01	0.002731423	0.15	1	<0.02	0.000342549	<0.0001	0.00001	<0.02	0.026963262	<0.001	0.01	<0.01	1.67833E-05	<0.01	0.045
Pine WTP	Nov 18 '92	8.9	44	not tested		not tested		not tested		not tested		not tested	1	not tested		not tested		not tested		not tested		not tested		not tested	
Pine 160	April 21, 93	10.1	not tested	<0.001	0.05	<0.005		<0.01	0.011	<0.01		0.64	1	<0.02		<0.0002	0.0001	<0.02		<0.001	0.01	<0.01		<0.01	0.045
Pine 160	May 20, '93	9.5	38	<0.001	0.05	<0.005	0.000609545	<0.01	0.011	<0.01	0.004938773	0.5	1	<0.02	0.000914706	<0.0001	0.0001	<0.02	0.043968541	<0.001	0.01	<0.01	5.62248E-05	<0.01	0.045
Pine 160	June 23 93	8.6	< detection	<0.001	0.05	<0.005		<0.01	0.011	<0.01		0.07	1	<0.02		<0.0001	0.0001	<0.02		<0.001	0.01	<0.01		0.01	0.045
Pine 160	July 22, 93	8.2	3		0.05		7.22683E-05		0.011		0.000590625		1		2.70446E-05		0.0001		0.00865186		0.01		7.69025E-07		0.045
Pine LaBoca	June 23 92	8	91	<0.001	0.05	<0.005	0.000163299	<0.01	0.011	<0.01	0.010909815	1.43*	1	<0.02	0.000403785	<0.0001	0.00001	<0.02	0.088965907	<0.004	0.01	0.02*	0.000272172	<0.01	0.045
Pine LaBoca	July 14 92	8.6	59.4	0.001	0.05	<0.005	0.000753611	<0.01	0.011	<0.01	0.007576334	0.62	1	<0.02	0.001859755	<0.0001	0.00001	<0.02	0.064332414	0.004	0.01	<0.01	0.000130679	0.02	0.045
Pine LaBoca	Sept 30 92	7.1	52	0.001	0.05	<0.005	0.000776268	<0.01	0.011	<0.01	0.007958819	0.92	1	<0.02	0.001976148	<0.0001	0.00001	<0.02	0.068461453	0.003	0.01	<0.01	0.000140671	<0.01	0.045
Pine LaBoca	Nov 18 92	8.6	64	<0.001	0.05	<0.005	0.000989137	<0.01	0.011	<0.01	0.010197209	0.17	1	<0.02	0.003098814	<0.0001	0.00001	<0.02	0.083715217	<0.001	0.01	<0.01	0.000237186	<0.01	0.045
Pine LaBoca	April 21 93	9.8	not tested	<0.001	0.05	<0.005		<0.01	0.011	<0.01		2.1*	1	<0.02		<0.0002	0.00001	<0.02		<0.001	0.01	<0.01		<0.01	0.045
Pine LaBoca	May 19 93	10.1	96	0.001	0.05	<0.005	0.001007642	<0.01	0.011	<0.01	0.010394116	2.7*	1	<0.02	0.003141846	<0.0001	0.00001	<0.02	0.096225778	0.001	0.01	<0.01	0.000246962	0.01	0.045
Pine LaBoca	June 23 '93	9.3	26	<0.001	0.05	<0.005	0.000893987	<0.01	0.011	<0.01	0.009739842	0.24	1	<0.02	0.00057679	<0.0001	0.00001	<0.02	0.0834334692	<0.001	0.01	<0.01	3.15594E-06	<0.01	0.045
Pine LaBoca	July 23, 93	9	64		0.05		0.00079896		0.011		0.009074941		1		0.000467081		0.00001		0.068084806		0.01		0.000148567		0.045
Pine 2 (RC)	July 14 92	8.8	39.5	0.001	0.05	<0.005	0.000648898	<0.01	0.011	<0.01	0.005346280	1.86	1	0.03*	0.001043226	<0.0001	0.00001	<0.02	0.04718087	0.003	0.01	<0.01	6.47797E-05	0.04	0.045
Pine 8	July 14 92	8.8	61	0.001	0.05	<0.005	0.000759402	<0.01	0.011	<0.01	0.007750379	1.27*	1	<0.02	0.001931136	<0.0001	0.00001	<0.02	0.065645177	0.001	0.01	<0.01	0.000146792	0.04	0.045

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

SALT CREEK PHYSICAL/NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D.O. mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA Chronic Limit mg/l
Salt Creek	June 24, '92	1275	20 9	8 4	6 7	106	180	130	not tested		0 02
Salt Creek	July 14, '92	1720	23 7	8 4	6 9	96	190	not tested	<0 01	< detection	0 02
Salt Creek	Sept 30, '92	1050	12 4	7.7	8 5	72	191	104	<0.01	< detection	0 02
Salt Creek	Nov 18, '92	1525	7	8 4	9	122	178	not tested	<0 01	< detection	0 02
Salt Creek	April 20, '93	1530	15 7	9 2	9 5	315	830	540	0 059	0 01839	0.02
Salt Creek	May 19, '93	1455	19 2	10 5	8 1	163.8	270	200	0.058	0 5358	0 02
Salt Creek	June 22, '93	1120	17 9	9 6	8	106	185	136	<0 01	< detection	0 02
Salt Creek	July 22, '93	1630	24 2	8 6	7 3	84	200	125	0 1	0 01748	0 02

Salt Creek Metals

SALT CREEK METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
Salt Creek	June 24 '92	8.4	96	0.001	0.15	<0.005	0.001098479	0.01	0.011	0.02*	0.011410501	6.52*	1	<0.02	0.003671/98	<0.0001	0.0001	<0.02	0.092657011	<0.001	0.017	<0.01	0.0002984	0.04	0.045
Salt Creek	July 14 '92	8.4	52	<0.001	0.15	<0.005	0.000678763	<0.01	0.011	0.01*	0.006762129	2.3*	1	<0.02	0.0015402	<0.0001	0.0001	<0.02	0.05814531	0.002	0.017	<0.01	0.000103948	0.02	0.045
Salt Creek	Sept 30 '92	7.7	40	<0.001	0.15	<0.005	0.000552395	0.02*	0.011	0.02*	0.005404044	1.11*	1	0.04*	0.001061988	<0.0001	0.0001	<0.02	0.047634076	0.002	0.017	<0.01	6.61965E-05	<0.01	0.045
Salt Creek	Nov 18 '92	8.4	66	<0.001	0.15	<0.005	0.000818499	<0.01	0.011	<0.01	0.008290083	0.45	1	<0.02	0.0014159206	<0.0001	0.0001	<0.02	0.069695629	0.002	0.017	<0.01	0.000156642	<0.01	0.045
Salt Creek	April 20 '93	9.2	not tested	<0.001	0.15	<0.005		<0.01	0.011	<0.01		0.52	1	<0.02		<0.0002	0.0001	<0.02		0.014	0.017	<0.01		<0.01	0.045
Salt Creek	May 19 '93	10.5	72	0.001	0.15	<0.005	0.000876375	<0.01	0.011	<0.01	0.008929954	3.4*	1	<0.02	0.002442534	<0.0001	0.0001	<0.02	0.074460311	0.002	0.017	<0.01	0.00018193	0.02	0.045
Salt Creek	June 22 '93	9.6	67	<0.001	0.15	<0.005	0.000828221	<0.01	0.011	<0.01	0.008297297	0.49	1	<0.02	0.00220571	<0.0001	0.0001	<0.02	0.070496735	0.002	0.017	<0.01	0.000160746	0.01	0.045
Salt Creek	July 22 '93	8.6	40		0.15		0.000552395		0.011		0.005404044		1		0.001061988		0.0001		0.047634076		0.017		6.61965E-05		0.045

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

SAN JUAN RIVER PHYSICAL/NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
San Juan 1	June 23, '92	1315	15 5	8 2	8 4	94	78	66	<0 01	< detection	0 02
San Juan 1	July 15, '92	1132	18 1	8 6	8 2	76	155	not tested	<0 01	< detection	0 02
San Juan 1	Sept. 29, '92	1252	13 5	8 4	9 1	74	195	156	<0 01	< detection	0 02
San Juan 1	Nov 18, '92	1040	2 7	8	10.6	78	220	164	<0 01	< detection	0.02
San Juan 1	April 21, '93	1150	7 4	9 3	10 7	159 6	150	138	0 03	0 006906	0.02
San Juan 1	May 20, '93	1130	7 5	8 9	8 9	58 8	65	84	<0 01	< detection	0 02
San Juan 1	June 23, '93	1120	8 2	9.5	10 9	36	50	40	<0 01	< detection	0 02
San Juan 1	July 21, '93	1240	18 9	9 9	8 3	72	155	105	0.07	0 05206	0.02
San Juan 2	June 23, '92	1400	16	8.2	8 2	60	92	164	<0.01	< detection	0 02
San Juan 2	Sept 29, '92	1322	14 3	8 6	9 1	80	220	164	<0 01	< detection	0 02
San Juan 2	Nov 18, '92	1080	2.9	8 2	10 7	92	183	not tested	not tested		0 02
San Juan 2	April 21, '93	1225	8 7	9 8	10	249 9	180	162	<0 01	< detection	0.02
San Juan 2	May 20, '93	1210	9	9	9 4	67 2	128	96	<0 01	< detection	0 02
San Juan 2	June 23, '93	1145	9.5	9 5	9.9	40	60	66	<0 01	< detection	0 02
San Juan 2	July 21, '93	1540	21 2	8 8	7 6	68	180	117	0 28	0 05963	0 02

SAN JUAN RIVER METALS

LOCATION	DATE	pH	HARDNESS mg/l	ARSENIC mg/l	ARSENIC Chronic Limit mg/l	CADMIUM mg/l	CADMIUM Chronic Limit mg/l	CHROMIUM mg/l	CHROMIUM Chronic Limit mg/l	COPPER mg/l	COPPER Chronic Limit mg/l	IRON mg/l	IRON Chronic Limit mg/l	LEAD mg/l	LEAD Chronic Limit mg/l	MERCURY mg/l	MERCURY Chronic Limit mg/l	NICKEL mg/l	NICKEL Chronic Limit mg/l	SELENIUM mg/l	SELENIUM Chronic Limit mg/l	SILVER mg/l	SILVER Chronic Limit mg/l	ZINC mg/l	ZINC Chronic Limit mg/l
San Juan 1	June 23 '92	8.2	33	<0.001	0.05	<0.005	0.0004	<0.01	0.026	0.03*	0.02	0.32	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
San Juan 1	July 15, '92	8.6	48	0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	0.53	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.02	0.05
San Juan 1	Sept. 29 '92	8.4	52	0.002	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	0.06	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	0.001	0.02	<0.01	0.0001	<0.01	0.05
San Juan 1	Nov. 18 '92	8	66	<0.001	0.05	<0.005	0.0004	<0.01	0.025	0.03*	0.02	0.32	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.04	0.05
San Juan 1	April 21 '93	9.3	not tested	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	2.4	2.4	<0.02	0.01	<0.0002	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.02	0.05
San Juan 1	May 20, '93	8.9	26	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	3.8	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.01	0.05
San Juan 1	June 23 '93	9.5	0	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	0.54	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
San Juan 1	July 21 '93	9.9	29		0.05		0.0004		0.025		0.02		2.4		0.01		0.05		0.05		0.02		0.0001		0.05
San Juan 2	June 23 '92	8.2	40	<0.001	0.05	<0.005	0.0004	<0.01	0.025	0.01	0.02	0.47	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.01	0.05
San Juan 2	Sept. 29 '92	8.6	64	<0.001	0.05	<0.005	0.0004	<0.1	0.025	<0.01	0.02	0.06	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
San Juan 2	Nov. 18 '92	8.2	76	<0.001	0.05	<0.005	0.0004	<0.1	0.025	<0.01	0.02	0.09	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	0.003	0.02	<0.01	0.0001	<0.01	0.05
San Juan 2	April 21 '93	9.8	not tested	<0.001	0.05	<0.005	0.0004	<0.1	0.025	<0.01	0.02	3.5*	2.4	<0.02	0.01	<0.0002	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.02	0.05
San Juan 2	May 20 '93	9	48	0.001	0.05	<0.005	0.0004	<0.1	0.025	<0.01	0.02	4.7*	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	0.01	0.05
San Juan 2	June 23 '93	9.5	0	<0.001	0.05	<0.005	0.0004	<0.01	0.025	<0.01	0.02	0.54	2.4	<0.02	0.01	<0.0001	0.05	<0.02	0.05	<0.001	0.02	<0.01	0.0001	<0.01	0.05
San Juan 2	July 21 '93	8.8	44		0.05		0.0004		0.025		0.02		2.4		0.01		0.05		0.05		0.02		0.0001		0.05

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

STOLLSTEIMER CREEK PHYSICAL/NUTRIENT PROPERTIES

LOCATION	DATE	TIME	TEMP CELSIUS	pH	D O mg/l	ALKALINITY mg/l	CONDUCTIVITY micromhos	TDS mg/l	TOTAL AMMONIA mg/l	ADJUSTED AMMONIA mg/l	AMMONIA CHRONIC LIMIT mg/l
Stoll Capote	June 23, '92	1575	27 5	8.4	6 9	288	1000	606	<0 01	0	0.02
Stoll 151	Sept 29, '92	1442	19 2	8 4	8 1	238	775	572	<0 01	< detection	0 02
Stoll 151	Nov 18, '92	1230	8 3	8.6	9 6	256	580	not tested	<0 01	< detection	0 02
Stoll 151	April 21, '93	1420	11 7	9 4	8 7	252	290	228	0 15	0.05187	0 02
Stoll 151	May 20, '93	1400	16 6	9 5	7 7	218	370	388	<0 01	< detection	0 02
Stoll 151	June 23, '93	1320	19 5	8.3	9 8	212	700	490	<0.01	< detection	0 02
Stoll 151	July 20, '93	1409	21 7	8 7	8 6	220	775	481	0 05	0 009112	0 02

STOLLSTEIMER CREEK METALS

Location	Date	pH	Hardness mg/l	Arsenic mg/l	Arsenic Chronic Limit	Cadmium mg/l	Cadmium Chronic Limit	Chromium mg/l	Chromium Chronic Limit	Copper mg/l	Copper Chronic Limit	Iron mg/l	Iron Chronic Limit	Lead mg/l	Lead Chronic Limit	Mercury mg/l	Mercury Chronic Limit	Nickel mg/l	Nickel Chronic Limit	Selenium mg/l	Selenium Chronic Limit	Silver mg/l	Silver Chronic Limit	Zinc mg/l	Zinc Chronic Limit
Stoll Capote	June 23, '92	8.4	337.5	0.002	0.015	<0.005	0.002947901	<0.01	0.011	0.04*	0.033432475	0.3	1	<0.02	0.021805415	<0.0001	0.0001	<0.02	0.240901898	0.001	0.017	<0.01	0.002593719	0.05	0.122448885
Stoll 151	Sept. 29, '92	8.4	446	<0.001	0.015	<0.005	0.003689188	<0.01	0.011	<0.01	0.042424352	0.08	1	<0.02	0.02367407	<0.0001	0.0001	<0.02	0.297746485	0.002	0.017	<0.01	0.004189363	<0.01	0.209351292
Stoll 151	Nov 18, '92	8.6	473	<0.001	0.015	<0.005	0.003842494	<0.01	0.011	<0.01	0.044609508	0.02	1	<0.02	0.016170608	<0.0001	0.0001	<0.02	0.311348395	0.001	0.017	<0.01	0.004635036	<0.01	0.244416519
Stoll 151	May 20, '93	9.5	349	<0.001	0.015	<0.005	0.002385558	<0.01	0.011	<0.01	0.03389748	0.54	1	<0.02	0.022310648	<0.0001	0.0001	<0.02	0.243879717	0.003	0.017	<0.01	0.002666846	<0.01	0.126316843
Stoll 151	June 23, '93	19.5	319	<0.001	0.015	<0.005	0.002820257	<0.01	0.011	<0.01	0.031860143	0.04	1	<0.02	0.013131299	<0.0001	0.0001	<0.02	0.230798547	<0.001	0.017	<0.01	0.00235403	0.01	0.118862291
Stoll 151	July 20, '93	8.7	438																						

*DENOTES EXCEEDENCE OF COLORADO STATE STREAM CLASSIFICATION STANDARDS

Animas River Water Quality Data - Durango Pumping Plant

Site 1 - Near the Red Lion

STATION	DATE	TOTAL GROSS ALPHA (pCi/L)	TOTAL GROSS BETA (pCi/L)	AS	CD	CU	HG	PB	ZN	SE
DRALP001	07-Sep-89			0.8	< 5.0	< 22	< 1.0	< 20	50	< 0.5
DRALP001	20-Oct-89			< 2.0	< 1.0	< 10	0.1	< 10	54	< 1.0
DRALP001	20-Oct-89	2.1 ± 3.0	6.3 ± 1.9	0.5	< 3.0	< 200	< 1.0	< 20	< 50	< 0.5
DRALP001	16-Nov-89	0.5 ± 1.5		< 0.5	< 0.5	< 20	< 0.5	< 5	64	< 0.5
DRALP001	18-Dec-89	3.7 ± 3.0	4.7 ± 1.8	0.5	< 3.0	< 20	< 1.0	< 5	< 100	< 0.5
DRALP001	18-Jan-90	0.2 ± 2.8	4.1 ± 2.0	< 0.5	< 3.0	< 20	< 1.0	< 5	94	< 0.5
DRALP001	15-Feb-90	1.5 ± 2.8	4.3 ± 1.8	< 0.5	< 3.0	< 20	< 0.5	< 5	77	< 0.5
DRALP001	15-Mar-90	0.0 ± 2.4	5.6 ± 1.8	< 0.5	< 3.0	< 20	< 0.5	< 5	48	< 0.5
DRALP001	13-Apr-90	0.0 ± 1.9	3.3 ± 1.5	< 0.5	< 3.0	< 20	< 0.5	< 5	58	< 0.5
DRALP001	17-May-90	0.0 ± 0.9		< 0.5	< 3.0	< 20	< 0.5	< 5	70	< 0.5
DRALP001	18-Jun-90	0.4 ± 1.1		< 0.5	< 3.0	< 20	< 1.0	< 5	< 50	1.0
DRALP001	01-Aug-90	0.3 ± 3.9	8.8 ± 2.3	0.6	< 3.0	< 20	< 1.0	< 5	46	< 0.5
DRALP001	28-Aug-90	3.0 ± 2.9	10.0 ± 2.0	< 0.5	< 3.0	< 20	< 1.0	5.5	46	< 0.5
DRALP001	12-Sep-90	0.0 ± 3.7	2.6 ± 2.4	0.5	< 3.0	< 20	< 0.5	< 5	< 50	< 0.5
DRALP001	05-Oct-90	0.0 ± 1.5	1.3 ± 2.0	< 0.5	< 3.0	< 20	< 0.5	< 5	85	< 0.5
DRALP001	01-Nov-90	11.1 ± 4.0	7.6 ± 2.1	< 0.5	1.0	20	< 0.5	< 5	83	< 0.5
DRALP001	06-Dec-90	7.1 ± 3.4	8.4 ± 2.0	< 0.5	< 1.0	< 20	< 1.0	< 5	93	< 0.5
DRALP001	01-Feb-91	1.0 ± 2.6	6.8 ± 2.1	< 0.5	< 2.0	< 20	< 0.5	< 5	86	< 0.5
DRALP001	01-Mar-91	5.7 ± 3.8	7.0 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	66	< 0.5
DRALP001	04-Apr-91	0.4 ± 3.0	0.5 ± 2.1	< 0.5	< 2.0	< 20	< 0.5	< 5	40	6.0
DRALP001	01-May-91	0.0 ± 2.4	0.0 ± 2.4	< 0.5	< 2.0	< 20	< 0.5	< 5	40	< 5.0
DRALP001	03-Jun-91	1.1 ± 1.7	1.1 ± 1.8	< 0.5	< 2.0	< 20	< 0.5	< 5	83	7.0
DRALP001	02-Jul-91	0.8 ± 1.7	0.8 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	90	< 5.0
DRALP001	05-Aug-91	0.0 ± 1.6	0.4 ± 2.6	< 0.5	< 2.0	< 20	< 0.5	13	54	< 5.0
DRALP001	23-Sep-91	3.0 ± 2.9	4.6 ± 2.3	< 0.5	< 2.0	< 20	< 0.5	< 5	53	1.0
DRALP001	04-Oct-91	0.0 ± 3.1	3.0 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	50	< 0.5
DRALP001	06-Nov-91			< 0.5	< 2.0	< 20	< 0.5	< 5	48	< 0.5
DRALP001	04-Dec-91			< 0.5	< 2.0	< 20	< 0.5	< 5	80	< 0.5
DRALP001	10-Jan-92									
DRALP001	18-Mar-92									
DRALP001	05-May-92									
DRALP001	02-Jun-92									

Animas River Water Quality Data - Durango Pumping Plant

Site 2 - At the Pumping Plant Intake

STATION	DATE	pH	EC	TDS	CL	SO4	ALK. (mg/L as CACO3)	HCO3	NA	CA	MG	K	NO3+NO2 (as N)
DRALP002	07-Sep-89		688	445	38	141	161	196	29.6	90.0	13.8	6.3	0.80
DRALP002	20-Oct-89	8.1	603	400					22.0	71.4	13.5	4.0	
DRALP002	20-Oct-89	8.1	603	400	24	128	136	166	24.1	70.3	13.0	4.6	0.20
DRALP002	16-Nov-89	8.3	768	505	32	155	178	217	31.9	93.0	17.8	5.4	0.27
DRALP002	18-Dec-89	8.4	709	475	28	175	161	196	28.6	88.5	16.1	5.0	0.73
DRALP002	18-Jan-90	8.1	804	510	42	186	155	189	38.4	117.0	17.3	6.6	0.91
DRALP002	15-Feb-90	7.2	722	465	32	172	131	160	28.4	89.4	14.5	5.6	0.86
DRALP002	15-Mar-90	7.3	856	510	34	194	159	194	30.3	96.8	15.4	6.1	0.44
DRALP002	13-Apr-90	7.3	580	390	19	146	106	129	19.9	70.8	10.5	3.9 <	0.20
DRALP002	17-May-90	6.8	290	175	< 10	61	72	88	6.7	36.4	6.0	1.5	0.22
DRALP002	18-Jun-90	7.5	236	150	< 10	54	54	66	6.9	31.5	4.4	1.5	0.18
DRALP002	01-Aug-90	6.7	612	410	29	135	143	174	25.0	80.8	16.6	4.5	0.18
DRALP002	28-Aug-90	7.5	567	385	21	128	140	171	25.5	80.6	11.4	4.5	0.15
DRALP002	12-Sep-90	8.3	600	405	31	150	160	195	32.4	87.2	16.5	4.8	0.19
DRALP002	05-Oct-90	8.0	325	225	10	82	82	100	10.4	50.7	7.9	2.1	0.24
DRALP002	01-Nov-90	8.2	455	385	18	114	113	138	16.6	62.4	11.7	3.1	0.78
DRALP002	06-Dec-90	7.9	520	335	19	145	114	139	19.0	82.6	12.8	3.1	0.54
DRALP002	03-Jan-91	7.7	543	375	20	145	135	165	22.9	79.2	13.5	3.9	0.29
DRALP002	02-Feb-91	7.9	700	510	24	180	185	226	29.9	100.5	23.4	4.3	0.76
DRALP002	01-Mar-91	7.8	565	405	22	152	129	157	21.1	78.5	12.7	4.2	1.16
DRALP002	04-Apr-91	7.7	440	320	< 10	111	121	148	14.3	63.7	10.7	2.6	0.29
DRALP002	01-May-91	7.8	380	270	< 10	80	113	138	9.6	57.8	8.2	2.2	0.45
DRALP002	03-Jun-91	7.6	232	175	< 10	50	60	73	6.4	34.5	4.8	1.4	0.35
DRALP002	02-Jul-91	7.4	270	185	< 10	60	64	78	7.4	30.0	6.4	1.6	0.31
DRALP002	05-Aug-91	7.9	430	260	15	100	114	139	17.4	60.3	10.4	2.8	0.28
DRALP002	23-Sep-91	8.0	470	295	16	107	105	128	20.2	68.7	10.5	3.2	0.44
DRALP002	04-Oct-91	7.6	540	365	22	134	119	145	23.6	75.9	11.0	3.9	0.88
DRALP002	06-Nov-91	8.2	560	455	22	190	138	168	21.5	78.0	14.3	3.9	0.88
DRALP002	04-Dec-91	7.9	480	360	20	136	124	151	21.8	76.5	12.5	3.9	1.14
DRALP002	10-Jan-92	7.8	622	440	22	190	136		23.4	94.5	15.1	3.7	1.10
DRALP002	18-Mar-92	9.0	628	442	23	168		172	21.8	104.0	14.6	2.7	
DRALP002	07-Apr-92	8.1	410	202	9	87.8			10.8	45.6	19.0	1.6	
DRALP002	05-May-92	8.3	223	98	2	37.4		89.1	3.5	35.2	3.9	1.2	
DRALP002	02-Jun-92	8.1	246	146	9	41.3		89.1	3.9	37.6	4.9	1.2	
	MEAN		531	361		124	118	150	20.8	71.9	12.3	3.7	0.48
	MINIMUM		232	150	< 10	0	0	65.88	6.4	30.0	4.4	1.4	0.00
	MAXIMUM		856	510	42	194	185	225.7	38.4	117.0	23.4	6.6	1.16

Animas River Water Quality Data - Durango Pumping Plant

Site 2 - At the Pumping Plant Intake

STATION	DATE	TOTAL GROSS ALPHA (pCi/L)	TOTAL GROSS BETA (pCi/L)	AS	CD	CU	HG	PB	ZN	SE
DRALP002	07-Sep-89			0.8	< 5.0	< 200	< 1.0	20	< 50	< 0.5
DRALP002	20-Oct-89			< 2.0	< 1.0	< 10	0.1	10	60	
DRALP002	20-Oct-89	0.0 ± 3.1	3.2 ± 2.0	0.5	< 3.0	< 200	< 1.0	20	< 50	< 0.5
DRALP002	16-Nov-89	0.6 ± 1.7		< 0.5	< 0.5	< 20	< 0.5	< 5	60	< 0.5
DRALP002	18-Dec-89	0.0 ± 2.4	3.2 ± 1.6	0.6	< 3.0	< 20	< 1.0	< 5	< 100	< 0.5
DRALP002	18-Jan-90	1.1 ± 2.9	4.3 ± 2.0	< 0.5	< 3.0	< 20	< 1.0	< 5	98	< 0.5
DRALP002	15-Feb-90	7.7 ± 3.6	7.9 ± 2.0	< 0.5	< 3.0	< 20	< 0.5	< 5	72	< 0.5
DRALP002	15-Mar-90	0.9 ± 2.9	4.2 ± 2.0	< 0.5	< 3.0	< 20	< 0.5	< 5	42	< 0.5
DRALP002	13-Apr-90	0.0 ± 1.3	4.3 ± 1.6	< 0.5	5.0	< 20	< 0.5	< 5	53	< 0.5
DRALP002	17-May-90	0.0 ± 0.9		< 0.5	< 3.0	< 20	< 0.5	< 5	68	< 0.5
DRALP002	18-Jun-90	1.8 ± 1.5		< 0.5	< 3.0	< 20	< 1.0	< 5	< 50	7.0
DRALP002	01-Aug-90	6.3 ± 3.5	12.6 ± 2.0	0.6	< 3.0	< 20	< 1.0	< 5	37	< 0.5
DRALP002	28-Aug-90	2.1 ± 2.8	12.1 ± 2.0	< 0.5	< 3.0	< 20	< 1.0	< 20	< 50	< 0.5
DRALP002	12-Sep-90	0.0 ± 4.1	2.9 ± 2.4	0.6	< 3.0	20	< 0.5	< 5	< 50	< 0.5
DRALP002	05-Oct-90	0.4 ± 2.4	0.0 ± 1.2	< 0.5	< 3.0	< 20	< 0.5	< 5	54	< 0.5
DRALP002	01-Nov-90	5.5 ± 3.0	6.1 ± 1.9	< 0.5	< 1.0	30	< 0.5	< 5	68	< 0.5
DRALP002	06-Dec-90	10.0 ± 5.0	7.6 ± 1.9	< 0.5	< 1.0	< 20	< 1.0	< 5	78	< 0.5
DRALP002	03-Jan-91	0.0 ± 2.4	7.1 ± 1.9	< 0.5	< 2.0	< 20	< 0.5	< 5	86	1.4
DRALP002	02-Feb-91	3.0 ± 3.3	6.9 ± 2.3	< 0.5	< 2.0	< 20	< 0.5	< 5	72	< 0.5
DRALP002	01-Mar-91	6.9 ± 3.8	6.2 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	58	< 0.5
DRALP002	04-Apr-91	0.7 ± 3.2	2.4 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	30	< 0.5
DRALP002	01-May-91	0.0 ± 2.8	1.6 ± 2.1	< 0.5	< 2.0	< 20	< 0.5	< 5	54	< 0.5
DRALP002	03-Jun-91	0.0 ± 1.5	0.0 ± 1.8	< 0.5	< 2.0	< 20	< 0.5	< 5	82.5	< 0.5
DRALP002	02-Jul-91	1.3 ± 1.8	0.3 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	71	< 0.5
DRALP002	05-Aug-91	1.0 ± 1.9	1.5 ± 2.5	0.5	< 2.0	< 20	< 0.5	< 5	47	< 0.5
DRALP002	23-Sep-91	1.8 ± 1.5	3.1 ± 1.7	< 0.5	< 2.0	< 20	< 0.5	< 5	43	< 0.5
DRALP002	04-Oct-91	2.5 ± 3.7	3.7 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 2	44	< 0.5
DRALP002	06-Nov-91			< 0.5	< 2.0	< 20	< 0.5	< 5	42	< 0.5
DRALP002	04-Dec-91			< 0.5	< 2.0	< 20	< 0.5	< 5	70	< 0.5
DRALP002	10-Jan-92									
DRALP002	18-Mar-92									
DRALP002	07-Apr-92									
DRALP002	05-May-92									
DRALP002	02-Jun-92									

Animas River Water Quality Data - Durango Pumping Plant

Site 3 - At the Highway 550 Bridge near the Durango Mall

STATION	DATE	pH	EC	TDS	CL	SO4	ALK. (mg/L as CACO3)	HCO3	NA	CA	MG	K	NO3+NO2 (as N)
DRALP003	07-Sep-89		644	455	34	142	164	200	28.9	88.1	14.2	5.9	0.32
DRALP003	20-Oct-89	8.1	579	385	26	134	134	163	23.2	70.5	11.9	4.4	0.14
DRALP003	16-Nov-89	8.7	739	475	32	160	160	195	28.4	96.6	15.9	4.6	0.27
DRALP003	18-Dec-89	8.2	641	400	25	170	134	163	22.9	84.5	12.8	4.6	0.47
DRALP003	18-Jan-90	8.2	781	530	39	196	153	187	36.3	124.0	17.1	6.5	0.30
DRALP003	15-Feb-90	6.7	729	460	32	186	142	173	30.5	91.1	14.9	5.1	0.20
DRALP003	15-Mar-90	7.3	765	520	36	198	157	192	29.6	98.6	15.1	6.1	0.52
DRALP003	13-Apr-90	7.2	608	380	18	149	108	132	19.3	73.0	11.4	3.4	0.20
DRALP003	17-May-90	6.8	291	185 <	10	59	75	92	5.7	35.8	5.8	1.4	0.16
DRALP003	18-Jun-90	7.6	234	160 <	10	48	45	55	5.0	29.5	4.1	1.4	0.17
DRALP003	01-Aug-90	7.0	544	395	29	130	130	159	25.9	81.4	13.2	4.3	0.14
DRALP003	28-Aug-90	8.3	526	395	24	144	139	170	24.2	83.0	11.3	4.4	0.16
DRALP003	12-Sep-90	8.5	580	355	31	150	155	189	25.7	83.6	12.7	4.8	0.17
DRALP003	05-Oct-90	8.2	310	215	10	82	82	100	9.2	49.5	7.2	1.9	0.22
DRALP003	01-Nov-90	8.2	420	380	16	108	101	123	14.5	62.4	9.1	2.9	0.23
DRALP003	06-Dec-90	8.1	517	350	22	145	112	137	18.4	82.7	12.8	3.3	0.30
DRALP003	03-Jan-91	8.0	540	370	20	148	132	161	23.4	78.3	13.5	3.9	0.21
DRALP003	01-Feb-91	8.0	600	420	24	175	133	162	24.5	92.4	13.8	4.0	0.15
DRALP003	01-Mar-91	8.0	580	380	22	158	133	162	19.7	78.5	13.3	3.7	0.22
DRALP003	04-Apr-91	7.9	420	310 <	10	106	113	138	11.8	62.4	10.3	2.2	0.14
DRALP003	01-May-91	8.1	375	265 <	10	84	110	134	8.0	57.8	7.9	1.9	0.08
DRALP003	03-Jun-91	7.8	225	185 <	10	48	67	82	5.7	34.5	4.7	1.2	0.12
DRALP003	02-Jul-91	7.7	260	165 <	10	65	62	76	6.4	31.3	4.5	1.5	0.10
DRALP003	05-Aug-91	8.1	430	320	16	108	108	132	16.9	59.1	9.8	2.8	0.15
DRALP003	23-Sep-91	8.2	440	305	14	107	105	128	19.8	70.5	10.4	10.4	0.19
DRALP003	04-Oct-91	8.1	520	385	22	134	132	161	22.4	78.5	10.9	3.7	0.35
DRALP003	06-Nov-91	8.3	500	400	20	155	127	155	19.2	76.9	11.2	3.9	0.29
DRALP003	04-Dec-91	8.2	520	355	19	136	123	150	21.1	75.8	12.4	3.3	0.46
DRALP003	10-Jan-92	8.2	600	445	21	195	129		23.5	97.3	15.3	3.4	0.44
DRALP003	13-Mar-92	9.0	551	360	16	129		140	17.9	80.0	11.7	2.4	
DRALP003	05-May-92	8.1	225	118	2	38.9		89.1	3.5	34.4	4.9	1.2	
DRALP003	02-Jun-92	8.0	246	122	4	42.7		89.1	4.6	38.4	3.4	1.2	
	MEAN		511	354		129	119	145	19.5	72.5	11.2	3.8	0.23
	MINIMUM		225	160 <	10	48	45	54.9	5.0	29.5	4.1	1.2	0.08
	MAXIMUM		781	530	39	198	164	200.08	36.3	124.0	17.1	10.4	0.52

Animas River Water Quality Data - Durango Pumping Plant

Site 3 - At the Highway 550 Bridge near the Durango Mall

STATION	DATE	TOTAL GROSS ALPHA (pCi/L)	TOTAL GROSS BETA (pCi/L)	AS	CD	CU	HG	PB	ZN	SE
DRALP003	07-Sep-89			0.8	< 5.0	< 200	< 1.0	< 20	< 50	< 0.5
DRALP003	20-Oct-89	0.0 ± 2.8	2.4 ± 2.0	0.6	< 3.0	< 200	< 1.0	< 20	< 50	< 0.5
DRALP003	16-Nov-89	2.3 ± 1.8	-	< 0.5	< 0.5	< 20	< 0.5	< 5	54	< 0.5
DRALP003	18-Dec-89	1.8 ± 3.1	3.9 ± 1.7	< 0.5	< 3.0	< 20	< 1.0	< 5	< 100	< 0.5
DRALP003	18-Jan-90	0.0 ± 2.2	7.4 ± 2.1	< 0.5	< 3.0	< 20	< 1.0	< 5	94	7.0
DRALP003	15-Feb-90	2.0 ± 2.8	3.5 ± 1.8	< 0.5	< 3.0	< 20	< 0.5	< 5	65	< 0.5
DRALP003	15-Mar-90	1.4 ± 2.8	4.3 ± 1.8	0.5	< 3.0	< 20	< 0.5	< 5	< 20	< 0.5
DRALP003	13-Apr-90	0.4 ± 1.6	4.1 ± 1.7	< 0.5	< 3.0	< 20	< 0.5	< 5	50	< 0.5
DRALP003	17-May-90	0.0 ± 1.2		< 0.5	< 3.0	< 20	< 0.5	< 5	59	< 0.5
DRALP003	18-Jun-90	0.7 ± 1.2		< 0.5	< 3.0	< 20	< 1.0	< 5	< 50	1.4
DRALP003	01-Aug-90	6.5 ± 3.4	15.0 ± 2.0	0.5	< 3.0	< 20	< 1.0	< 20	29	< 0.5
DRALP003	28-Aug-90	4.6 ± 3.1	9.5 ± 2.1	< 0.5	< 3.0	< 20	< 1.0	< 5	< 50	< 0.5
DRALP003	12-Sep-90	3.3 ± 3.8	6.3 ± 2.3	0.5	< 3.0	20	< 0.5	< 5	< 50	< 0.5
DRALP003	05-Oct-90	0.0 ± 2.2	0.7 ± 1.3	< 0.5	< 3.0	< 20	< 0.5	< 5	40	< 0.5
DRALP003	01-Nov-90	6.0 ± 3.8	6.2 ± 2.2	< 0.5	< 1.0	20	< 0.5	< 5	51	< 0.5
DRALP003	06-Dec-90	4.9 ± 3.2	4.2 ± 1.6	< 0.5	< 1.0	< 20	< 1.0	< 5	74	< 0.5
DRALP003	03-Jan-91	1.5 ± 2.6	7.9 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	82	1.2
DRALP003	01-Feb-91	2.0 ± 2.7	5.7 ± 1.9	< 0.5	< 2.0	< 20	< 0.5	< 5	72	< 0.5
DRALP003	01-Mar-91	1.8 ± 3.3	5.9 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	54	< 0.5
DRALP003	04-Apr-91	2.1 ± 3.4	5.3 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	< 25	0.5
DRALP003	01-May-91	0.0 ± 2.9	2.8 ± 2.1	< 0.5	< 2.0	< 20	< 0.5	< 5	64	< 0.5
DRALP003	03-Jun-91	2.4 ± 1.9	1.1 ± 1.8	< 0.5	< 2.0	< 20	< 0.5	< 5	78.3	< 0.5
DRALP003	02-Jul-91	2.8 ± 1.8	0.9 ± 2.0	< 0.5	< 2.0	< 20	< 0.5	< 5	60	< 0.5
DRALP003	05-Aug-91	1.6 ± 1.7	1.4 ± 2.3	0.7	< 2.0	< 20	< 0.5	5	38	< 0.5
DRALP003	23-Sep-91	3.6 ± 3.0	3.6 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	36	1.0
DRALP003	04-Oct-91	0.0 ± 3.3	3.3 ± 2.2	< 0.5	< 2.0	< 20	< 0.5	< 5	39	< 0.5
DRALP003	06-Nov-91			< 0.5	< 2.0	< 20	< 0.5	< 5	40	< 0.5
DRALP003	04-Dec-91			< 0.5	< 2.0	< 20	< 0.5	< 5	70	< 0.5
DRALP003	10-Jan-92									
DRALP003	13-Mar-92									
DRALP003	05-May-92									
DRALP003	02-Jun-92									

[source: Department of Energy, Albuquerque NM]

Site	Date	EC (µS/cm)	SO_4 (mg/L)	SE (mg/L)	CD (mg/L)	U	Location
DR-02	09-01-82	18,900	11,000	< 0.010	N/D	0.0120	Located down-gradient from the former raffinate ponds
	07-01-83	11,960	6,700	< 0.010	N/D	0.0260	
	08-15-83	14,400	7,100	< 0.010	N/D	0.0380	
	11-01-83	18,000	13,000	0.020	N/D	0.5000	
	03-14-85	22,270	17,000	0.060	< 0.001	0.9850	
	11-10-85	16,000	15,700	< 0.005	N/D	1.2700	
	04-04-87	6,500	12,900	< 0.002	< 0.001	0.8418	
	09-13-87	15,000	11,200	< 0.001	< 0.005	0.4788	
	11-18-87	15,200	12,160	0.104	< 0.005	0.9092	
	04-05-88	15,490	10,170	0.195	0.08	0.9330	
	07-01-88	14,000	11,100	< 0.005	0.001	0.0940	
	10-07-88	11,000	10,700	0.763	0.003	0.6020	
	01-10-89	12,500	9,460	0.032	0.081	0.4710	
	04-03-89	9,000	8,550	0.085	0.028	0.2290	
	07-15-89	5,000	8,420	0.293	0.021	0.2500	
	11-16-89	12,000	7,840	0.054	0.002	0.1060	
	05-12-90	11,500	7,650	0.056	< 0.001	0.0520	
	07-16-90	12,000	7,840	<0.050	< 0.003	0.0810	
	10-28-90	16,180	8,070	<0.005	< 0.001	0.1090	
	08-05-91	15,100	6,730	<0.050	< 0.001	0.0780	
	Average	13,600	10,165				
DR-07	09-01-82	3,400	2,009	< 0.010	N/D	0.0160	Located up-gradient from the former site of the Raffinate ponds - back-ground well.
	07-01-83	3,843	2,200	< 0.010	N/D	0.0110	
	08-15-83	5,733	2,800	< 0.010	N/D	0.0050	
	11-01-83	4,700	2,800	< 0.010	N/D	0.0080	
	11-11-85	4,500	3,190	< 0.005	N/D	0.0080	
	04-03-87	1,975	1,700	< 0.002	< 0.001	0.0020	
	09-10-87	2,600	1,580	0.002	< 0.005	0.0040	
	11-19-87	2,320	1,820	0.022	< 0.005	0.0023	
	04-07-88	3,520	1,830	0.025	< 0.012	0.0036	
	07-01-88	4,150	2,360	0.040	< 0.001	0.0130	
	10-07-88	2,000	1,720	0.067	0.002	0.0042	
	04-03-89	1,550	923	0.024	0.003	0.0077	
	07-15-89	1,600	1,540	0.025	0.004	0.0033	
	11-16-89	1,400	1,190	0.031	0.001	0.0028	
	05-12-90	1,780	1,080	< 0.005	< 0.001	0.0020	
	07-15-90	1,800	1,100	0.030	< 0.001	0.0020	
	10-28-90	2,520	1,040	0.008	< 0.001	0.0037	
	08-05-91	2,480	942	<0.005	< 0.001	0.0020	
	Average	2,882	1,740				

N/D - Not Determined

Appendix 20b. Electrical conductivity, sulfate, selenium, cadmium, and uranium - UMTRA site groundwater (U.S. Bureau of Reclamation 1992b)

DURANGO PUMPING PLANT - RADIONUCLIDE DATA FOR 1990, 1991, & 1992

LOCALE	WELL NUMBER	SAMPLING DATE	GROSS ALPHA (pCi/L)	GROSS BETA (pCi/L)	Ra (pCi/L)	U (pCi/L)	Th (pCi/L)	NOTES ON WELLS
NW OF FAULT	DH-111	5/23/90	0.0 ± 26.6	0.0 ± 20.9	2.2 ± 2.1	<0.6	0.0 ± 0.1	LOCATED UPGRADIENT OF FORMER SITE OF
		8/16/90	6.1 ± 38.3	12.2 ± 24.1	3.4 ± 1.9	1.4	0.1 ± 0.2	RAFFINATE PONDS AND IN THE SITE OF THE
		11/20/90	105.0 ± 42.9	50.0 ± 23.5	3.6 ± 2.1	<0.7	0.2 ± 0.3	DURANGO PUMPING PLANT.
		5/2/91	0.0 ± 58.0	24.0 ± 34.0	1.0 ± 2.3	0.7	0.0 ± 1.0	
		6/13/91	2.3 ± 26.1	22.0 ± 37.9	3.1 ± 1.4	0.3	1.0 ± 0.4	
		9/20/91	0.0 ± 61.0	0.0 ± 43.0	1.9 ± 1.9	0.3	0.1 ± 0.5	
		12/26/91	0.0 ± 56.4	22.5 ± 37.8	4.1 ± 3.5	1.4	0.6 ± 0.6	
		3/4/92	0.0 ± 17.9	5.7 ± 18.0	2.1 ± 1.6	<0.7	0.3 ± 0.5	
	DH-112	5/23/90	0.0 ± 26.9	0.0 ± 15.6	0.7 ± 2.2	4.7	0.0 ± 0.3	LOCATED BENEATH THE FORMER SITE OF
		8/16/90	0.0 ± 27.6	11.9 ± 18.5	2.8 ± 1.8	10.6	0.2 ± 0.4	RAFFINATE PONDS AND IN THE SITE OF THE
		11/20/90	104.0 ± 43.6	80.3 ± 24.6	0.6 ± 1.5	<0.7	0.0 ± 0.1	DURANGO PUMPING PLANT.
		5/2/91	60.0 ± 52.0	40.0 ± 27.0	3.8 ± 2.9	19.6	0.2 ± 1.3	
		6/13/91	12.1 ± 31.5	2.9 ± 25.2	0.6 ± 1.3	6.3	1.2 ± 0.4	
		9/20/91	0.0 ± 35.0	39.0 ± 25.0	5.7 ± 3.2	8.2	0.1 ± 1.0	
		12/26/91	30.3 ± 44.5	7.2 ± 24.8	0.2 ± 3.5	5.4	0.6 ± 0.6	
		12/26/91R	48.5 ± 46.8	32.2 ± 26.1	0.1 ± 2.2	2.0	0.4 ± 0.4	
		3/04/92	0.0 ± 17.6	0.0 ± 17.5	0.4 ± 2.8	10.9	0.0 ± 0.5	
	DH-113	5/23/90	1.0 ± 6.7	6.0 ± 5.4	0.4 ± 2.8	1.8	0.0 ± 0.5	LOCATED ADJACENT TO THE ANIMAS RIVER
		8/16/90	0.4 ± 1.4	0.3 ± 1.3	0.1 ± 1.5	<1.0	0.0 ± 0.6	ON THE PUMPING PLANT SITE.
		11/20/90	29.3 ± 11.1	23.7 ± 6.3	1.5 ± 1.6	<0.7	0.0 ± 0.1	
		6/13/91	9.8 ± 8.0	0.0 ± 5.3	0.7 ± 1.3	0.3	1.4 ± 0.4	
		9/20/91	2.4 ± 7.9	3.4 ± 5.3	1.3 ± 1.7	1.4	0.5 ± 0.7	
		12/26/91	4.9 ± 8.7	6.3 ± 5.2	0.1 ± 2.9	0.7	0.6 ± 0.9	
		3/04/92	0.0 ± 3.0	1.2 ± 2.9	0.0 ± 1.5	1.4	0.6 ± 1.1	
	DH-113A	5/23/90	50.9 ± 28.1	14.8 ± 13.3	1.7 ± 2.8	31.6	0.0 ± 0.4	SHALLOW WELL IN FILL AT DH-113
		3/04/92	13.0 ± 5.3	19.7 ± 4.7	1.6 ± 2.8	23.1	0.7 ± 0.8	
	DH-114 (CONTROL)	5/23/90	0.0 ± 15.2	0.0 ± 11.6	0.4 ± 1.8	<0.6	0.1 ± 0.2	LOCATED UPGRADIENT OF THE FORMER SITE OF
		8/16/90	0.0 ± 15.5	12.8 ± 10.9	0.6 ± 2.0	1.4	0.1 ± 0.3	RAFFINATE POND AND THE PUMPING PLANT.
		8/16/90R	4.2 ± 18.0.	18.0 ± 11.5	0.2 ± 1.9	2.1	0.1 ± 0.1	BACKGROUND WATER QUALITY SITE.
		11/20/90	53.0 ± 23.5	42.0 ± 13.6	0.0 ± 1.5	<0.7	0.0 ± 0.1	
		6/13/91	18.2 ± 17.8	10.0 ± 13.1	2.7 ± 1.4	0.3	0.8 ± 0.3	
		9/20/91	0.0 ± 16.0	6.4 ± 11.0	1.4 ± 1.7	<1.0	0.8 ± 0.3	
		12/26/91	0.0 ± 17.1	31.9 ± 12.1	0.2 ± 3.4	0.7	0.4 ± 0.7	
		3/04/92	3.1 ± 7.1	15.3 ± 7.3	0.0 ± 1.6	1.4	0.3 ± 1.1	
	DH-115 (CONTROL)	5/23/90	0.0 ± 5.2	0.0 ± 3.9	0.2 ± 1.7	<0.6	0.2 ± 1.3	LOCATED UPGRADIENT OF THE FORMER SITE OF
		8/16/90	0.0 ± 7.0	11.1 ± 5.1	2.1 ± 2.1	<1.0	0.2 ± 1.1	RAFFINATE POND AND THE PUMPING PLANT.
		11/20/90	11.7 ± 8.9	12.5 ± 5.7	0.0 ± 1.6	<0.7	0.8 ± 0.3	BACKGROUND WATER QUALITY SITE.
		6/13/91	10.9 ± 7.7	2.7 ± 5.2	5.2 ± 2.2	0.3	1.6 ± 0.5	
		9/20/91	19.0 ± 13.0	16.0 ± 7.8	0.1 ± 1.6	<0.7	0.1 ± 0.6	
		12/26/91	0.0 ± 6.5	3.7 ± 4.5	4.8 ± 6.3	<0.7	0.2 ± 0.4	
		3/04/92	0.0 ± 3.6	12.1 ± 3.9	0.3 ± 1.5	<0.7	0.3 ± 1.1	
		3/04/92R	1.2 ± 3.6	14.4 ± 3.4	0.0 ± 2.7	0.7	0.5 ± 0.7	

Appendix 20c. Durango Pumping Plant Radionuclide data for 1990, 1991, and 1992 (U.S. Bureau of Reclamation 1992b)

DURANGO PUMPING PLANT - RADIONUCLIDE DATA FOR 1990, 1991, & 1992

LOCALE	WELL NUMBER	SAMPLING DATE	GROSS ALPHA (pCi/L)	GROSS BETA (pCi/L)	Ra (pCi/L)	U (pCi/L)	Th (pCi/L)	NOTES ON WELLS
SE OF FAULT	DH-110	5/23/90	271.0 ± 159.0	98.0 ± 74.0	0.6 ± 1.9	336.5	0.0 ± 0.3	LOCATED BENEATH THE FORMER SITE OF THE
		8/16/90	198.0 ± 105.0	122.0 ± 71.0	2.0 ± 1.6	331	0.1 ± 0.3	RAFFINATE PONDS; WELL PENETRATES THE
		11/20/90	701.0 ± 185.0	257.0 ± 70.0	1.7 ± 1.9	268	0.0 ± 0.2	FAULT BETWEEN 71.3-84.7 FT.
		6/13/91	373.0 ± 143.8	203.0 ± 85.6	2.6 ± 2.1	106.3	2.6 ± 0.6	
		9/20/91	0.0 ± 115.0	0.0 ± 67.0	2.8 ± 1.7	218.2	0.3 ± 0.6	
		9/20/91R	218.0 ± 128.0	0.0 ± 68.0	3.4 ± 1.8	164.6	0.1 ± 0.5	
		12/26/91	137.0 ± 119.0	91.2 ± 65.8	0.1 ± 3.3	142.8	0.4 ± 0.4	
		3/4/92	141.0 ± 55.0	127.0 ± 4.4	0.7 ± 1.6	204.7	1.2 ± 1.0	
	DH-116	5/23/90	0.0 ± 62.0	0.0 ± 34.0	0.4 ± 1.8	53.1	0.3 ± 0.3	LOCATED DOWNGRADIENT FROM RAFFINATE POND.
		8/16/90	68.2 ± 103.0	91.5 ± 52.3	1.5 ± 2.0	91.5	0.1 ± 0.3	SHALLOW WELL IN SANDSTONE.
		11/20/90	45.6 ± 26.6	50.5 ± 16.1	0.1 ± 1.5	0.7	0.0 ± 0.2	
		6/13/91	47.1 ± 58.9	0.0 ± 53.7	2.7 ± 2.1	27.2	1.5 ± 0.4	
		6/13/91R	26.2 ± 55.2	0.0 ± 53.5	2.2 ± 1.4	32.0	1.3 ± 0.4	
		9/20/91	0.0 ± 24.0	0.0 ± 16.0	0.1 ± 1.8	11.6	0.1 ± 0.5	
		12/26/91	11.4 ± 16.7	22.3 ± 10.3	5.7 ± 2.8	8.2	0.3 ± 0.5	
		3/04/92	22.7 ± 6.1	29.0 ± 3.8	2.3 ± 0.7	51.0	1.2 ± 1.0	
	DH-117	5/23/90	0.0 ± 69.0	0.0 ± 55.8	2.7 ± 2.2	<0.6	0.3 ± 0.2	LOCATED DOWNGRADIENT FROM FORMER SITE OF
		8/16/90	26.0 ± 110.0	35.1 ± 65.1	2.5 ± 2.2	2.8	0.1 ± 0.2	THE RAFFINATE PONDS. SHALLOW WELL IN
		11/20/90	94.1 ± 100.0	218.0 ± 74.7	0.0 ± 2.0	<0.7	0.0 ± 0.2	SANDSTONE WITH THIN COAL SEAM AT 20 FT.
		6/13/91	63.7 ± 99.3	55.8 ± 78.2	9.2 ± 2.4	0.3	1.4 ± 0.4	
		9/20/91	0.0 ± 122.0	0.0 ± 80.0	1.3 ± 1.9	<0.7	0.2 ± 0.5	
		12/26/91	0.0 ± 94.0	84.0 ± 65.5	2.1 ± 8.0	2.0	0.3 ± 0.5	
		3/04/92	0.0 ± 40.3	6.4 ± 40.2	1.9 ± 1.1	0.7	0.6 ± 0.8	
	DH-118 (CONTROL)	5/23/90	6.2 ± 8.5	2.1 ± 6.8	1.4 ± 3.1	0.6	0.4 ± 0.3	LOCATED UPGRADIENT OF FORMER SITE OF
		8/16/90	11.2 ± 10.2	15.3 ± 6.4	3.0 ± 2.4	<1.0	0.2 ± 0.3	RAFFINATE PONDS. PENETRATES FAULT AT DEPTH
		11/20/90	3.5 ± 8.2	10.3 ± 5.9	0.2 ± 1.7	<0.7	0.1 ± 0.2	OF 132 FT. BACKGROUND WATER QUALITY SITE.
		6/13/91	0.0 ± 7.6	0.0 ± 6.8	0.2 ± 1.3	0.3	1.0 ± 0.4	
		9/20/91	11.0 ± 11.0	11.0 ± 7.0	1.5 ± 3.0	<0.7	0.1 ± 0.5	
		12/26/91	0.0 ± 9.8	13.1 ± 6.8	8.0 ± 4.0	0.7	0.0 ± 0.4	
		3/04/92	0.8 ± 4.9.	23.0 ± 5.4	3.2 ± 2.9	<0.7	0.2 ± 0.7	

Durango Pumping Plant Site Monitoring Wells - Field Data, T.D.S., NO3, and Silica

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-110	754	14000	6.38	12 <	0.04	19.4	18500
26-Dec-91	DH-110	746	12500	7.15	10	0.04	19.4	17500
20-Sep-91	DH-110	750	16000		14 <	0.04	23.5	18000
20-Sep-91	DH-110 R	770	19000		14 <	0.04	22.4	18000
13-Jun-91	DH-110	706	11500	6.97	16 <	0.04	20.7	19300
20-Nov-90	DH-110	833	10100	6.94	9 <	0.04	21.1	19100
16-Oct-90	DH-110	915	14000	6.87	16 <	0.04	17.4	19400
23-May-90	DH-110	890	1500	6.9	12	0.04	17.3	
23-May-90	DH-110 U	890	1500	6.9	12 <	0.44	17	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-111	634	7500	6.85	9.5 <	0.04	16	9380
26-Dec-91	DH-111	654	7000	7.29	10	0.06	14.15	9180
20-Sep-91	DH-111	570	9000		14	0.05	16	8890
13-Jun-91	DH-111	650	5500	7.22	15.5 <	0.04	14.2	9570
03-May-91	DH-111	660	5200	7.38	8 <	0.04	13.25	9260
20-Nov-90	DH-111	441	5000	7.15	9	0.04	13.9	7880
16-Oct-90	DH-111	550	6500	7.06	15 <	0.04	12.5	7580
23-May-90	DH-111	445	6000	7.07	16	0.08	10	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-112	420	5000	6.44	8 <	0.04	14.8	7320
26-Dec-91	DH-112 R	588	50	7.13	10 <	0.04	13.15	7110
26-Dec-91	DH-112	588	50	7.13	10	0.06	12.9	6910
20-Sep-91	DH-112	630	5400		18	0.05	13.2	6020
13-Jun-91	DH-112	546	5000	6.98	15.5	0.14	12	7560
13-Jun-91	DH-112 U	553	5000	6.98	15.5	0.16	12.8	8000
03-May-91	DH-112	566	4700	7.06	18	0.08	11.5	7570
20-Nov-90	DH-112	592	4200	6.99	9.5	0.04	13.1	6340
16-Oct-90	DH-112	600	5000	6.93	20	0.04	13.2	6280
23-May-90	DH-112 U	550	4500	6.93	12 <	0.04	11.4	
23-May-90	DH-112	550	4500	6.93	12	0.04	11.3	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-113	660	1280	8.3	8 <	0.04	6.9	1170
03-May-92	DH-113 A	204	1260	7.24	6	1.36	10.1	1660
26-Dec-91	DH-113	902	1500	8.31	10	0.04	7.45	1420
20-Sep-91	DH-113	730	2000		15	0.05	9.7	1280
13-Jun-91	DH-113	766	1300	8.3	13 <	0.04	6.08	1410
20-Nov-90	DH-113	836	1500	8.3	11	0.04	8.56	1490
16-Oct-90	DH-113	44	130	8.53	15	0.26	2.68	160
23-May-90	DH-113 U	278	3100	7.6	15	1.11	6.9	
23-May-90	DH-113	664	1250	8.2	14	0.24	6.5	
23-May-90	DH-113 A	278	3100	7.6	15	1.16	6.7	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-114	456	2400	6.93	13	1.74	9.8	2860
26-Dec-91	DH-114	418	2400	7.25	11	1.34	8.4	2950
20-Sep-91	DH-114	350	3300		9	1.16	8.75	3080
13-Jun-91	DH-114	392	2500	7.29	16	1.04	8.35	3270
03-May-91	DH-114	384	2200	7.36	15	0.96	8	3230
20-Nov-90	DH-114	384	2390	7.28	9	0.88	6.04	3400
16-Oct-90	DH-114 R	410	2650	7.09	16.5	0.95	8.86	3390
16-Oct-90	DH-114	410	2650	7.09	16.5	0.94	8.72	3380
23-May-90	DH-114	415	2750	7.16	16	1.01	7.3	

Appendix 20d. Durango Pumping Plant site monitoring wells data (U.S. Bureau of Reclamation 1992b)

Durango Pumping Plant - Field Data, T.D.S., NO3, and Silica

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-115	620	1400	6.97	11 <	0.04	16.8	1350
03-May-92	DH-115 R	618	1400	6.83	12	0.36	12	1230
26-Dec-91	DH-115	786	1100	7.29	8	0.07	14.9	1270
20-Sep-91	DH-115	730	2500		15	0.07	13	1670
13-Jun-91	DH-115	734	1300	7.18	15	0.04	13.4	1290
20-Nov-90	DH-115 R	738	1500	7.28	9	0.17	13.1	1480
20-Nov-90	DH-115	738	1500	7.28	9	0.17	12.95	1470
16-Oct-90	DH-115	740	1450	6.95	13	0.23	11.1	1360
23-May-90	DH-115	570	1450	7.05	16	0.27	10.5	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-116	292	4000	7.01	7	7.68	5.9	4990
26-Dec-91	DH-116	340	2400	6.98	5	5.28	6.9	2510
20-Sep-91	DH-116	400	4800		15	0.73	6.8	3770
13-Jun-91	DH-116 R	756	7000	7.31	15	0.27	15.7	13500
13-Jun-91	DH-116	756	7000	7.31	15	0.27	15.8	13500
20-Nov-90	DH-116	392	3200	7.1	9	0.42	10	5300
16-Oct-90	DH-116 R	945	12000	7.46	15	0.09	18.5	15800
16-Oct-90	DH-116	945	12000	7.46	15	0.09	18.6	15800
23-May-90	DH-116	419	6000	6.9	16	0.14	13.4	

DATE	DRILL HOLE DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-117	796	9000	6.34	11	0.04	12.8	16700
26-Dec-91	DH-117	760	11000		12	0.17	14	16500
20-Sep-91	DH-117	1000	22000		13	0.05	15.8	22100
13-Jun-91	DH-117	970	11800	6.83	15 <	0.04	13.9	20000
20-Nov-90	DH-117	1089	12100	7.09	12 <	0.04	15.2	22700
16-Oct-90	DH-117	1140	12000	7.04	15 <	0.04	14.6	20200
23-May-90	DH-117	974	14500	7.11	16	0.09	11.8	

DATE	DRILL HOLE	Alkalinity mg/L	Conductivity Micromhos	pH	TEMP Deg C	NO3 mg/L	Si mg/L	TDS mg/L
03-Mar-92	DH-118	752	1700	7.08	11 <	0.04	23.8	1950
26-Dec-91	DH-118	774	1300	7.39	10.5 <	0.04	22.3	1670
20-Sep-91	DH-118	780	2300		18	0.04	19.6	1680
13-Jun-91	DH-118	800	1750	7.37	16	0.05	21.9	1880
20-Nov-90	DH-118 R	916	1500	7.44	10	0.07	18.6	1700
20-Nov-90	DH-118	916	1500	7.44	10	0.07	18.6	1700
16-Oct-90	DH-118	965	1750	7.16	16 <	0.04	17.2	1700

A - Sample from shallow well
R - Replicate sample
U - Unfiltered sample

Durango Pumping Plant - Major Ions

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-110	2700	7600	408	74.3	723	4380
26-Dec-91	DH-110	2600	8800	426	72.3	619	3980
20-Sep-91	DH-110	2700	8000	442	84.6	722	4330
20-Sep-91	DH-110 R	2300	8000	514	75.7	671	4350
13-Jun-91	DH-110	2460	8800	431	77	686	4100
20-Nov-90	DH-110	2485	8650	465	76.9	680	5070
16-Oct-90	DH-110	2200	10300	467	109	656	5170
23-May-90	DH-110	2180	10200	417	109	627	4400
23-May-90	DH-110 U	2170	10300	412	109	539	4400

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-111	1370	4400	259	12.2	171	2630
26-Dec-91	DH-111	1330	4300	270	11.4	152	2550
20-Sep-91	DH-111	1400	4250	352	12.8	189	2320
13-Jun-91	DH-111	1270	4200	254	10.9	157	1590
03-May-91	DH-111	1320	3750	251	14.3	154	2310
20-Nov-90	DH-111	1180	3500	436	11.6	235	2190
16-Oct-90	DH-111	1230	3700	450	14.9	222	1760
23-May-90	DH-111	1210	2800	322	16.4	167	1470

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-112	790	3150	416	11.7	361	1180
26-Dec-91	DH-112 R	730	3700	440	11.5	328	1120
26-Dec-91	DH-112	740	3450	437	11.1	332	1140
20-Sep-91	DH-112	620	3000	369	11.9	304	997
13-Jun-91	DH-112	850	3400	386	14.2	368	1540
13-Jun-91	DH-112 U	880	3800	400	14.7	437	1280
03-May-91	DH-112	930	3680	372	14.8	388	1310
20-Nov-90	DH-112	690	2900	406	12.4	332	1250
16-Oct-90	DH-112	835	3000	409	16.2	310	1110
23-May-90	DH-112 U	665	2500	324	12	262	879
23-May-90	DH-112	628	2300	317	12.1	254	850

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-113	170	70	5.2	2.1	1.3	413
03-May-92	DH-113 A	32	760	202	10.2	79.6	146
26-Dec-91	DH-113	230	67	8.2	2.5	2	549
20-Sep-91	DH-113	210	98	8.2	3.1	2.2	526
13-Jun-91	DH-113	211	106	8.8	2.8	2.6	494
20-Nov-90	DH-113	244	118	8.4	2.6	2.2	624
16-Oct-90	DH-113	10	72	30.8	1.2	2.7	5.2
23-May-90	DH-113 U	300	2000	511	18.2	221	489
23-May-90	DH-113	164	220	9.5	4.4	2.3	500
23-May-90	DH-113 A	255	1900	278	17.5	200	450

Durango Pumping Plant - Major Ions

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-114	52	1280	286	6.8	120	372
26-Dec-91	DH-114	48	1650	312	6.6	123	415
20-Sep-91	DH-114	56	1650	318	9	132	395
13-Jun-91	DH-114	51	1850	323	7.3	130	367
03-May-91	DH-114	53	1940	328	7.1	124	362
20-Nov-90	DH-114	52	1860	386	7.8	149	467
16-Oct-90	DH-114 R	46	1880	386	8	110	429
16-Oct-90	DH-114	52	1940	386	8.6	139	427
23-May-90	DH-114	56	1700	350	11	137	394

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-115	100	340	86.4	4.9	46.5	286
03-May-92	DH-115 R	90	370	91.7	4.2	54.4	261
26-Dec-91	DH-115	93	270	93.5	5	47.4	330
20-Sep-91	DH-115	115	540	129	7.6	62.9	398
13-Jun-91	DH-115	97	235	88.2	4.9	49.3	381
20-Nov-90	DH-115 R	118	400	109	5.7	58.4	391
20-Nov-90	DH-115	115	420	113	5.7	55	398
16-Oct-90	DH-115	115	375	114	6.4	59.9	326
23-May-90	DH-115	116	268	88.9	7.2	51.5	294

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DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-116	380	2700	197	16.4	110	1180
26-Dec-91	DH-116	152	1160	150	10.4	70.1	558
20-Sep-91	DH-116	220	1950	208	17.9	97	884
13-Jun-91	DH-116 R	1700	6400	511	43.5	510	3710
13-Jun-91	DH-116	1660	6400	516	42.6	498	1890
20-Nov-90	DH-116	385	2900	311	19	167	1140
16-Oct-90	DH-116 R	2010	7300	467	51.5	580	4120
16-Oct-90	DH-116	2210	7900	476	42	578	4000
23-May-90	DH-116	1410	5400	389	46	426	2440

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-117	1420	10000	378	34.3	460	4330
26-Dec-91	DH-117	1830	8600	426	36.3	479	4060
20-Sep-91	DH-117	2400	10300	453	66.7	673	5290
13-Jun-91	DH-117	1800	10400	447	34.3	632	4630
20-Nov-90	DH-117	2260	11250	894	43.9	650	5970
16-Oct-90	DH-117	1690	10800	489	47.7	620	5350
23-May-90	DH-117	1370	10000	467	44.4	550	4090

DATE	DRILL HOLE	Cl mg/L	SO4 mg/L	Ca mg/L	K mg/L	Mg mg/L	Na mg/L
03-Mar-92	DH-118	64	670	107	5.9	156	267
26-Dec-91	DH-118	54	680	109	5.8	143	264
20-Sep-91	DH-118	54	630	101	7.4	115	310
13-Jun-91	DH-118	26	680	115	5.9	159	267
20-Nov-90	DH-118 R	64	580	106	6.6	121	361
20-Nov-90	DH-118	64	580	106	6.5	120	368
16-Oct-90	DH-118	90	530	92.5	8	81.8	386

Durango Pumping Plant - Ground Water Contaminants

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-110	< 2	< 0.001	< 1.0	0.007	< 0.02	< 0.02	< 0.25	1.20
26-Dec-91	DH-110	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	3.00
20-Sep-91	DH-110	< 2	< 0.001	< 1.0	0.014	< 0.05	< 0.04	< 0.25	3.10
20-Sep-91	DH-110 R	< 2	< 0.001	< 1.0	0.01	< 0.05	< 0.02	< 0.25	3.40
13-Jun-91	DH-110	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	2.80
20-Nov-90	DH-110	< 2	< 0.001	< 1.0	< 0.005	0.02	< 0.01	< 0.02	2.60
16-Oct-90	DH-110	< 2	< 0.001	< 0.5	< 0.005	0.02	< 0.01	0.02	3.40
23-May-90	DH-110	< 2	< 0.001	0.1		< 0.05	< 0.01	< 0.05	2.50
23-May-90	DH-110 U	< 2	< 0.001	< 0.1		< 0.05	< 0.01	< 0.05	4.40

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-111	< 2	< 0.001	< 1.0	0.003	< 0.02	< 0.02	< 0.25	0.80
26-Dec-91	DH-111	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	0.70
20-Sep-91	DH-111	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	0.50
13-Jun-91	DH-111	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
03-May-91	DH-111	< 2	< 0.001	< 1.0	< 0.005		< 6.92	< 0.03	0.30
20-Nov-90	DH-111	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-111	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	< 0.05
23-May-90	DH-111	< 2	< 0.001	0.1		< 0.05	< 0.01	< 0.05	0.30

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-112	< 2	< 0.001	< 1.0	0.002	< 0.04	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-112 R	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
26-Dec-91	DH-112	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-112	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-112	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
13-Jun-91	DH-112 U	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
03-May-91	DH-112	< 2	< 0.001	< 1.0	< 0.005		< 0.02	< 0.03	0.20
20-Nov-90	DH-112	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-112	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	0.09
23-May-90	DH-112 U	< 2	< 0.001	< 0.1		< 0.05	< 0.01	< 0.05	0.68
23-May-90	DH-112	< 2	< 0.001	< 0.1		< 0.05	< 0.01	< 0.05	0.20

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-113	< 2	< 0.001	< 1.0	0.001	< 0.02	< 0.02	< 0.25	< 0.30
03-May-92	DH-113 A	< 2	< 0.001	< 1.0	0.001	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-113	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-113	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-113	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Nov-90	DH-113	< 2	0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-113	< 2	< 0.001	0.5	< 0.005	< 0.02	< 0.01	< 0.02	0.06
23-May-90	DH-113 U	< 2	0.003	0.1		< 0.05	< 0.01	< 0.05	1.20
23-May-90	DH-113	< 2	0.001	0.6		< 0.05	< 0.01	< 0.05	0.25
23-May-90	DH-113 A	< 2	< 0.001	0.2		< 0.05	< 0.01	< 0.05	< 0.30

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-114	< 2	< 0.001	< 1.0	< 0.001	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-114	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-114	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-114	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
03-May-91	DH-114	< 2	< 0.001	< 1.0	< 0.005		< 0.02	< 0.03	0.10
20-Nov-90	DH-114	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-114 R	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	< 0.05
16-Oct-90	DH-114	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	< 0.05
23-May-90	DH-114	< 2	< 0.001	0.1		< 0.05	< 0.01	< 0.05	< 0.03

Durango Pumping Plant - Ground Water Contaminants

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-115	< 2	< 0.001	< 1.0	< 0.001	< 0.02	< 0.02	< 0.25	< 0.30
03-May-92	DH-115 R	< 2	< 0.001	< 1.0	< 0.001	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-115	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-115	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-115	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Nov-90	DH-115 R	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
20-Nov-90	DH-115	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-115	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	0.21
23-May-90	DH-115	< 2	< 0.001	0.3		< 0.05	< 0.01	< 0.05	0.05

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-116	< 2	< 0.001	< 1.0	0.002	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-116	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-116	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-116 R	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
13-Jun-91	DH-116	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Nov-90	DH-116	< 2	0.004	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-116 R	< 2	< 0.001	< 0.5	< 0.005	0.02	< 0.01	< 0.02	0.05
16-Oct-90	DH-116	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	< 0.05
23-May-90	DH-116	< 2	< 0.001	0.1		< 0.05	< 0.01	< 0.05	0.07

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-117	< 2	0.002	< 1.0	< 0.001	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-117	< 2	< 0.003	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-117	< 2	0.004	< 1.0	0.012	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-117	< 2	0.002	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Nov-90	DH-117	< 2	0.005	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	5.10
16-Oct-90	DH-117	< 2	0.001	< 0.5	< 0.005	0.02	< 0.01	< 0.02	0.52
23-May-90	DH-117	< 2	0.002	0.1		< 0.05	< 0.01	< 0.05	0.29

DATE	DRILL HOLE	Al mg/L	As mg/L	Ba mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L
03-Mar-92	DH-118	< 2	< 0.001	< 1.0	< 0.001	< 0.02	< 0.02	< 0.25	< 0.30
26-Dec-91	DH-118	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Sep-91	DH-118	< 2	< 0.001	< 1.0	< 0.005	< 0.05	< 0.02	< 0.25	< 0.20
13-Jun-91	DH-118	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.02	< 0.25	< 0.50
20-Nov-90	DH-118 R	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
20-Nov-90	DH-118	< 2	< 0.001	< 1.0	< 0.005	< 0.02	< 0.01	< 0.02	< 0.50
16-Oct-90	DH-118	< 2	< 0.001	< 0.5	< 0.005	< 0.02	< 0.01	< 0.02	< 0.05
23-May-90	DH-112 U	< 2	< 0.001	< 0.1		< 0.05	< 0.01	< 0.05	1.80
23-May-90	DH-112	< 2	< 0.001	0.2		< 0.05	< 0.01	< 0.05	0.06

Durango Pumping Plant - Ground Water Contaminants

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-110	< 0.001	0.3	3.4	< 0.1	< 0.05	< 0.05	0.039	< 0.05	< 0.25
26-Dec-91	DH-110	< 0.001	0.3	3.3	< 0.1	< 0.04	< 0.02	0.002	0.02	< 0.25
20-Sep-91	DH-110	< 0.001	0.3	3.3	< 0.05	< 0.05	< 0.02	0.006	< 0.02	< 0.25
20-Sep-91	DH-110R	< 0.001	0.3	3.4	< 0.05	< 0.05	< 0.02	0.004	< 0.02	< 0.25
13-Jun-91	DH-110	< 0.001	0.3	2.6	< 0.05	< 0.02	< 0.02	0.14	< 0.02	< 0.25
20-Nov-90	DH-110	< 0.001	0.26	3.7	< 0.02	< 0.05	< 0.02	0.001	< 0.02	0.06
16-Oct-90	DH-110	< 0.001		4.2	< 0.05	< 0.05	< 0.02	0.007	< 0.02	0.13
23-May-90	DH-110	< 0.001			< 0.05	< 0.04	< 0.02	0.044	< 0.05	0.13
23-May-90	DH-110U	< 0.001			< 0.05	< 0.04	< 0.02	0.064	< 0.05	0.11

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-111	< 0.001	1.5	< 0.2	< 0.1	< 0.05	< 0.02	< 0.001	< 0.05	< 0.25
26-Dec-91	DH-111	< 0.001	1.3	< 0.2	< 0.1	< 0.04	< 0.02	< 0.001	0.02	< 0.25
20-Sep-91	DH-111	< 0.001	1.3	< 0.2	< 0.05	< 0.05	< 0.02	< 0.001	< 0.02	< 0.25
13-Jun-91	DH-111	< 0.001	1.5	< 0.2	< 0.05	< 0.02	< 0.02	< 0.001	< 0.02	< 0.25
03-May-91	DH-111	< 0.001	1.7	< 0.2	< 0.05	< 0.02	< 0.02	< 0.001	< 0.02	< 0.05
20-Nov-90	DH-111	< 0.001	0.9	0.12	< 0.02	< 0.05	< 0.02	< 0.001	< 0.02	0.05
16-Oct-90	DH-111	< 0.001		0.13	< 0.05	< 0.05	< 0.02	< 0.001	< 0.02	0.05
23-May-90	DH-111	< 0.001			< 0.05	< 0.04	< 0.02	< 0.001	< 0.05	0.05

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-112	< 0.001	0.3	0.2	< 0.1	< 0.05	< 0.02	0.04	< 0.05	< 0.25
26-Dec-91	DH-112R	< 0.001	0.3	0.3	< 0.1	< 0.04	< 0.02	0.01	0.02	< 0.25
26-Dec-91	DH-112	< 0.001	0.3	0.3	< 0.1	< 0.04	< 0.02	0.004	0.02	< 0.25
20-Sep-91	DH-112	< 0.001	0.3	< 0.2	< 0.05	< 0.05	< 0.02	0.005	< 0.02	< 0.25
13-Jun-91	DH-112	< 0.001	0.3	< 0.2	< 0.05	< 0.02	< 0.02	0.082	< 0.02	< 0.25
13-Jun-91	DH-112U	< 0.001	0.3	< 0.2	< 0.05	< 0.02	< 0.02	0.15	< 0.02	< 0.25
03-May-91	DH-112	< 0.001	0.3	0.2	< 0.05	< 0.02	< 0.02	0.172	< 0.02	< 0.05
20-Nov-90	DH-112	< 0.001	0.3	0.19	< 0.02	< 0.05	< 0.02	0.033	< 0.02	< 0.05
16-Oct-90	DH-112	< 0.001		0.17	< 0.05	< 0.05	0.006	0.001	< 0.02	< 0.05
23-May-90	DH-112U	< 0.001			< 0.05	< 0.04	< 0.02	0.004	< 0.05	< 0.01
23-May-90	DH-112	< 0.001			< 0.05	< 0.04	< 0.02	0.007	< 0.05	< 0.01

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-113	< 0.001	0.4	< 0.2	< 0.1	< 0.05	< 0.02	< 0.001	< 0.05	< 0.25
03-May-92	DH-113A	< 0.001	< 0.1	< 0.2	< 0.1	< 0.05	< 0.02	0.03	< 0.05	< 0.25
26-Dec-91	DH-113	< 0.001	0.5	< 0.2	< 0.1	< 0.04	< 0.02	< 0.001	< 0.02	< 0.25
20-Sep-91	DH-113	< 0.001	0.5	< 0.2	< 0.05	< 0.05	< 0.02	< 0.001	< 0.02	< 0.25
13-Jun-91	DH-113	< 0.001	0.5	< 0.2	< 0.05	< 0.02	< 0.02	< 0.001	< 0.02	< 0.25
20-Nov-90	DH-113	< 0.001	0.58	0.05	< 0.02	< 0.05	< 0.02	< 0.001	< 0.02	0.08
16-Oct-90	DH-113	< 0.001		0.05	< 0.05	< 0.05	< 0.005	< 0.001	< 0.02	< 0.05
23-May-90	DH-113U	< 0.001			< 0.05	< 0.04	0.02	0.27	< 0.05	0.22
23-May-90	DH-113	< 0.001			< 0.05	< 0.04	< 0.02	0.004	< 0.05	0.05
23-May-90	DH-113A	< 0.001			< 0.05	< 0.04	< 0.02	0.235	< 0.05	0.09

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-114	< 0.001	0.1	< 0.2	< 0.1	< 0.05	< 0.02	0.057	< 0.05	< 0.25
26-Dec-91	DH-114	< 0.001	0.2	0.2	< 0.1	< 0.04	< 0.02	0.083	0.02	< 0.25
20-Sep-91	DH-114	< 0.001	0.2	< 0.2	< 0.05	< 0.05	< 0.02	0.063	< 0.02	< 0.25
13-Jun-91	DH-114	< 0.001	0.2	< 0.2	< 0.05	< 0.02	< 0.02	0.026	< 0.02	< 0.25
03-May-91	DH-114	< 0.001	0.2	< 0.2	< 0.65	< 0.02	< 0.02	0.036	< 0.02	< 0.05
20-Nov-90	DH-114	< 0.001	0.19	0.03	< 0.02	< 0.05	< 0.02	0.049	< 0.02	0.06
16-Oct-90	DH-114R	< 0.001		0.03	< 0.05	< 0.05	< 0.005	0.058	< 0.02	< 0.05
16-Oct-90	DH-114	< 0.001		0.02	< 0.05	< 0.05	< 0.005	0.059	< 0.02	0.05
23-May-90	DH-114	< 0.001			< 0.05	< 0.04	< 0.02	0.057	< 0.05	0.05

Durango Pumping Plant - Ground Water Contaminants

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-115	< 0.001	0.3	< 0.2	< 0.1	< 0.05	< 0.02	0.002	< 0.05	< 0.25
03-May-92	DH-115R	< 0.001	0.2	< 0.2	< 0.1	< 0.05	< 0.02	0.022	< 0.05	< 0.25
26-Dec-91	DH-115	< 0.001	0.2	< 0.2	< 0.1	< 0.04	< 0.02	0.002	0.02	< 0.25
20-Sep-91	DH-115	< 0.001	0.4	< 0.2	< 0.05	< 0.05	< 0.02	0.004	< 0.02	< 0.25
13-Jun-91	DH-115	< 0.001	0.3	< 0.2	< 0.05	< 0.02	< 0.02	0.002	< 0.02	< 0.25
20-Nov-90	DH-115R	< 0.001	0.28	0.05	< 0.02	< 0.05	< 0.02	0.012	< 0.02	< 0.05
20-Nov-90	DH-115	< 0.001	0.29	0.05	< 0.02	< 0.05	< 0.02	0.012	< 0.02	< 0.05
16-Oct-90	DH-115	< 0.001		0.05	< 0.05	< 0.05	< 0.005	0.025	< 0.02	< 0.05
23-May-90	DH-115	< 0.001			< 0.05	< 0.04	< 0.02	0.018	< 0.05	0.04

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-116	< 0.001	< 0.1	< 0.2	< 0.1	< 0.05	< 0.02	0.37	< 0.05	< 0.25
26-Dec-91	DH-116	< 0.001	< 0.1	< 0.2	< 0.1	< 0.04	< 0.02	0.112	0.02	< 0.25
20-Sep-91	DH-116	< 0.001	< 0.1	0.3	< 0.05	< 0.05	< 0.02	0.065	< 0.02	< 0.25
13-Jun-91	DH-116R	< 0.001	0.3	1.9	< 0.05	< 0.02	< 0.02	0.006	< 0.02	< 0.25
13-Jun-91	DH-116	< 0.001	0.3	1.9	< 0.05	< 0.02	< 0.02	0.006	< 0.02	< 0.25
20-Nov-90	DH-116	< 0.001	< 0.1	0.54	< 0.02	< 0.05	< 0.02	0.009	< 0.02	0.18
16-Oct-90	DH-116R	< 0.001		2.8	< 0.05	< 0.05	< 0.02	0.023	< 0.02	< 0.05
16-Oct-90	DH-116	< 0.001		2.7	< 0.05	< 0.05	< 0.02	0.023	< 0.02	< 0.05
23-May-90	DH-116	< 0.001			< 0.05	< 0.04	< 0.02	0.011	< 0.05	0.06

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-117	< 0.001	0.2	4.3	< 0.1	< 0.05	0.05	0.001	< 0.05	< 0.25
26-Dec-91	DH-117	< 0.001	0.2	4.2	< 0.1	< 0.04	< 0.02	0.002	0.02	< 0.25
20-Sep-91	DH-117	< 0.001	0.2	6.1	< 0.05	< 0.05	< 0.04	0.001	< 0.02	< 0.25
13-Jun-91	DH-117	< 0.001	0.3	3.4	< 0.05	< 0.02	< 0.02	< 0.001	< 0.02	< 0.25
20-Nov-90	DH-117	< 0.001	0.35	7.6	< 0.02	< 0.05	< 0.02	< 0.001	< 0.02	0.06
16-Oct-90	DH-117	< 0.001		5.9	< 0.05	< 0.05	< 0.02	< 0.001	< 0.02	0.06
23-May-90	DH-117	< 0.001			< 0.05	< 0.04	< 0.02	0.002	< 0.05	0.06

DATE	DRILL HOLE	Hg mg/L	Li mg/L	Mn mg/L	Mo mg/L	Ni mg/L	Pb mg/L	Se mg/L	V mg/L	Zn mg/L
03-Mar-92	DH-118	< 0.001	0.2	< 0.2	< 0.1	< 0.05	< 0.02	< 0.001	< 0.05	< 0.25
26-Dec-91	DH-118	< 0.001	0.2	< 0.2	< 0.1	< 0.02	< 0.02	< 0.001	0.02	< 0.25
20-Sep-91	DH-118	< 0.001	0.3	< 0.2	< 0.05	< 0.05	< 0.02	< 0.001	< 0.02	< 0.25
13-Jun-91	DH-118	< 0.001	0.2	< 0.2	< 0.05	< 0.02	< 0.02	< 0.001	< 0.02	< 0.25
20-Nov-90	DH-118R	< 0.001	0.24	0.02	< 0.02	< 0.05	< 0.02	< 0.001	< 0.02	< 0.05
20-Nov-90	DH-118	< 0.001	0.25	0.02	< 0.02	< 0.05	< 0.02	< 0.001	< 0.02	< 0.05
16-Oct-90	DH-118	< 0.001		< 0.02	< 0.05	< 0.05	< 0.005	< 0.001	< 0.02	< 0.05
23-May-90	DH-112U	< 0.001			< 0.05	< 0.04	< 0.02	< 0.001	< 0.05	0.05
23-May-90	DH-112	< 0.001			< 0.05	< 0.04	< 0.02	< 0.001	< 0.05	0.04

REGISTER

LISTED BELOW ARE THE SAMPLES COLECTED FOR TISSUE ANALYSIS
ANIMAS RIVER TRACE ELEMENT TOXICITY STUDY

SPECIES	NUMBER	SAMPLE TYPE	AREA COLLECTED	SAMPLE I.D.NUMBER
Brook Trout	(5) fish	whole body	Station #1	AEC-BKT-2
Brook Trout	(5) fish	whole body	Station #3	BEC-BKT-1
Brook Trout	(5) fish	whole body	Station #4	MC-BKT-1
Brook Trout	(5) fish	whole body	Station #5	AN-BKT-1
Brook Trout	(5) fish	whole body	Station #9	AC-BKT-1
Rainbow Trout	(1) fish	whole body	Station #11	RBT-BB-A-1
Brown Trout	(1) fish	whole body	Station #11	BRN-BB-A-1
Flannelmouth Sucker	(2) fish	whole body	Station #11	FMS-BB-A-1
Rainbow Trout	(6) fish	whole body	Station #12	TLA-RBT-1
Brown Trout	(6) fish	whole body	Station #12	TLA-BT-1
Flannelmouth Sucker	(5) fish	whole body	Station #12	TLA-FMS-1
Mottled Sculpin	(6) fish	whole body	Station #12	TLA-MS-1
Carp	(1) fish	whole body	Station #12	TLA-CA-1
Rainbow Trout	(6) fish	whole body	Station #13	BCA-RBT-1
Brown Trout	(6) fish	whole body	Station #13	BCA-BT-1
Flannelmouth Sucker	(5) fish	whole body	Station #13	BCA-FMS-1
Mottled Sculpin	(15) fish	whole body	Station #13	BCA-MS-1
Carp	(2) fish	whole body	Station #13	BCA-CA-1
Rainbow Trout	(5) fish	whole body	Station #14	WSA-RBT-1
Brown Trout	(5) fish	whole body	Station #14	WSA-BT-1
Flannelmouth Sucker	(6) fish	whole body	Station #14	WSA-FMS-1
Mottled Sculpin	(18) fish	whole body	Station #14	WSA-MS-1
Rainbow Trout	(1) fish	whole body	Station #15	FRA-RBT-1
Brown Trout	(6) fish	whole body	Station #15	FRA-BT-1
Flannelmouth Sucker	(7) fish	whole body	Station #15	FRA-FMS-1
Mottled Sculpin	(22) fish	whole body	Station #15	FRA-MS-1
Carp	(2) fish	whole body	Station #15	FRA-CA-1

Note: These samples were sent to E.T.S.R.C in Columbia, Mo. on July 21, 1992 for trace heavy metal analysis.

Appendix 21a. Animas-La Plata fish tissue samples (U.S. Bureau of Reclamation 1993a)

Station #1.
Collection Date: APRIL 28, 1992
Method: Electrofishing
Station: Animas River-1/4 mile above Elk Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	280	179	AEC-BKT-1 (2 fish)*
Brook Trout	302	237	
Brook Trout	200	65	AEC-BKT-2 (5 fish)*
Brook Trout	220	32	
Brook Trout	195	59	
Brook Trout	200	57	
Brook Trout	230	93	

* Fish were in very poor condition-large head/small body

Station #2.
Collection Date: APRIL 28, 1992
Method: Electrofishing
Station: Elk Creek- Lower 250 yards

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	217	90	EC-BKT-1 (5 fish)
Brook Trout	187	67	
Brook Trout	181	62	
Brook Trout	193	86	
Brook Trout	192	74	
Brook Trout (fillet)	254	163 (28)	EC-BKTF-2
Brook Trout (remaining portion)		138	EC-BKT-3

Station #3.
Collection Date: APRIL 28, 1992
Method: Electrofishing
Station: Animas River-1/2 mile downstream of Elk Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	255	143	BEC-BKT-1 (5 fish)
Brook Trout	255	135	
Brook Trout	217	94	
Brook Trout	252	122	
Brook Trout	245	108	
Brook Trout	170	45	BEC-BKT-2 (5 fish)
Brook Trout	174	45	
Brook Trout	174	47	
Brook Trout	185	59	
Brook Trout	193	61	
Brook Trout (fillet)	208	83 (30)	BEC-BKTF-3 (2 fish)
Brook Trout (fillet)	221		

Brook Trout (remaining portion)	151		BEC-BKT-4 (2 fish)

Station #4.
Collection Date: APRIL 29, 1992
Method: Electrofishing
Station: Molas Creek-100 yards above conf. with Animas River

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	241	142	MC-BKT-1 (5 fish)
Brook Trout	263	151	
Brook Trout	219	115	
Brook Trout	265	154	
Brook Trout	233	114	

Station #5.
Collection Date: APRIL 29, 1992
Method: Electrofishing
Station: Animas River-3/4 mile upstream of conf. with Needle Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	171	32	AN-BKT-1 (5 fish)
Brook Trout	182	51	
Brook Trout	168	40	
Brook Trout	192	55	
Brook Trout	164	30	
Brook Trout	79	5	AN-BKT-2 (5 fish)
Brook Trout	78	4	
Brook Trout	75	3	

Station #6.
Collection Date: APRIL 29, 1992
Method: Electrofishing
Station: Needle Creek 1/4 mile upstream of conf. with Needle Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	190	55	NC-BKT-1 (5 fish)
Brook Trout	187	52	
Brook Trout	206	51	
Brook Trout	185	55	
Brook Trout	184	51	

Station #7.
Collection Date: APRIL 30, 1992
Method: Electrofishing
Station: Ruby Creek-1/4 mile upstream of conf. with Animas River

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	124	21	RC-RBT-1 (5 fish)*

Rainbow Trout	176	48	* Fish not cooled for over four hours.
Rainbow Trout	198	55	
Rainbow Trout	208	107	
Rainbow Trout	157	31	

Station #8.
Collection Date: APRIL 30, 1992
Method: Electrofishing
Station: Noname Creek-1/4 mile upstream of conf. with Animas River

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	215	106	NNC-BT-1 (3 fish)*
Brook Trout	226	88	* Fish not cooled for over four hours.
Brook Trout	181	66	
Rainbow Trout	203	77	NNC-RBT-1 (2 fish)*
Rainbow Trout	245	167	* Fish not cooled

Station #9.
Collection Date: APRIL 30, 1992
Method: Electrofishing
Station: Animas River-1/4 mile upstream of conf. with Cascade Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Brook Trout	190	60	AC-BKT-1 (5 fish)
Brook Trout	174	46	
Brook Trout	176	54	
Brook Trout	197	70	
Brook Trout	177	65	
Brook Trout (fillet)	238	120 (19)	AC-BKTF-2 (1 fish)
Brook Trout (remaining portion)		98	AC-BKT-3 (1 fish)

Station #10.
Collection Date: MAY 1, 1992
Method: Electrofishing
Station: Cascade Creek-1/4 mile upstream of conf. with Animas River

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	247	162	CC-RBT-1 (2 fish)*
Rainbow Trout	253	188	

Station #11.
Collection Date: June 5, 1992
Method: Trammel Net
Station: Animas River immediately downstream of Baker's Bridge

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	304	285	RBT-BB-A-1
Brown Trout	370	465	BRN-BB-A-1
Flannelmouth Sucker	465	1042	FMS-BB-A-1
Flannelmouth Sucker	495	1269	FMS-BB-A-2
Bluehead Sucker	410	721	BHS-BB-A-1
Western White Sucker	433	933	WWS-BB-A-1 (4 fish)
Western White Sucker	353	670	
Western White Sucker	369	525	
Western White Sucker	414	774	

Station #12.
Collection Date: June 5, 1992
Method: Trammel Net
Station: Animas River between Trimble Lane and Durango

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	360	552	TLA-RBT-1 (6 fish)
Rainbow Trout	355	509	
Rainbow Trout	330	405	
Rainbow Trout	337	455	
Rainbow Trout	362	515	
Rainbow Trout	418	751	
Brown Trout	372	615	TLA-BT-1 (6 fish)
Brown Trout	408	740	
Brown Trout	358	545	
Brown Trout	445	906	
Brown Trout	416	768	
Brown Trout	346	434	
Flannelmouth Sucker	549	1688	TLA-FMS-1 (5 fish)
Flannelmouth Sucker	560	1757	
Flannelmouth Sucker	498	1274	
Flannelmouth Sucker	525	1722	
Flannelmouth Sucker	495	1128	
Bluehead Sucker	370	713	TLA-BHS-1 (6 fish)
Bluehead Sucker	409	970	
Bluehead Sucker	396	773	
Bluehead Sucker	353	472	
Bluehead Sucker	410	885	
Bluehead Sucker	385	706	

Mottled Sculpin	85	32 (total weight 6 fish)	TLA-MS-1 (6 fish)
Mottled Sculpin	74		
Mottled Sculpin	63		
Mottled Sculpin	65		
Mottled Sculpin	74		
Mottled Sculpin	47		
Carp	549	1744	TLA-CA-1 (1 fish)

Station #13.
Collection Date: July 6, 1992
Method: Electrofishing
Station: Animas River between Purple Cliffs and Basin Creek

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	464	1147	BCA-RBT-1 (6 fish)
Rainbow Trout	338	499	
Rainbow Trout	409	921	
Rainbow Trout	314	440	
Rainbow Trout	311	426	
Rainbow Trout	389	725	
Brown Trout	428	995	BCA-BT-1 (6 fish)
Brown Trout	421	878	
Brown Trout	400	803	
Brown Trout	368	595	
Brown Trout	434	968	
Brown Trout	334	453	
Flannelmouth Sucker	540	1683	BCA-FMS-1 (5 fish)
Flannelmouth Sucker	567	1569	
Flannelmouth Sucker	540	1511	
Flannelmouth Sucker	476	1151	
Flannelmouth Sucker	545	1424	
Bluehead Sucker	405	897	BCA-BHS-1 (5 fish)
Bluehead Sucker	410	957	
Bluehead Sucker	389	609	
Bluehead Sucker	375	640	
Bluehead Sucker	380	667	
Mottled Sculpin	85	183 (total weight)	BCA-MS-1 (15 fish)
Mottled Sculpin	100		
Mottled Sculpin	88		
Mottled Sculpin	97		
Mottled Sculpin	97		
Mottled Sculpin	106		
Mottled Sculpin	86		
Mottled Sculpin	95		
Mottled Sculpin	104		
Mottled Sculpin	75		
Mottled Sculpin	83		

Mottled Sculpin	82		
Mottled Sculpin	76		
Mottled Sculpin	87		
Mottled Sculpin	91		
Carp	683	5330	BCA-CA-1 (2 fish)
Carp	512	2174	

Station #14.
Collection Date: July 7, 1992
Method: Electrofishing
Station: Animas River between Weaselskin Bridge and Bondad

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	412	790	WSA-RBT-1 (5 fish)
Rainbow Trout	427	928	
Rainbow Trout	325	456	
Rainbow Trout	303	385	
Rainbow Trout	365	569	
Brown Trout	405	808	WSA-BT-1 (5 fish)
Brown Trout	454	940	
Brown Trout	497	1393	
Brown Trout	456	1126	
Brown Trout	455	959	
Brown Trout	374	626	WSA-BT-2 (3 fish)
Brown Trout	373	530	
Brown Trout	394	829	
Flannelmouth Sucker	575	2039	WSA-FMS-1 (6 fish)
Flannelmouth Sucker	528	1590	
Flannelmouth Sucker	450	1126	
Flannelmouth Sucker	503	1307	
Flannelmouth Sucker	537	1726	
Flannelmouth Sucker	517	1434	
Bluehead Sucker	402	894	WSA-BHS-1 (5 fish)
Bluehead Sucker	434	1047	
Bluehead Sucker	402	920	
Bluehead Sucker	425	911	
Bluehead Sucker	420	1029	
Mottled Sculpin	102	112 (total weight)	WSA-MS-1 (18 fish)
Mottled Sculpin	63		
Mottled Sculpin	70		
Mottled Sculpin	71		
Mottled Sculpin	60		
Mottled Sculpin	61		
Mottled Sculpin	83		
Mottled Sculpin	62		
Mottled Sculpin	26		
Mottled Sculpin	70		
Mottled Sculpin	69		

Mottled Sculpin	55
Mottled Sculpin	66
Mottled Sculpin	85
Mottled Sculpin	70
Mottled Sculpin	79
Mottled Sculpin	55
Mottled Sculpin	73

Station #14.
Collection Date: July 8, 1992
Method: Electrofishing
Station: Animas River between Florida River and Colo./New Mexico stateline

Species	Length (mm)	Weight (grams)	Sample I.D.#
Rainbow Trout	300	359	FRA-RBT-1 (1 fish)
Brown Trout	493	1397	FRA-BT-1 (6 fish)
Brown Trout	455	1172	
Brown Trout	412	820	
Brown Trout	485	1511	
Brown Trout	404	675	
Brown Trout	390	725	
Flannelmouth Sucker	529	1727	FRA-FMS-1 (7 fish)
Flannelmouth Sucker	454	1075	
Flannelmouth Sucker	513	1647	
Flannelmouth Sucker	470	1192	
Flannelmouth Sucker	528	1501	
Flannelmouth Sucker	479	1231	
Flannelmouth Sucker	542	1645	
Bluehead Sucker	429	975	FRA-BHS-1 (6 fish)
Bluehead Sucker	395	868	
Bluehead Sucker	387	849	
Bluehead Sucker	450	1532	
Bluehead Sucker	386	655	
Bluehead Sucker	415	916	
Mottled Sculpin	114	203 (total weight)	FRA-MS-1 (22 fish)
Mottled Sculpin	113		
Mottled Sculpin	104		
Mottled Sculpin	103		
Mottled Sculpin	110		
Mottled Sculpin	57		
Mottled Sculpin	107		
Mottled Sculpin	108		
Mottled Sculpin	62		
Mottled Sculpin	68		
Mottled Sculpin	59		
Mottled Sculpin	71		
Mottled Sculpin	65		
Mottled Sculpin	65		
Mottled Sculpin	61		

Mottled Sculpin	58		
Mottled Sculpin	70		
Mottled Sculpin	55		
Mottled Sculpin	63		
Mottled Sculpin	64		
Mottled Sculpin	65		
Mottled Sculpin	67		
Carp	590	3606	FRA-CA-1 (2 fish)
Carp	580	3893	

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:ASHY

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	<0.06	MCG/G WW	0.06	WHOLE BODY FISH
AEC-BKT-2	2080183	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
AN-BKT-1	2080184	0.22	MCG/G WW	0.06	WHOLE BODY FISH
BCA-BT-1	2080185	0.1	MCG/G WW	0.09	WHOLE BODY FISH
BCA-CA-1	2080186	<0.1	MCG/G WW	0.1	WHOLE BODY FISH
BCA-FMS-1	2080187	0.2	MCG/G WW	0.08	WHOLE BODY FISH
BCA-MS-1	2080188	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
BCA-RBT-1	2080189	<0.08	MCG/G WW	0.08	WHOLE BODY FISH
BEC-BKT-1	2080190	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.1	MCG/G WW	0.06	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.09	MCG/G WW	0.07	WHOLE BODY FISH
FRA-BT-1	2080193	0.1	MCG/G WW	0.09	WHOLE BODY FISH
FRA-CA-1	2080194	<0.1	MCG/G WW	0.1	WHOLE BODY FISH
FRA-FMS-1	2080195	<0.09	MCG/G WW	0.09	WHOLE BODY FISH
FRA-MS-1	2080196	<0.08	MCG/G WW	0.08	WHOLE BODY FISH
FRA-RBT-1	2080197	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
MC-BKT-1	2080198	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
RBT-BB-A-1	2080200	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
TLA-BT-1	2080201	<0.08	MCG/G WW	0.08	WHOLE BODY FISH
TLA-CA-1	2080205	0.27	MCG/G WW	0.08	WHOLE BODY FISH
TLA-FMS-1	2080206	0.34	MCG/G WW	0.08	WHOLE BODY FISH
TLA-MS-1	2080207	0.2	MCG/G WW	0.06	WHOLE BODY FISH
TLA-RBT-1	2080208	<0.08	MCG/G WW	0.08	WHOLE BODY FISH
WSA-BT-1	2080209	<0.08	MCG/G WW	0.08	WHOLE BODY FISH
WSA-FMS-1	2080210	0.09	MCG/G WW	0.09	WHOLE BODY FISH
WSA-MS-1	2080211	<0.07	MCG/G WW	0.07	WHOLE BODY FISH
WSA-RBT-1	2080212	<0.08	MCG/G WW	0.08	WHOLE BODY FISH

Appendix 21b. Animas-La Plata fish tissue trace element analyses (U.S. Bureau of Reclamation 1993a)

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:ASHY

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
AEC-BKT-2	2080183	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
AN-BKT-1	2080184	1.	MCG/G DW	0.3	WHOLE BODY FISH
BCA-BT-1	2080185	0.4	MCG/G DW	0.3	WHOLE BODY FISH
BCA-CA-1	2080186	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
BCA-FMS-1	2080187	0.6	MCG/G DW	0.3	WHOLE BODY FISH
BCA-MS-1	2080188	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
BCA-RBT-1	2080189	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
BEC-BKT-1	2080190	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.7	MCG/G DW	0.3	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.4	MCG/G DW	0.3	WHOLE BODY FISH
FRA-BT-1	2080193	0.5	MCG/G DW	0.3	WHOLE BODY FISH
FRA-CA-1	2080194	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
FRA-FMS-1	2080195	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
FRA-MS-1	2080196	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
FRA-RBT-1	2080197	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
MC-BKT-1	2080198	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
RBT-BB-A-1	2080200	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
TLA-BT-1	2080201	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
TLA-CA-1	2080205	1.0	MCG/G DW	0.3	WHOLE BODY FISH
TLA-FMS-1	2080206	1.3	MCG/G DW	0.3	WHOLE BODY FISH
TLA-MS-1	2080207	0.8	MCG/G DW	0.3	WHOLE BODY FISH
TLA-RBT-1	2080208	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
WSA-BT-1	2080209	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
WSA-FMS-1	2080210	0.3	MCG/G DW	0.3	WHOLE BODY FISH
WSA-MS-1	2080211	<0.3	MCG/G DW	0.3	WHOLE BODY FISH
WSA-RBT-1	2080212	<0.3	MCG/G DW	0.3	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:CDHGA

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.21	MCG/G WW	0.006	WHOLE BODY FISH
AEC-BKT-2	2080183	0.20	MCG/G WW	0.006	WHOLE BODY FISH
AN-BKT-1	2080184	0.30	MCG/G WW	0.006	WHOLE BODY FISH
BCA-BT-1	2080185	0.072	MCG/G WW	0.003	WHOLE BODY FISH
BCA-CA-1	2080186	0.20	MCG/G WW	0.01	WHOLE BODY FISH
BCA-FMS-1	2080187	0.20	MCG/G WW	0.008	WHOLE BODY FISH
BCA-MS-1	2080188	0.098	MCG/G WW	0.007	WHOLE BODY FISH
BCA-RBT-1	2080189	0.15	MCG/G WW	0.003	WHOLE BODY FISH
BEC-BKT-1	2080190	0.20	MCG/G WW	0.006	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.16	MCG/G WW	0.005	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.15	MCG/G WW	0.002	WHOLE BODY FISH
FRA-BT-1	2080193	0.050	MCG/G WW	0.003	WHOLE BODY FISH
FRA-CA-1	2080194	0.085	MCG/G WW	0.003	WHOLE BODY FISH
FRA-FMS-1	2080195	0.15	MCG/G WW	0.01	WHOLE BODY FISH
FRA-MS-1	2080196	0.078	MCG/G WW	0.002	WHOLE BODY FISH
FRA-RBT-1	2080197	0.092	MCG/G WW	0.002	WHOLE BODY FISH
MC-BKT-1	2080198	0.16	MCG/G WW	0.007	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.15	MCG/G WW	0.007	WHOLE BODY FISH
TLA-BT-1	2080201	0.14	MCG/G WW	0.003	WHOLE BODY FISH
TLA-CA-1	2080205	0.16	MCG/G WW	0.003	WHOLE BODY FISH
TLA-FMS-1	2080206	0.18	MCG/G WW	0.008	WHOLE BODY FISH
TLA-MS-1	2080207	0.29	MCG/G WW	0.006	WHOLE BODY FISH
TLA-RBT-1	2080208	0.16	MCG/G WW	0.002	WHOLE BODY FISH
WSA-BT-1	2080209	0.040	MCG/G WW	0.003	WHOLE BODY FISH
WSA-FMS-1	2080210	0.20	MCG/G WW	0.003	WHOLE BODY FISH
WSA-MS-1	2080211	0.10	MCG/G WW	0.003	WHOLE BODY FISH
WSA-RBT-1	2080212	0.095	MCG/G WW	0.003	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:CDHGA

Submitter's ID Number	ETSRC ID	Final Concen	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	1.0	MCG/G DW	0.03	WHOLE BODY FISH
AEC-BKT-2	2080183	0.96	MCG/G DW	0.03	WHOLE BODY FISH
AN-BKT-1	2080184	1.5	MCG/G DW	0.03	WHOLE BODY FISH
BCA-BT-1	2080185	0.25	MCG/G DW	0.01	WHOLE BODY FISH
BCA-CA-1	2080186	0.50	MCG/G DW	0.03	WHOLE BODY FISH
BCA-FMS-1	2080187	0.75	MCG/G DW	0.03	WHOLE BODY FISH
BCA-MS-1	2080188	0.42	MCG/G DW	0.03	WHOLE BODY FISH
BCA-RBT-1	2080189	0.52	MCG/G DW	0.01	WHOLE BODY FISH
BEC-BKT-1	2080190	0.96	MCG/G DW	0.03	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.86	MCG/G DW	0.03	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.62	MCG/G DW	0.01	WHOLE BODY FISH
FRA-BT-1	2080193	0.17	MCG/G DW	0.009	WHOLE BODY FISH
FRA-CA-1	2080194	0.24	MCG/G DW	0.01	WHOLE BODY FISH
FRA-FMS-1	2080195	0.46	MCG/G DW	0.03	WHOLE BODY FISH
FRA-MS-1	2080196	0.31	MCG/G DW	0.01	WHOLE BODY FISH
FRA-RBT-1	2080197	0.43	MCG/G DW	0.01	WHOLE BODY FISH
MC-BKT-1	2080198	0.71	MCG/G DW	0.03	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.65	MCG/G DW	0.03	WHOLE BODY FISH
TLA-BT-1	2080201	0.54	MCG/G DW	0.009	WHOLE BODY FISH
TLA-CA-1	2080205	0.62	MCG/G DW	0.01	WHOLE BODY FISH
TLA-FMS-1	2080206	0.68	MCG/G DW	0.03	WHOLE BODY FISH
TLA-MS-1	2080207	1.3	MCG/G DW	0.03	WHOLE BODY FISH
TLA-RBT-1	2080208	0.62	MCG/G DW	0.01	WHOLE BODY FISH
WSA-BT-1	2080209	0.14	MCG/G DW	0.009	WHOLE BODY FISH
WSA-FMS-1	2080210	0.60	MCG/G DW	0.01	WHOLE BODY FISH
WSA-MS-1	2080211	0.40	MCG/G DW	0.01	WHOLE BODY FISH
WSA-RBT-1	2080212	0.37	MCG/G DW	0.01	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:HGCV

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.030	MCG/G WW	0.001	WHOLE BODY FISH
AEC-BKT-2	2080183	0.030	MCG/G WW	0.001	WHOLE BODY FISH
AN-BKT-1	2080184	0.032	MCG/G WW	0.001	WHOLE BODY FISH
BCA-BT-1	2080185	0.026	MCG/G WW	0.001	WHOLE BODY FISH
BCA-CA-1	2080186	0.050	MCG/G WW	0.002	WHOLE BODY FISH
BCA-FMS-1	2080187	0.092	MCG/G WW	0.002	WHOLE BODY FISH
BCA-MS-1	2080188	0.013	MCG/G WW	0.001	WHOLE BODY FISH
BCA-RBT-1	2080189	0.017	MCG/G WW	0.002	WHOLE BODY FISH
BEC-BKT-1	2080190	0.037	MCG/G WW	0.001	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.22	MCG/G WW	0.04	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.058	MCG/G WW	0.001	WHOLE BODY FISH
FRA-BT-1	2080193	0.052	MCG/G WW	0.001	WHOLE BODY FISH
FRA-CA-1	2080194	0.045	MCG/G WW	0.002	WHOLE BODY FISH
FRA-FMS-1	2080195	0.093	MCG/G WW	0.002	WHOLE BODY FISH
FRA-MS-1	2080196	0.022	MCG/G WW	0.001	WHOLE BODY FISH
FRA-RBT-1	2080197	0.021	MCG/G WW	0.001	WHOLE BODY FISH
MC-BKT-1	2080198	0.031	MCG/G WW	0.001	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.041	MCG/G WW	0.001	WHOLE BODY FISH
TLA-BT-1	2080201	0.043	MCG/G WW	0.002	WHOLE BODY FISH
TLA-CA-1	2080205	0.095	MCG/G WW	0.002	WHOLE BODY FISH
TLA-FMS-1	2080206	0.087	MCG/G WW	0.001	WHOLE BODY FISH
TLA-MS-1	2080207	0.010	MCG/G WW	0.001	WHOLE BODY FISH
TLA-RBT-1	2080208	0.021	MCG/G WW	0.002	WHOLE BODY FISH
WSA-BT-1	2080209	0.020	MCG/G WW	0.002	WHOLE BODY FISH
WSA-FMS-1	2080210	0.065	MCG/G WW	0.002	WHOLE BODY FISH
WSA-MS-1	2080211	0.0066	MCG/G WW	0.002	WHOLE BODY FISH
WSA-RBT-1	2080212	0.013	MCG/G WW	0.002	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:HGCV

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.14	MCG/G DW	0.006	WHOLE BODY FISH
AEC-BKT-2	2080183	0.14	MCG/G DW	0.006	WHOLE BODY FISH
AN-BKT-1	2080184	0.16	MCG/G DW	0.006	WHOLE BODY FISH
BCA-BT-1	2080185	0.089	MCG/G DW	0.005	WHOLE BODY FISH
BCA-CA-1	2080186	0.12	MCG/G DW	0.006	WHOLE BODY FISH
BCA-FMS-1	2080187	0.34	MCG/G DW	0.006	WHOLE BODY FISH
BCA-MS-1	2080188	0.057	MCG/G DW	0.006	WHOLE BODY FISH
BCA-RBT-1	2080189	0.061	MCG/G DW	0.006	WHOLE BODY FISH
BEC-BKT-1	2080190	0.18	MCG/G DW	0.006	WHOLE BODY FISH
BRN-BB-A-1	2080191	1.2	MCG/G DW	0.2	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.24	MCG/G DW	0.006	WHOLE BODY FISH
FRA-BT-1	2080193	0.17	MCG/G DW	0.005	WHOLE BODY FISH
FRA-CA-1	2080194	0.12	MCG/G DW	0.006	WHOLE BODY FISH
FRA-FMS-1	2080195	0.29	MCG/G DW	0.006	WHOLE BODY FISH
FRA-MS-1	2080196	0.087	MCG/G DW	0.006	WHOLE BODY FISH
FRA-RBT-1	2080197	0.098	MCG/G DW	0.006	WHOLE BODY FISH
MC-BKT-1	2080198	0.14	MCG/G DW	0.006	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.18	MCG/G DW	0.006	WHOLE BODY FISH
TLA-BT-1	2080201	0.16	MCG/G DW	0.006	WHOLE BODY FISH
TLA-CA-1	2080205	0.36	MCG/G DW	0.006	WHOLE BODY FISH
TLA-FMS-1	2080206	0.32	MCG/G DW	0.005	WHOLE BODY FISH
TLA-MS-1	2080207	0.047	MCG/G DW	0.006	WHOLE BODY FISH
TLA-RBT-1	2080208	0.082	MCG/G DW	0.006	WHOLE BODY FISH
WSA-BT-1	2080209	0.072	MCG/G DW	0.006	WHOLE BODY FISH
WSA-FMS-1	2080210	0.20	MCG/G DW	0.006	WHOLE BODY FISH
WSA-MS-1	2080211	0.026	MCG/G DW	0.006	WHOLE BODY FISH
WSA-RBT-1	2080212	0.049	MCG/G DW	0.006	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:PBHGA

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.19	MCG/G WW	0.02	WHOLE BODY FISH
AEC-BKT-2	2080183	0.50	MCG/G WW	0.02	WHOLE BODY FISH
AN-BKT-1	2080184	0.84	MCG/G WW	0.02	WHOLE BODY FISH
BCA-BT-1	2080185	0.15	MCG/G WW	0.03	WHOLE BODY FISH
BCA-CA-1	2080186	1.1	MCG/G WW	0.04	WHOLE BODY FISH
BCA-FMS-1	2080187	2.3	MCG/G WW	0.1	WHOLE BODY FISH
BCA-MS-1	2080188	0.93	MCG/G WW	0.02	WHOLE BODY FISH
BCA-RBT-1	2080189	0.52	MCG/G WW	0.03	WHOLE BODY FISH
BEC-BKT-1	2080190	0.37	MCG/G WW	0.02	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.28	MCG/G WW	0.02	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.44	MCG/G WW	0.02	WHOLE BODY FISH
FRA-BT-1	2080193	0.071	MCG/G WW	0.02	WHOLE BODY FISH
FRA-CA-1	2080194	0.25	MCG/G WW	0.03	WHOLE BODY FISH
FRA-FMS-1	2080195	1.7	MCG/G WW	0.2	WHOLE BODY FISH
FRA-MS-1	2080196	0.42	MCG/G WW	0.02	WHOLE BODY FISH
FRA-RBT-1	2080197	0.55	MCG/G WW	0.02	WHOLE BODY FISH
MC-BKT-1	2080198	0.24	MCG/G WW	0.02	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.69	MCG/G WW	0.02	WHOLE BODY FISH
TLA-BT-1	2080201	0.55	MCG/G WW	0.03	WHOLE BODY FISH
TLA-CA-1	2080205	4.2	MCG/G WW	0.1	WHOLE BODY FISH
TLA-FMS-1	2080206	2.5	MCG/G WW	0.1	WHOLE BODY FISH
TLA-MS-1	2080207	0.54	MCG/G WW	0.02	WHOLE BODY FISH
TLA-RBT-1	2080208	1.1	MCG/G WW	0.02	WHOLE BODY FISH
WSA-BT-1	2080209	0.08	MCG/G WW	0.03	WHOLE BODY FISH
WSA-FMS-1	2080210	1.8	MCG/G WW	0.03	WHOLE BODY FISH
WSA-MS-1	2080211	0.42	MCG/G WW	0.03	WHOLE BODY FISH
WSA-RBT-1	2080212	0.34	MCG/G WW	0.03	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:PBHGA

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.90	MCG/G DW	0.1	WHOLE BODY FISH
AEC-BKT-2	2080183	2.4	MCG/G DW	0.1	WHOLE BODY FISH
AN-BKT-1	2080184	4.1	MCG/G DW	0.1	WHOLE BODY FISH
BCA-BT-1	2080185	0.51	MCG/G DW	0.1	WHOLE BODY FISH
BCA-CA-1	2080186	2.7	MCG/G DW	0.1	WHOLE BODY FISH
BCA-FMS-1	2080187	8.4	MCG/G DW	0.5	WHOLE BODY FISH
BCA-MS-1	2080188	4.0	MCG/G DW	0.1	WHOLE BODY FISH
BCA-RBT-1	2080189	1.9	MCG/G DW	0.1	WHOLE BODY FISH
BEC-BKT-1	2080190	1.7	MCG/G DW	0.1	WHOLE BODY FISH
BRN-BB-A-1	2080191	1.5	MCG/G DW	0.1	WHOLE BODY FISH
FMS-BB-A-1	2080192	1.8	MCG/G DW	0.1	WHOLE BODY FISH
FRA-BT-1	2080193	0.24	MCG/G DW	0.08	WHOLE BODY FISH
FRA-CA-1	2080194	0.70	MCG/G DW	0.1	WHOLE BODY FISH
FRA-FMS-1	2080195	5.4	MCG/G DW	0.5	WHOLE BODY FISH
FRA-MS-1	2080196	1.7	MCG/G DW	0.1	WHOLE BODY FISH
FRA-RBT-1	2080197	2.6	MCG/G DW	0.1	WHOLE BODY FISH
MC-BKT-1	2080198	1.0	MCG/G DW	0.1	WHOLE BODY FISH
RBT-BB-A-1	2080200	3.0	MCG/G DW	0.1	WHOLE BODY FISH
TLA-BT-1	2080201	2.1	MCG/G DW	0.09	WHOLE BODY FISH
TLA-CA-1	2080205	16.	MCG/G DW	0.5	WHOLE BODY FISH
TLA-FMS-1	2080206	9.2	MCG/G DW	0.4	WHOLE BODY FISH
TLA-MS-1	2080207	2.5	MCG/G DW	0.1	WHOLE BODY FISH
TLA-RBT-1	2080208	4.2	MCG/G DW	0.1	WHOLE BODY FISH
WSA-BT-1	2080209	0.3	MCG/G DW	0.09	WHOLE BODY FISH
WSA-FMS-1	2080210	5.4	MCG/G DW	0.1	WHOLE BODY FISH
WSA-MS-1	2080211	1.6	MCG/G DW	0.1	WHOLE BODY FISH
WSA-RBT-1	2080212	1.3	MCG/G DW	0.1	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:SEHY

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	0.34	MCG/G WW	0.03	WHOLE BODY FISH
AEC-BKT-2	2080183	0.32	MCG/G WW	0.03	WHOLE BODY FISH
AN-BKT-1	2080184	0.37	MCG/G WW	0.03	WHOLE BODY FISH
BCA-BT-1	2080185	0.61	MCG/G WW	0.05	WHOLE BODY FISH
BCA-CA-1	2080186	0.36	MCG/G WW	0.06	WHOLE BODY FISH
BCA-FMS-1	2080187	0.27	MCG/G WW	0.04	WHOLE BODY FISH
BCA-MS-1	2080188	0.33	MCG/G WW	0.04	WHOLE BODY FISH
BCA-RBT-1	2080189	0.53	MCG/G WW	0.04	WHOLE BODY FISH
BEC-BKT-1	2080190	0.44	MCG/G WW	0.03	WHOLE BODY FISH
BRN-BB-A-1	2080191	0.60	MCG/G WW	0.03	WHOLE BODY FISH
FMS-BB-A-1	2080192	0.33	MCG/G WW	0.04	WHOLE BODY FISH
FRA-BT-1	2080193	0.91	MCG/G WW	0.05	WHOLE BODY FISH
FRA-CA-1	2080194	0.78	MCG/G WW	0.05	WHOLE BODY FISH
FRA-FMS-1	2080195	0.39	MCG/G WW	0.05	WHOLE BODY FISH
FRA-RBT-1	2080197	0.62	MCG/G WW	0.03	WHOLE BODY FISH
MC-BKT-1	2080198	0.51	MCG/G WW	0.03	WHOLE BODY FISH
RBT-BB-A-1	2080200	0.54	MCG/G WW	0.03	WHOLE BODY FISH
TLA-BT-1	2080201	0.61	MCG/G WW	0.04	WHOLE BODY FISH
TLA-CA-1	2080205	1.3	MCG/G WW	0.04	WHOLE BODY FISH
TLA-FMS-1	2080206	0.25	MCG/G WW	0.04	WHOLE BODY FISH
TLA-MS-1	2080207	0.45	MCG/G WW	0.03	WHOLE BODY FISH
TLA-RBT-1	2080208	0.42	MCG/G WW	0.04	WHOLE BODY FISH
WSA-BT-1	2080209	1.4	MCG/G WW	0.04	WHOLE BODY FISH
WSA-FMS-1	2080210	0.22	MCG/G WW	0.05	WHOLE BODY FISH
WSA-MS-1	2080211	0.52	MCG/G WW	0.04	WHOLE BODY FISH
WSA-RBT-1	2080212	0.95	MCG/G WW	0.04	WHOLE BODY FISH

ETSRC Sample Report

BUREAU OF RECLAMATION
Batch:B-92080181 Test:SEHY

Submitter's ID Number	ETSRC ID	Final Concen.	Units of Fin.Conc.	Detection Limit	Description
AC-BKT-1	2080182	1.6	MCG/G DW	0.2	WHOLE BODY FISH
AEC-BKT-2	2080183	1.5	MCG/G DW	0.2	WHOLE BODY FISH
AN-BKT-1	2080184	1.8	MCG/G DW	0.2	WHOLE BODY FISH
BCA-BT-1	2080185	2.1	MCG/G DW	0.2	WHOLE BODY FISH
BCA-CA-1	2080186	0.89	MCG/G DW	0.2	WHOLE BODY FISH
BCA-FMS-1	2080187	1.0	MCG/G DW	0.2	WHOLE BODY FISH
BCA-MS-1	2080188	1.4	MCG/G DW	0.2	WHOLE BODY FISH
BCA-RBT-1	2080189	1.9	MCG/G DW	0.2	WHOLE BODY FISH
BEC-BKT-1	2080190	2.1	MCG/G DW	0.1	WHOLE BODY FISH
BRN-BB-A-1	2080191	3.2	MCG/G DW	0.2	WHOLE BODY FISH
FMS-BB-A-1	2080192	1.3	MCG/G DW	0.2	WHOLE BODY FISH
FRA-BT-1	2080193	3.0	MCG/G DW	0.2	WHOLE BODY FISH
FRA-CA-1	2080194	2.2	MCG/G DW	0.2	WHOLE BODY FISH
FRA-FMS-1	2080195	1.2	MCG/G DW	0.2	WHOLE BODY FISH
FRA-MS-1	2080196	2.8	MCG/G DW	0.2	WHOLE BODY FISH
FRA-RBT-1	2080197	2.9	MCG/G DW	0.2	WHOLE BODY FISH
MC-BKT-1	2080198	2.2	MCG/G DW	0.2	WHOLE BODY FISH
RBT-BB-A-1	2080200	2.4	MCG/G DW	0.2	WHOLE BODY FISH
TLA-BT-1	2080201	2.3	MCG/G DW	0.2	WHOLE BODY FISH
TLA-CA-1	2080205	4.8	MCG/G DW	0.2	WHOLE BODY FISH
TLA-FMS-1	2080206	0.92	MCG/G DW	0.1	WHOLE BODY FISH
TLA-MS-1	2080207	2.1	MCG/G DW	0.2	WHOLE BODY FISH
TLA-RBT-1	2080208	1.6	MCG/G DW	0.2	WHOLE BODY FISH
WSA-BT-1	2080209	4.8	MCG/G DW	0.2	WHOLE BODY FISH
WSA-FMS-1	2080210	0.67	MCG/G DW	0.2	WHOLE BODY FISH
WSA-MS-1	2080211	2.0	MCG/G DW	0.2	WHOLE BODY FISH
WSA-RBT-1	2080212	3.6	MCG/G DW	0.2	WHOLE BODY FISH

STREAM SEDIMENT SAMPLE	LOCATION
ANIMAS RIVER SAMPLES	
DRSSARO1	BEHIND RED LION INN ABOVE BRIDGE
DRSSARO7	UPSTREAM OF BRIDGE AT AZTEC, NM
DRSSAR08	UPSTREAM OF BRIDGE AT CEDAR HILL, NM
DRSSAR09	WEASEL SKIN BRIDGE, CO
DRSSAR10	ACROSS FROM PUMPING PLANT SITE; SAMPLES ALSO TAKEN FROM PUMPING PLANT SIDE OF RIVER
DRSSAR11	UPSTREAM OF 32ND BRIDGE
DRSSAR12	TRIMBLE LANE BRIDGE
DRSSAR13	BONDAD AREA ALONG LA POSTA RD., APPROX. 1/8 MILE NORTH OF HWY 550
LIGHTNER CREEK	
DRSSLCO1	AT MOUTH OF CREEK WITH ANIMAS RIVER
MANCOS RIVER	
DRSSMR01	AT USGS STATION, TOWOAC
DRSSMR02	BELOW MANCOS, CO
DRSSMR03	BELOW JOHNSON CANYON AT OLD USGS STATION
LA PLATA RIVER	
DRSSLR01	UPSTREAM OF JACKSON LAKE, NM
DRSSLR02	USGS STATION ON CO/NM BORDER
DRSSLR05	ABOVE CONFLUENCE OF CHERRY CREEK
DRSSLR07	NEAR MAYDAY MINE IN LA PLATA CANYON
DRSSLR08	UPSTREAM OF BRIDGE AT LA PLATA, NM
DRSSLR09	1.8 MILES SOUTH OF CO/NM BORDER *DESTROYED IN SHIPMENT TO LAB*
DRSSLR10	ABOVE CONFLUENCE WITH LONG HOLLOW CREEK
DRSSLR12	ABOVE CONFLUENCE WITH CHERRY CREEK
DRSSLR14	0.5 MILES NORTH OF BREEN
DRSSLR15	0.8 MILES NORTH OF MAYDAY, CO
LONG HOLLOW CREEK	
DRSSLR03	NEAR MOUTH/CONFLUENCE OF LA PLATA RIVER
DRSSLR11	ABOVE CONFLUENCE WITH LA PLATA RIVER
CHERRY CREEK	
DRSSLR04	ABOVE CONFLUENCE WITH LA PLATA RIVER
DRSSLR06	NEAR TOP OF PROJECT BOUNDARY
DRSSLR13	UPPER CHERRY CREEK - 1.5 MILES SOUTH OF
DRSSLR06	

Appendix 22a. Animas-La Plata stream sediment sample locations (U.S Bureau of Reclamation 1993c)

STATION	DATE	LAB	LAB_ID	PH	EC	NA	CA	MG	K
DRSSLR08	07<Dec<92	ALA	901412						
DRSSLR09	07<Dec<92	ALA	901413						
DRSSLR10	07<Dec<92	ALA	901414						
DRSSLR11	07<Dec<92	ALA	901415						
DRSSLR12	07<Dec<92	ALA	901416						
DRSSLR13	07<Dec<92	ALA	901417						
DRSSLR14	07<Dec<92	ALA	901418						
DRSSLR15	07<Dec<92	ALA	901419						
DRSSAR13	14<Jul<92	ALA	900949						
DRSSLR01	30<Mar<92	IML	70945113						
DRSSLR02	30<Mar<92	IML	70955114						
DRSSLR03	30<Mar<92	IML	70965115						
DRSSLR04	03<Mar<92	IML	70975116						
DRSSLR05	30<Mar<92	IML	70985117						
DRSSLR06	30<Mar<92	IML	70995118						
DRSSLR07	01<Aug<92	ALA	901152	7.400	1420 410	2.420	11.200	1.120	
DRSSAR01	21<Dec<92	USGS	D524389			14000.000	41000	7500.000	2.000
DRSSAR07	21<Dec<92	USGS	D524390D			10000	9300	3800.000	2.200
DRSSAR07	21<Dec<92	USGS	D524391			11000	9600	4000	2.300
DRSSAR08	21<Dec<92	USGS	D524392			12000	14000	2600	2.000
DRSSAR09	21<Dec<92	USGS	D524393			17000	25000	4800	1.700
DRSSAR10	21<Dec<92	USGS	D524394			10000	78000	5400	1.800
DRSSAR13	21<Dec<92	USGS	D524395			8000	11000	4900	2.100
DRSSLC01	21<Dec<92	USGS	D524396			5800	56000	1600	1.800
DRSSLR03	22<Dec<92	USGS	D524397			22000	18000	3000	3.400
DRSSLR10	22<Dec<92	USGS	D524398D			13000	25000	6800	1.900
DRSSLR08	22<Dec<92	USGS	D524399			9500	44000	6800	1.900
DRSSLR10	22<Dec<92	USGS	D524400			13000	25000	6700	1.900
DRSSLR14	21<Dec<92	USGS	D524401			21000	10000	2800	4.300
DRSSMR01	22<Dec<92	USGS	D524402			8700	23000	9900	1.700
DRSSMR02	23<Dec<92	USGS	D524403			7800	18000	7100	1.900
DRSSMR03	22<Dec<92	USGS	D524404			8400	33000	7100	1.300
DRSSAR07	21<Dec<92	ALA	901472D			12000	9700	4100	2.100
DRSSAR07	21<Dec<92	ALA	901473			15000	9800	4100	2.300
DRSSLR10	22<Dec<92	ALA	901474D			15000	26000	6500	2.000
DRSSLR10	22<Dec<92	ALA	901475			15000	25000	6800	2.000
DRSSLC01	21<Dec<92	ALA	901476			5500	55000	1500	1.700
DRSSLR03	22<Dec<92	ALA	901477			25000	10000	3300	3.100
DRSSAR13	21<Dec<92	ALA	901478			5100	14000	5200	3.100
DRSSAR08	21<Dec<92	ALA	901479			14000	46000	3100	1.800
DRSSLR08	22<Dec<92	ALA	901480			10000	50000	7000	2.100
DRSSAR01	21<Dec<92	ALA	901481			15000	37000	8000	1.800
DRSSLR14	21<Dec<92	ALA	901482			20000	11000	3000	4.400
DRSSAR09	21<Dec<92	ALA	901483			16000	22000	5000	1.800
DRSSAR10	21<Dec<92	ALA	901484			12000	80000	6000	2.000

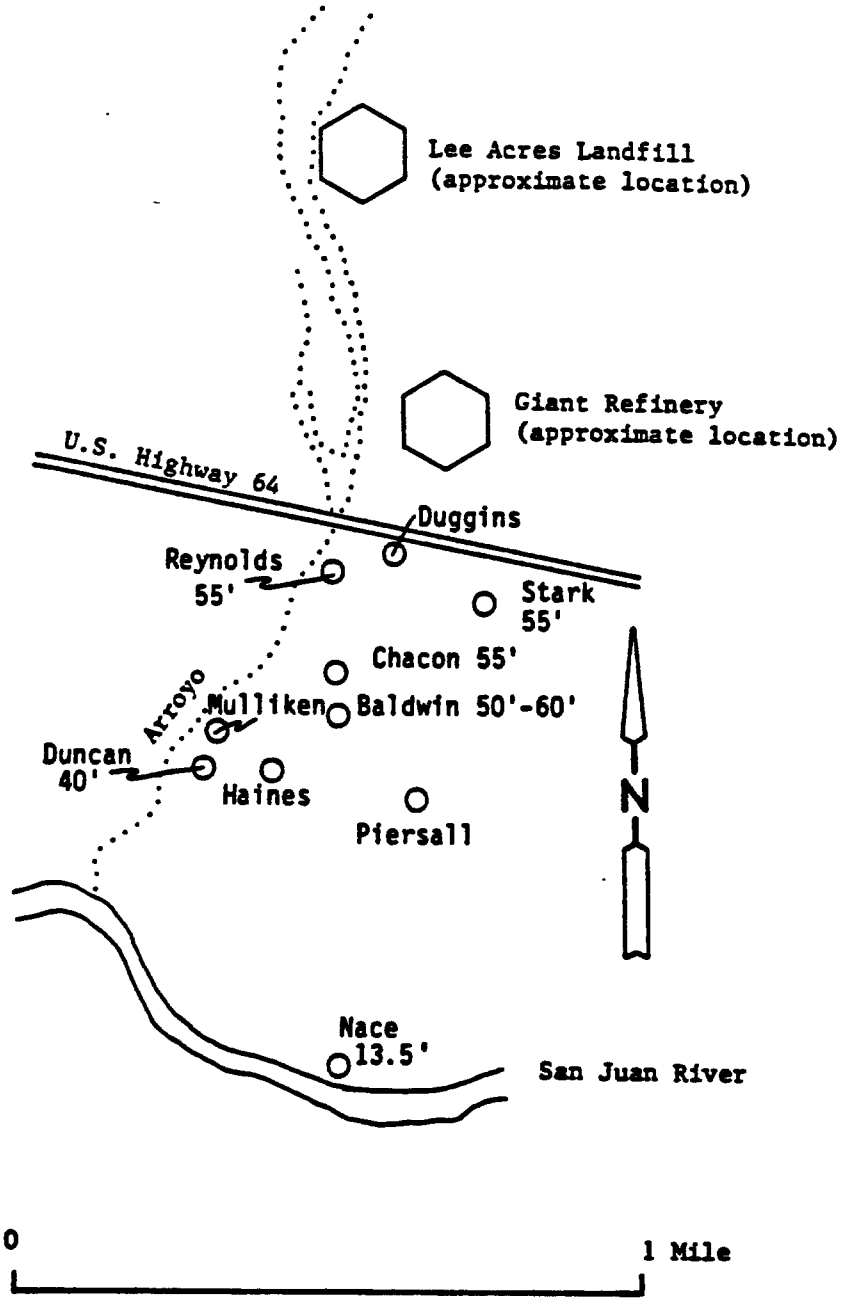
Appendix 22b. Animas-La Plata stream sediment data (U S Bureau of Reclamation 1993c)

LAB_ICP	LABID_ICP	DATE_ICP	AG_ICP	AL_ICP	AU_ICP	BA_ICP	BE_ICP	BI_ICP	CD_ICP
ALA	901412	120792	<2.000	28000	<5.000	360.000	0.230	<10.000	<2.000
ALA	901413	120792	<2.000	21000	<5.000	510.000	0.210	<10.000	<2.000
ALA	901414	120792	<2.000	19000	<5.000	570.000	0.250	<10.000	<2.000
ALA	901415	120792	<2 000	24000	<5.000	550.000	0.280	<10.000	<2.000
ALA	901416	120792	<2 000	22000	<5.000	470.000	0.230	<10.000	<2.000
ALA	901417	120792	<2.000	36000	<5.000	630.000	0.270	<10.000	<2.000
ALA	901418	120792	<2.000	41000	<5.000	570.000	0.240	<10.000	<2.000
ALA	901419	120792	<2 000	29000	<5.000	660.000	0.250	<10.000	<2.000
ALA	8900949	071492	<2.000						<2.000
IML	70945113	033092	<5.000						<1.000
IML	70955114	030392	<5.000						<1.000
IML	70965115	033092	<5.000						<1.000
IML	70975116	033092	<5.000						<1.000
IML	70985117	033092	<5.000						<1.000
IML	70995118	033092	<10.000						<1.000
ALA	901152	080192	0.100						1.200
USGS	D524389	122192	<2.000	56000	<8.000	610.000	1.000	<10.000	2.000
USGS	D524390	122192	<2 000	53000	<8.000	990.000	1.000	<10.000	<2.000
USGS	D524391	122192	<2.000	55000	<8.000	1000.000	1.000	<10.000	<2.000
USGS	D524392	122192	<2.000	47000	<8.000	2100.000	1.000	<10.000	<2.000
USGS	D524393	122192	<2.000	62000	<8.000	1000.000	1.000	<10.000	<2.000
USGS	D524394	122192	<2.000	44000	<8.000	610.000	<1.000	<10.000	<2.000
USGS	D524395	122192	<2.000	75000	<8.000	800.000	2.000	<10.000	<2.000
USGS	D524396	122192	<2.000	69000	<8.000	400.000	2.000	<10.000	<2.000
USGS	D524397	122292	<2.000	64000	<8.000	1000.000	1.000	<10.000	<2.000
USGS	D524398	122292	<2 000	53000	<8.000	610.000	2.000	<10.000	2.000
USGS	D524399	122292	<2.000	51000	<8.000	570.000	1.000	<10.000	<2.000
USGS	D524400	122292	<2.000	52000	<8 000	600.000	1.000	<10.000	2.000
USGS	D524401	122192	<2.000	71000	<8.000	1200.000	1.000	<10.000	<2.000
USGS	D524402	122292	<2.000	48000	<8.000	550.000	1.000	<10.000	<2.000
USGS	D524403	122392	<2.000	55000	<8.000	520.000	1.000	<10.000	<2.000
USGS	D524404	122292	<2.000	38000	<8.000	860.000	1.000	<10.000	<2.000
ALA	901472D	122192	<2.000	55000	<5.000	977.000	1.000	<8.000	<2.000
ALA	901473	122192	<2.000	55000	<5.000	1010.000	1.000	<8.000	<2.000
ALA	901474D	122192	<2.000	53000	<5.000	588.000	2.000	<8.000	<2.000
ALA	901475	122192	<2.000	51000	<5.000	615.000	1.000	<8.000	<2.000
ALA	901476	122192	<2.000	70000	<5.000	388.000	2.000	<8.000	<2.000
ALA	901477	122192	<2.000	61000	<5.000	976.000	1.000	<8.000	<2.000
ALA	901478	122192	<2.000	78000	<5.000	766.000	2.000	<8.000	<2.000
ALA	901479	122192	<2.000	50000	<5.000	2133.000	2.000	<8.000	<2.000
ALA	901480	122292	<2.000	48000	<5.000	471.000	1.000	<8.000	<2.000
ALA	901481	122192	<2.000	56000	<5.000	581.000	2.000	<8.000	<2.000
ALA	901482	122192	<2.000	68000	<5.000	1155.000	1.000	<8.000	<2.000
ALA	901483	122192	<2.000	59000	<5.000	1014.000	2.000	<8.000	<2.000
ALA	901484	122192	<2.000	47000	<5.000	510.000	0.000	<8.000	<2.000

CE_ICP	CO_ICP	CR_ICP	CU_ICP	FE_ICP	GA_ICP	HO_ICP	LA_ICP	LI_ICP
49.000	4.700	29.000	17.000	14000	13.000	<5.000	24.000	30.000
56.000	5.300	36.000	20.000	16000	12.000	<5.000	29.000	21.000
60.000	6.000	39.000	19.000	2000	15.000	<5.000	34.000	27.000
44.000	4.400	28.000	16.000	19000	13.000	<5.000	31.000	20.000
51.000	3 900	35.000	17.000	16000	15.000	<5.000	27.000	34.000
59.000	5.900	39.000	27.000	21000	18.000	<5.000	44.000	30.000
76.000	7.300	41.000	29.000	27000	15.000	<5.000	33.000	27.000
70.000	8.000	45.000	39.000	34000	17.000	<5.000	54.000	37.000
		42.000	26.000	14000				
		<5.000	6.800	7720.000				
		7.800	19.900	11600.000				
		6.500	12.400	10300.000				
		5.900	11.000	10800.000				
		<5.000	56.100	10500.000				
		<5.000	7.200	8600.000				
		5.000	39.000	96.000				
59.000	13.000	33.000	60.000	29000	16.000	<4.000	33.000	30.000
66.000	8.000	18 000	23.000	20000	12.000	<4.000	36.000	16.000
71.000	8.000	19.000	24.000	21000	13.000	<4.000	39.000	16.000
63.000	6.000	13.000	33.000	23000	11.000	<4.000	34.000	13.000
58 000	14.000	17.000	46 000	35000	17.000	<4.000	32.000	21.000
33 000	6.000	26.000	16.000	15000	10.000	<4.000	19.000	22.000
65 000	12 000	21.000	57.000	34000	20.000	<4.000	37.000	20.000
47.000	9.000	73.000	26.000	27000	17.000	<4.000	27.000	54.000
43.000	5.000	17.000	35.000	21000	15.000	<4.000	27.000	17.000
56.000	14.000	33.000	92 000	36000	16.000	<4.000	32.000	30.000
45.000	7.000	33.000	24.000	18000	12.000	<4.000	27.000	25.000
52.000	13.000	34.000	92.000	36000	17.000	<4.000	31.000	29.000
48.000	6.000	18.000	92.000	25000	20.000	<4.000	31.000	19.000
47.000	7.000	34.000	16.000	19000	11.000	<4.000	26.000	26.000
53.000	9.000	42.000	29.000	23000	13.000	<4.000	29.000	33.000
46.000	10.000	33.000	14.000	46000	8.000	<4.000	27.000	21.000
59 000	11.000	20.000	20.000	18000	10.000	<2.000	40.000	13.000
80.000	10.000	20.000	25.000	20000	15.000	<2.000	42.000	15.000
61.000	15.000	37.000	82 000	33000	20.000	<2.000	27.000	32.000
47.000	11.000	28.000	96 000	33000	20.000	<2.000	26.000	30.000
50.000	10.000	62.000	21.000	19000	15.000	<2.000	23.000	25.000
38.000	<5.000	27.000	67.000	17000	18.000	<2.000	31.000	27.000
71.000	10.000	20.000	20.000	37000	18.000	<2.000	35.000	22.000
55.000	5.000	15.000	30.000	25000	15.000	<2.000	31.000	11.000
41.000	10.000	31.000	28.000	19000	12.000	<2.000	30.000	25.000
60.000	15.000	30.000	71.000	25000	13.000	<2.000	27.000	24.000
50.000	5.000	20.000	99.000	27000	18.000	<2.000	30.000	20.000
60.000	15.000	15.000	52.000	35000	15.000	<2.000	31.000	20.000
30.000	5.000	22.000	20.000	17000	10.000	<2.000	23.000	19.000

NB_ICP	ND_ICP	NI_ICP	PB_ICP	SN_ICP	SC_ICP	TA_ICP	U_ICP	Y_ICP
11.000	26.000	<10.000	14.000	<5.000	<10.000	<40.000	<100.000	<20.000
9.000	24.000	16.000	13.000	<5.000	<10.000	<40.000	<100.000	<20.000
8.000	27.000	20.000	16.000	<5.000	<10.000	<40.000	<100.000	<20.000
11.000	21.000	17.000	19.000	<5.000	<10.000	<40.000	<100.000	<20.000
8.000	26.000	22.000	16.000	<5.000	<10.000	<40.000	<100.000	<20.000
11.000	17.000	<10.000	14.000	<5 000	<10.000	<40.000	<100.000	<20.000
10.000	27.000	13.000	23.000	<5 000	<10.000	<40 000	<100.000	<20.000
13.000	30.000	<10.000	19.000	<5.000	<10.000	<40.000	<100.000	<20.000
		31.000	27.000					
		2.500	<10.000					
		7.800	<10.000					
		7.299	<10.000					
		7.300	<10.000					
		3.300	<10.000					
		5.000	<10.000					
		7.000	6.000					
8.000	28.000	16.000	120.000	<5.000	8.000	<40.000	<100.000	16.000
7.000	28.000	8.000	41.000	<5.000	5 000	<40.000	<100.000	14.000
8 000	30.000	8.000	39.000	<5.000	5.000	<40.000	<100.000	15.000
<4.000	28.000	6.000	110.000	<5.000	4.000	<40.000	<100.000	13.000
8.000	28.000	9.000	110.000	<5.000	7.000	<40.000	<100.000	16.000
4.000	16.000	10.000	16.000	<5.000	4.000	<40.000	<100.000	12.000
9.000	28.000	10.000	67.000	<5.000	8.000	<40.000	<100.000	14.000
9.000	27.000	28.000	19.000	<5.000	11.000	<40.000	<100.000	17.000
7.000	17.000	6.000	17.000	<5.000	4.000	<40.000	<100.000	12.000
8 000	25 000	12 000	200.000	<5.000	8 000	<40.000	<100.000	15.000
7.000	22 000	11.000	15.000	<5.000	5.000	<40.000	<100.000	13.000
9.000	26.000	14.000	210.000	<5 000	8.000	<40.000	<100.000	14.000
8.000	20.000	7.000	33 000	<5.000	4.000	<40.000	<100.000	13.000
7.000	22 000	13.000	17.000	<5.000	6.000	<40.000	<100.000	15.000
7.000	25.000	19.000	18.000	<5.000	7.000	<40.000	<100.000	17.000
6.000	23.000	19.000	14.000	<5.000	6.000	<40.000	<100.000	13.000
6.000	30.000	10.000	45.000	<5.000	5.000	<20.000	<50.000	15.000
6.000	30.000	10.000	40.000	<5.000	5.000	<20.000	<50.000	15.000
9.000	28.000	11.000	180.000	<5.000	10.000	<20.000	<50.000	15.000
9.000	28.000	15.000	200.000	<5.000	10.000	<20.000	<50.000	15.000
10.000	28.000	30.000	20.000	<5.000	10.000	<20.000	<50.000	19.000
6.000	30.000	15.000	145.000	<5.000	10.000	<20.000	<50.000	15.000
10.000	30.000	10 000	61.000	<5.000	7.000	<20.000	<50.000	15.000
<4.000	25.000	5.000	105.000	<5.000	5.000	<20.000	<50.000	10.000
10.000	25.000	10.000	17.000	<5.000	5.000	<20.000	<50.000	11.000
6.000	33.000	14.000	104.000	<5.000	5.000	<20.000	<50.000	17.000
7.000	22.000	5.000	35.000	<5.000	3.000	<20.000	<50.000	15.000
6.000	25.000	10.000	101.000	<5.000	6.000	<20.000	<50.000	15.000
5.000	12.000	12.000	15.000	<5.000	5.000	<20.000	<50.000	11.000

YB_ICP	V_ICP	ZN_ICP	AS_ICP	SE_ICP	HG_ICP	HG_TOT
2.200	49.000	66.000	<10.000	0.200	0.025	
2.400	56.000	79.000	<10.000	0.220	0.022	
2.700	52.000	74.000	<10.000	0.240	0.032	
1.500	60.000	81.000	<10.000	0.300	0.035	
1.700	64.000	62.000	<10.000	0.260	0.024	
4.200	60.000	56.000	<10.000	0.230	0.023	
3.400	66.000	80.000	<10.000	0.210	0.024	
2 700	72.000	77.000	<10.000	0.240	0.022	
		69.000	<10.000	0.310		0.220
		16.200	<10.000	<10.000	<0.200	
		33.700	<10.000	<10.000	<0.200	
		29.300	<10.000	<10.000	<0.200	
		30 700	<10.000	<10.000	<0.200	
		29.300	<10.000	<10.000	<0.200	
		26.500	<10.000	<10.000	<0.200	
		32.000	17.000	21.000	0.010	
1.000	110.000	540.000	9.600	1.800	<0.020	
1.000	46.000	170.000	4.500	0.200	0.020	
2.000	48.000	180.000	4.700	0.200	0.020	
1.000	53.000	480.000	7.300	0.300	0.020	
2.000	91.000	690.000	8.400	0.400	0.040	
1.000	47.000	50.000	6.100	1.000	<0.020	
1.000	90.000	320.000	6.300	0.300	0.040	
1.000	150.000	94.000	10.000	2.200	0.060	
1.000	65.000	42.000	9.200	0.200	0.020	
1.000	95.000	770.000	12.000	0.700	0.030	
1.000	60.000	57.000	6 400	0.800	0.020	
1.000	95.000	760.000	11.000	0.600	0.060	
1.000	86.000	62.000	16.000	0.200	<0.020	
1.000	57.000	55.000	6.600	0.600	0.050	
2.000	81.000	76.000	8.000	0.700	0.020	
1.000	58.000	67.000	12.000	0.800	0.030	
1.000	50.000	160.000	3.800	0.100	<0.020	
2.000	50.000	200.000	4.300	0.100	<0.020	
1.000	100.000	800.000	10.500	0.500	0.020	
1.000	100.000	800.000	9.300	0.400	0.050	
2.000	135.000	100.000	8.500	1.500	0.040	
1.000	99.000	572.000	8.000	0.100	<0.020	
1.000	77.000	55.000	4.900	0.200	0.030	
2.000	50.000	501.000	6.100	0.200	<0.020	
1.000	52.000	52.000	5.800	0.700	0.020	
1.000	97.000	525.000	7.800	1.500	<0.020	
1.000	84.000	60.000	13.600	0.200	<0.020	
2.000	90.000	709.000	7.000	0.300	0.030	
2.000	50.000	55.000	5.500	0.700	<0.020	



Appendix 23a. Locations and reported depths of wells sampled (McQuillan and Longmire 1986)

All concentrations are mg/L except for pH units. If no entry is made for the trace elements (aluminum through zinc) then the element was not detected with the detection limit of 0.1 mg/L.

Abbreviations Used in Appendix B and in the text

CH_2Cl_2	Methylene Chloride
1,1-DCA	1,1-Dichloroethane
1,1-DCE	1,1-Dichloroethylene
1,2-DCE	1,2-Dichloroethylene
PCE	Tetrachloroethylene
R	Reported Well Depth
1,1,1-TCA	1,1,1-Trichloroethane
TCE	Trichloroethylene
TD	Total (Well) Depth
TDS	Total Dissolved Solids (if filtered through 0.45 um membrane) or Total Solids (if not filtered through 0.45 um membrane)
Tr	Trace (<0.001 mg/L)
VOCs	Volatile Organic Compounds

Appendix 23b. Results of chemical analyses of water and wastewater (McQuillan and Longmire 1986)

Lagoon Water		W. Side	E. Side	S. Side*
Sampling Date	1/11/85	2/27/85	2/27/85	5/2/85
Calcium	204./170.	267/230.	234./200	224 /240
Magnesium	26.8/19.	18 7/19.	18.5/16	36 6/25
Sodium	1,507.	1,833.	1,263	1790
Potassium	885	848.	548.	390
Bicarbonate	--	417.	625	476
Sulfate	430	1,881.	1,086	40 2
Chloride	2,759	3,577.	2,251	4,474
Phosphate	--	--	--	0.92
Nitrate-N	--	--	--	< 0 01
Ammonia-N	--	--	--	6 8
TKN	--	--	--	11 1
Aluminum	2.3	1.8	1.5	0 30
Arsenic	0.022	--	--	0 009
Barium	0 74	0 60	0.37	0 5
Beryllium	<0 10	<0.10	<0 10	<0 1
Boron	0 61	0 58	0.48	1 6
Cadmium	<0 10	<0 10	<0.10	<0 10
Chromium	0.28	0 23	0 15	<0 10
Cobalt	<0.10	<0 10	<0.10	<0 10
Copper	<0 10	<0 10	<0.10	<0 10
Iron	6.9	7 8	6.8	75
Lead	<0.10	0 21	0.10	<0 10
Manganese	1.5	0.83	0.80	2.1
Mercury	--	--	--	--
Molybdenum	<0.10	<0.10	<0 10	<0.10
Nickel	<0.10	<0 10	<0.10	<0 10
Selenium	0.026	--	--	0.025
Silicon	1.2	2 0	2.0	14.0
Silver	<0.10	<0 10	<0.10	<0 10
Strontium	4 4	6 0	4.5	7.3
Tin	<0.10	<0.10	<0 10	<0 10
Vanadium	<0 10	<0.10	<0.10	<0.10
Yttrium	<0.10	<0.10	<0.10	<0.10
Zinc	0.29	0.24	0.54	<0.10
TDS	6,308.	7,695.	5,268	9018.
pH	7.14	8 08	7 64	6.14
Benzene	0 44	1.03	0.89	0.120
Toluene	0.95	1.98	1.94	0.330
Ethylbenzene	0.1	0.16	0.17	0.025
Xylenes	0.71	1.21	1.34	0.205
CH_2Cl_2	2.0	0.18	0.21	--
1,1,1-TCA	0 4	0.19	0.23	0.010
TCE	0.004	--	--	--
PCE	--	0.016	0.007	--
Acetone	--	--	--	--
2-Propanol	--	--	--	--

* After the addition of $FeCl_3$

Baldwin Well	TD = 50'-60'R
Sampling Date	5/2/85
Calcium	360./400.
Magnesium	46.4/47.
Sodium	311.
Potassium	55.4
Bicarbonate	148.8
Sulfate	1464.
Chloride	69.0
Nitrate-N	<0.01
Ammonia-N	0.02
TKN	0.19
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.24
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	18.
Lead	
Manganese	0.77
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	9.0
Silver	
Strontium	6.3
Tin	
Vanadium	
Yttrium	
Zinc	0.15
TDS	2345.
pH	7.11
Filtration (0.45 um)	No
VOCs	ND

Chacon Well	TD = 55'R
Sampling Date	5/1/85
Calcium	352./410.
Magnesium	51.4/39.
Sodium	506.0
Potassium	3.9
Bicarbonate	127.6
Sulfate	2073.
Chloride	53.2
Nitrate-N	0.04
Ammonia-N	0.15
TKN	0.31
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.32
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	26.
Lead	
Manganese	0.63
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	6.6
Silver	
Strontium	7.1
Tin	
Vanadium	
Yttrium	
Zinc	0.80
TDS	3118.
pH	6.66
Filtration (0.45 um)	No
VOCs	
1,1,1-TCA	0.001
TCE	0.001

Duggins Well

Sampling Date	4/30/85
Calcium	448./430.
Magnesium	43.9/24.
Sodium	610.
Potassium	5.46
Bicarbonate	125.2
Sulfate	2452.
Chloride	40.2
Nitrate-N	1.39
Ammonia-N	0.32
TKN	0.39
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.30
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	0.19
Lead	
Manganese	0.30
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	7.4
Silver	
Strontium	8.8
Tin	
Vanadium	
Yttrium	
Zinc	0.40
TDS	3773.
pH	7.04
Filtration (0.45 um)	No
VOCs	ND

Duncan Well	TD = 40'R
Sampling Date	4/22/85
Calcium	413./430.
Magnesium	69.3/51.
Sodium	508.
Potassium	5.46
Bicarbonate	119.0
Sulfate	2041.
Chloride	81.7
Nitrate-N	<0.01
Ammonia-N	
TKN	
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.42
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	15.
Lead	
Manganese	0.45
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	7.7
Silver	
Strontium	7.7
Tin	
Vanadium	
Yttrium	
Zinc	
TDS	3250.
pH	7.59
Filtration (0.45 um)	No
VOCs	ND

Haines "Cinderblock" Well

Sampling Date	4/30/85
Calcium	117./110.
Magnesium	22.0/24.
Sodium	273.7
Potassium	3.12
Bicarbonate	69.9
Sulfate	871.9
Chloride	20.2
Nitrate-N	0.00
Ammonia-N	0.12
TKN	0.36
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.17
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	16.
Lead	
Manganese	0.15
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	1.7
Silver	
Strontium	3.6
Tin	
Vanadium	
Yttrium	
Zinc	
TDS	1398.
pH	7.02
Filtration (0.45 um)	No
VOCs	ND

Mulliken Well

Sampling Date	4/30/85
Calcium	378./450.
Magnesium	42.5/48.
Sodium	345.
Potassium	3.12
Bicarbonate	155.7
Sulfate	1759.
Chloride	34.1
Nitrate-N	0.08
Ammonia-N	0.01
TKN	<0.1
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.26
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	0.58
Lead	
Manganese	0.43
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	12.
Silver	
Strontium	7.4
Tin	
Vanadium	
Yttrium	
Zinc	
TDS	2278.
pH	7.21
Filtration (0.45 um)	No
VOCs	ND

Nace Well	TD = 13.5'R
Sampling Date	5/1/85
Calcium	148./130.
Magnesium	14.
Sodium	101.2
Potassium	2.73
Bicarbonate	151.4
Sulfate	471.9
Chloride	13.2
Nitrate-N	<0.01
Ammonia-N	0.07
TKN	<0.1
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	<0.1
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	0.44
Lead	
Manganese	2.1
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	6.7
Silver	
Strontium	2.0
Tin	
Vanadium	
Yttrium	
Zinc	0.13
TDS	855.
pH	6.60
Filtration (0.45 um)	No
VOCs	0.001 PCE

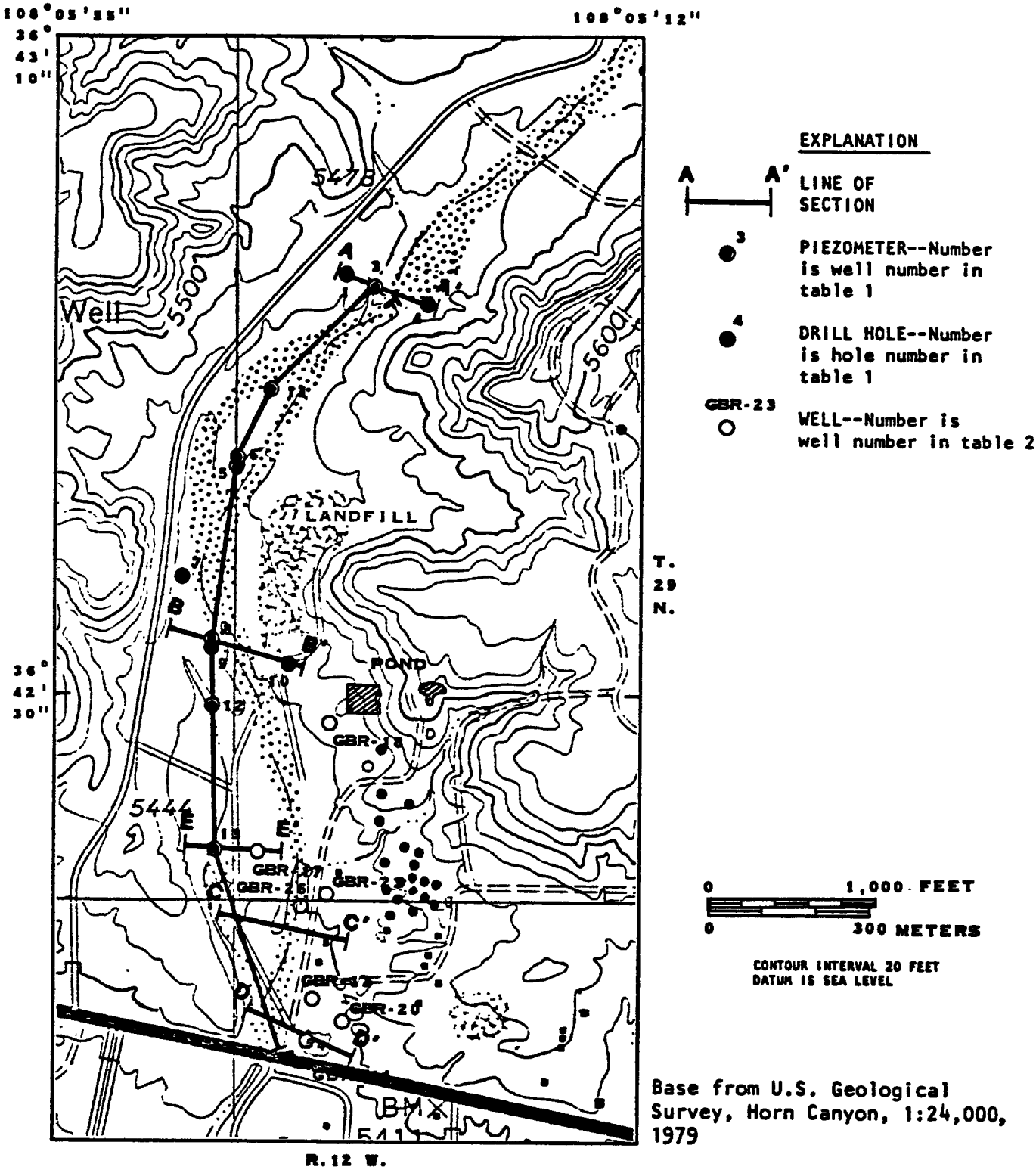
Piersall Well

Sampling Date	4/29/85
Calcium	224./280.
Magnesium	46.4/32.
Sodium	145.
Potassium	2.73
Bicarbonate	169.
Sulfate	814.7
Chloride	37.7
Nitrate-N	<0.01
Ammonia-N	0.12
TKN	<0.1
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.18
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	1.7
Lead	
Manganese	0.90
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	10.
Silver	
Strontium	4.3
Tin	
Vanadium	
Yttrium	
Zinc	0.13
TDS	1428.
pH	6.93
Filtration (0.45 um)	No
VOCs	ND

Reynolds Well TD = 50'R

Sampling Date	4/22/85	4/26/85	10/23/85	10/24/85	10/24/85
Calcium	677.	710.		816 8/810	762 4/810
Magnesium	73.0	53.		120 5/61	86 4/61
Sodium	393			418 6	414 0
Potassium	2.34			1.17	1.56
Bicarbonate	171.6			228 9	218 7
Sulfate	1231.			1262	1212
Chloride	1002.9			1221 8	1320 8
Nitrate-N	3.06			2 31	2 38
Ammonia-N				<0 10	<0 10
TKN				0.62	<0 10
Aluminum	Not Analyzed		Not Analyzed		
Arsenic					
Barium					
Beryllium					
Boron		0 19		0 2	0 2
Cadmium					
Chromium					
Cobalt					
Copper					
Iron		<0 10		0.2	<0.10
Lead					
Manganese		<0.05		<0 05	<0 05
Mercury					
Molybdenum					
Nickel					
Selenium					
Silicon		6.6		6.3	6 2
Silver					
Strontium		13.		14.	14.
Tin					
Vanadium					
Yttrium					
Zinc		1.1		0.7	0 7
TDS	4313			4343.	4308
pH	6.85			6.38	6.38
Filtration (0.45 um)	No	No	No	No	Yes
VOCs					
Benzene	0.008	Tr			
1,1-DCA	0.006	0 002			
1,1,1-TCA	0 022	0 02			
vinylchloride	–	–		?	
1,1-DCE	0.001	Tr	0 002		
1,2-DCE	0 001	Tr	0.011	0.01	
TCE	0.002	0 002	0 0015	Tr	
PCE	0 01	0 004	0.001	0.001	

Stark Well	TD = 55'R
Sampling Date	4/30/85
Calcium	140./180.
Magnesium	24.4/26.
Sodium	80.5
Potassium	3.9
Bicarbonate	121.4
Sulfate	441.6
Chloride	19.2
Nitrate-N	0.05
Ammonia-N	0.03
TKN	<0.1
Aluminum	
Arsenic	
Barium	
Beryllium	
Boron	0.10
Cadmium	
Chromium	
Cobalt	
Copper	
Iron	4.2
Lead	
Manganese	4.9
Mercury	
Molybdenum	
Nickel	
Selenium	
Silicon	8.2
Silver	
Strontium	2.7
Tin	
Vanadium	
Yttrium	
Zinc	0.15
TDS	828.
pH	6.69
Filtration (0.45 um)	No
VOCs	ND



Appendix 24a. Location of the drill holes and hydrogeologic sections (Peter et al 1987)

Chemical analyses

[°C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; µg/L, micrograms per liter; <, less than. All other constituents in milligrams per liter]

Number in fig. 3	Well number	Date	Water temperature (°C)	Air temperature (°C)	Specific conductance (µS/cm)	pH (standard units)	Dissolved cations: Calcium	Magnesium	Sodium	Potassium
3	29N.12W.22.1321	04-29-87	16.0	25.0	3,000	7.11	290	32	370	1.8
5	29N.12W.21.4222A	04-30-87	16.5	29.0	2,800	7.22	290	32	340	2.6
6	29N.12W.21.4222B	04-29-87	16.0	27.5	2,700	7.10	320	34	280	1.1
8	29N.12W.21.4244A	04-30-87	16.0	24.5	3,040	7.15	320	32	330	1.0
11	29N.12W.22.1331	04-30-87	17.0	22.5	2,750	7.12	280	31	320	3.2
12	29N.12W.21.4422	05-01-87	15.0	15.0	2,980	6.90	330	32	330	.90
13	29N.12W.21.4444	05-01-87	15.5	19.5	2,850	6.65	320	32	300	.90

Number in fig. 3	Date	Dissolved anions: Bicarbonate	Sulfate	Chloride	Fluoride, dissolved	Silica, dissolved	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Strontium, dissolved (µg/L)
3	04-29-87	334	1,600	55	0.90	13	290	20	7,500
5	04-30-87	336	1,500	51	.80	13	280	20	7,600
6	04-29-87	336	1,400	56	.80	13	260	20	7,700
8	04-30-87	311	1,500	110	.70	13	230	20	7,500
11	04-30-87	317	1,500	52	.80	14	300	<10	7,300
12	05-01-87	275	1,500	140	.80	13	230	20	7,800
13	05-01-87	237	1,400	130	.70	12	200	20	6,000

Number in fig. 3	Date	Toluene total (µg/L)	Benzene total (µg/L)	1,1,-Dichloroethane total (µg/L)	1,1,1-Trichloroethane total (µg/L)
3	05-12-87	<0.20	0.40	<0.20	<0.20
5	05-12-87	.60	< .20	< .20	< .20
8	05-12-87	< .20	< .20	1.3	.20
11	05-12-87	3.0	< .20	< .20	< .20
12	05-12-87	< .20	< .20	1.4	.20
13	05-12-87	< .20	< .20	< .20	< .20

Other volatile organic compounds not detected (detection level 0.2 µg/L):

Dichloro-bromomethane
Carbon-tetrachloride
1,2-Dichloroethane
Bromoform
Chlorodibromomethane
Chloroform
Chlorobenzene
Chloroethane
Ethylbenzene
Methylbromide
Methylchloride
Methylene-chloride
Tetrachloroethylene
Trichlorofluoromethane
1,1-Dichloroethylene
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
1,2-Dichlorobenzene
1,2-Dichloropropane
1,2-Transdichloroethylene
1,3-Dichloropropane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Chloroethylvinylether
Dichlorodifluoromethane
Trans-1,3-dichloropropene
Cis 1,3-Dichloropropene
1,2-Dibromoethylene
Vinyl chloride
Trichloroethylene
Styrene
Xylene

Appendix 24b. Chemical analyses (Peter et al. 1987)

All data are provisional and subject to revision. All chemical concentrations are expressed in milligrams per liter. Specific conductance is given in micromhos per centimeter at 25 degrees Celsius.

Location	Date of sample	Calcium, dissolved	Sodium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Alkalinity (as $CaCO_3$)	Sodium adsorption ratio	pH (units)	Specific conductance
San Juan Mine												
1974	07-12-82	40	29	7.1	18	7.0	13	0.3	220	1	6.9	460
reclamation	04-23-82	110	1,200	25	13	2,300	54	1.1	120	27	8.0	4,800
plot	10-02-81	39	47	6.7	22	8.0	15	0.3	200	2	7.1	500
	02-13-79	31	9.8	2.9	17	13	9.8	.1	100	0.5	-	-
1977	04-23-82	310	800	41	14	2,300	22	.5	90	11	7.0	4,580
reclamation	(upper stage)											
plot	04-23-82	36	86	3.9	9	160	4.9	.8	120	4	7.4	610
	(lower stage)											
	10-02-81	67	53	7.9	15	33	4.2	.5	270	2	6.9	625
	07-12-81	99	80	12	15	310	4.1	.4	210	2	6.7	965
	11-03-78	41	94	4.4	14	130	5.9	.5	210	4	7.0	640
	09-24-78	53	100	7.8	22	200	7.9	.5	210	3	7.4	940
Navajo Mine												
1973	04-23-82	31	10	4.5	9	17	2.5	.8	72	0.5	7.5	275
reclamation	03-05-80	19	11	2.4	8	57	2.1	.2	3	.6	6.8	188
plot	02-13-79	38	23	6.9	-	-	-	-	38	.9	6.8	410
1976	02-13-79	13	100	0.9	4	-	-	-	43	7	6.8	590
reclamation	(upper stage)											
plot	02-13-79	18	210	1.6	6	43	39	.6	120	13	7.1	1,120
	(lower stage)											
1978	02-13-79	150	130	27	12	610	26	.8	74	3	6.0	1,330
reclamation	09-24-78	280	440	74	13	1,600	130	1.9	130	6	7.2	3,400
plot	09-24-78	300	500	92	15	1,900	210	2.4	100	7	7.3	3,600

Appendix 25a. Results of chemical analyses of runoff samples from mine-reclamation plots (U.S. Bureau of Land Management 1984)

Lease area	Total surface area disturbed in acres	Erosion rate, in acre-feet per square mile per year	Sediment yield, in acre-feet per year
La Plata 1	1070	.5-1	.8-1.7
La Plata 3	1128	.5-1	.9-1.8
Johnson Trading Post	5112	.2-.5	1.6-4.0
Star Lake East 1	4130	1-3	6.5-19.4
Star Lake West 2	2165	.2-.5	.7-1.7
Kimbeto 2	1135	.2-.5	.4-.9
Gallo Wash 1	1906	1-3	3.0-8.9
Bisti 1	4871	1-3	7.6-22.8
Bisti 2	4598	1-3	7.2-21.6
Bisti 4	3740	1-3	5.8-17.5
Bisti 6/8	560	1-3	.9-2.6
Lee Ranch East	2196	1-3	3.4-10.3
Lee Ranch Middle	8572	1-3	13.4-40.2
Lee Ranch West	10132	1-3	15.8-47.5
Divide	4325	1-3	6.8-20.3
Crownpoint NE	10834	.5-1	8.5-16.9
Crownpoint East	12979	.5-1	10.1-20.3
Hospah 1	-	1-3	-
Chico Wash South	8572	<.2	<2.7
Catalpa Canyon	730	.5-1	.6-1.1
Sandance	1597	.5-1	1.2-2.5
Hogback	2198	.5-1	1.7-3.4
Twin Buttes	12550	.5-1	9.8-19.6
Pinehaven	1831	.5-1	1.4-2.9
Bread Springs 1	930	.5-1	.7-1.5
Gamerco 1 and 2	1942	.5-1	1.5-3.0
Samson Lake 2/2	973	.5-1	.8-1.5
La Plata 2 *	160	.5-1	.1-.2
La Plata 4 *	160	.5-1	.1-.2
Star Lake East 2	160	1-3	.2-.7
Kimbeto *	160	1-3	.2-.7
Nageezi *	160	1-3	.2-.7
Gallo Wash *	-	1-3	-
Hospah	-	1-3	-
Tah-ha-bah well *	160	.5-1	.1-.2
Bread Springs 2	80	.5-1	.06-.1
Gamerco *	160	.5-1	.1-.2
Samson Lake 1 *	160	.5-1	.1-.2

* indicates underground mine.

Surface acres disturbed are based on preliminary estimates and will be changed to reflect revised estimates
Erosion rates from Figure 2-5 in the Draft Environmental Assessment for Coal Preference Right Leasing, New Mexico (USDI, BLM 1981a)

Appendix 25b. Estimates of sediment yield from coal tracts (U.S Bureau of Land Management 1984)

[Detection ratio, number of samples in which the parameter was found in measurable concentrations relative to the number of samples analyzed; geometric error (except as indicated) attributed to laboratory procedures; baseline, expected 95-percent range; leaders (—), no data available; <, less than; >, greater than; ppm, parts per million; me/L, milliequivalents per liter; mmhos/cm, reciprocal millihms per centimeter; me/100 g, milliequivalents per 100 g; pct, percent]

Parameter	Soil horizon	Detection ratio	Geometric mean	Geometric deviation	Geometric error	Observed range	Baseline
			Based on total concentration				
Al, pct	Topsoil	12:12	4.9	1.06	1.03	4.5 - 5.5	4.4 - 5.5
	Spoil	12:12	6.1	1.11	1.03	5.1 - 6.9	5.0 - 7.5
As, pct	Topsoil	12:12	2.9	1.53	1.37	1.0 - 4.7	1.2 - 6.8
	Spoil	12:12	4.3	1.22	1.10	3.0 - 6.1	2.9 - 6.4
B, ppm	Topsoil	8:12	6.9	1.84	1.59	<5.0 - 23	2.0 - 23
	Spoil	12:12	13	1.52	1.41	7.3 - 25	5.6 - 30
Ba, ppm	Topsoil	12:12	450	1.37	1.36	330 - 1,000	240 - 840
	Spoil	12:12	590	1.46	1.61	310 - 1,100	280 - 1,300
Be, ppm	Topsoil	12:12	2.4	1.10	1.08	2.1 - 2.7	2.0 - 2.9
	Spoil	12:12	2.7	1.11	1.10	2.2 - 3.2	2.2 - 3.3
C, carbonate, pct	Topsoil	12:12	.28	1.39	1.20	.19 - .47	.15 - .54
	Spoil	12:12	.23	1.63	1.43	.07 - .42	.09 - .61
C, organic, pct	Topsoil	12:12	.44	2.91	1.17	.19 - 4.1	.05 - 3.7
	Spoil	12:12	2.3	2.59	1.05	.89 - 14	.34 - 15
C, total, pct	Topsoil	12:12	.78	2.29	1.02	.40 - 4.5	.15 - 4.1
	Spoil	12:12	2.6	2.45	1.03	1.1 - 14	.43 - 16
Ca, pct	Topsoil	12:12	1.3	1.26	1.03	.96 - 1.9	.82 - 2.1
	Spoil	12:12	1.4	1.16	1.03	1.1 - 1.8	1.0 - 1.9
Co, ppm	Topsoil	12:12	6.0	1.14	1.11	4.9 - 7.4	4.6 - 7.8
	Spoil	12:12	8.5	1.22	1.10	5.8 - 12	5.7 - 13
Cr, ppm	Topsoil	12:12	22	1.41	1.41	10 - 29	11 - 44
	Spoil	12:12	14	1.26	1.14	10 - 22	8.8 - 22
Cu, ppm	Topsoil	12:12	10	1.48	1.15	6.6 - 24	4.6 - 22
	Spoil	12:12	18	1.58	1.50	6.0 - 28	7.2 - 45
Dy, ppm	Topsoil	12:12	6.5	1.10	1.07	5.2 - 7.5	5.4 - 7.9
	Spoil	12:12	7.1	1.15	1.10	5.2 - 9.1	5.4 - 9.4
Fe, pct	Topsoil	12:12	1.4	1.09	1.07	1.3 - 1.6	1.2 - 1.7
	Spoil	12:12	1.7	1.17	1.08	1.3 - 2.1	1.2 - 2.3
Ge, ppm	Topsoil	12:12	1.3	1.31	1.31	.7 - 1.9	.8 - 2.2
	Spoil	12:12	1.4	1.59	1.17	.5 - 2.3	.6 - 3.5
Hg, ppm	Topsoil	12:12	.01	2.01	1.22	.01 - .06	<.01 - .04
	Spoil	12:12	.03	1.80	1.16	.02 - .09	.01 - .10
K, pct	Topsoil	12:12	1.5	1.05	1.01	1.4 - 1.6	1.4 - 1.7
	Spoil	12:12	1.4	1.12	1.01	1.1 - 1.6	1.1 - 1.8
La, ppm	Topsoil	12:12	25	1.36	1.26	18 - 51	14 - 46
	Spoil	12:12	32	1.21	1.21	21 - 40	22 - 47
Li, ppm	Topsoil	12:12	17	1.11	1.03	16 - 22	14 - 21
	Spoil	12:12	22	1.10	1.03	19 - 26	18 - 27
Mg, pct	Topsoil	12:12	.42	1.05	1.01	.40 - .46	.38 - .46
	Spoil	12:12	.56	1.13	1.01	.45 - .67	.44 - .72
Mn, ppm	Topsoil	12:12	260	1.36	1.26	190 - 430	140 - 480
	Spoil	12:12	340	1.32	1.12	190 - 430	200 - 590
Mo, ppm	Topsoil	12:12	1.8	1.29	1.12	1.3 - 2.8	1.1 - 3.0
	Spoil	12:12	2.7	1.13	1.11	2.1 - 3.2	2.1 - 3.4
Na, pct	Topsoil	12:12	1.2	1.04	1.02	1.1 - 1.3	1.1 - 1.3
	Spoil	12:12	1.7	1.22	1.02	1.2 - 2.0	1.1 - 2.5
Nb, ppm	Topsoil	12:12	11	1.26	1.20	7.5 - 16	6.9 - 17
	Spoil	12:12	9.2	1.41	1.26	5.1 - 15	4.6 - 18
Ni, ppm	Topsoil	12:12	8.6	1.14	1.06	7.1 - 11	6.6 - 11
	Spoil	12:12	12	1.18	1.06	9.4 - 16	8.6 - 17
Pb, ppm	Topsoil	12:12	11	1.15	1.18	8.2 - 13	8.3 - 15
	Spoil	12:12	11	1.33	1.11	6.6 - 17	6.2 - 19

Appendix 26. Geochemical variability of natural soils and reclaimed mine-spoil soils in the San Juan basin, New Mexico (Severson and Gough 1981). Summary statistics for parameters measured for topsoil and mine spoil from a reclaimed area of the San Juan mine in northwestern New Mexico.

Parameter	Soil horizon	Detection ratio	Geometric mean	Geometric deviation	Geometric error	Observed range			Baseline		
Based on total concentration											
Rb, ppm	Topsoil	12:12	70	1.05	1.04	65	-	75	63	-	77
	Spoil	12:12	71	1.14	1.06	55	-	80	55	-	92
S, pct	Topsoil	12:12	.10	1.55	1.13	.06	-	.24	.04	-	.24
	Spoil	12:12	.26	1.63	1.30	.10	-	.52	.10	-	.69
Sc, ppm	Topsoil	12:12	3.9	1.14	1.10	3.1	-	5.2	3.0	-	5.1
	Spoil	12:12	5.4	1.33	1.09	3.6	-	9.0	3.1	-	9.6
Si, pct	Topsoil	12:12	35	1.06	1.01	31	-	36	31	-	39
	Spoil	12:12	30	1.11	1.01	23	-	32	24	-	37
Sn, ppm	Topsoil	11:12	1.1	2.24	1.60	<.2	-	2.6	.2	-	5.5
	Spoil	12:12	1.9	1.27	1.29	1.4	-	2.8	1.2	-	3.1
Sr, ppm	Topsoil	12:12	190	1.55	1.57	48	-	260	79	-	460
	Spoil	12:12	270	1.14	1.05	220	-	330	210	-	350
Th, ppm	Topsoil	12:12	7.7	1.19	1.16	6.0	-	11	5.4	-	11
	Spoil	12:12	9.8	1.14	1.14	7.9	-	12	7.5	-	13
Ti, pct	Topsoil	12:12	.23	1.05	1.04	.21	-	.25	.21	-	.25
	Spoil	12:12	.27	1.14	1.04	.21	-	.32	.21	-	.35
U, ppm	Topsoil	12:12	2.9	1.16	1.05	2.4	-	4.0	2.2	-	3.9
	Spoil	12:12	4.1	1.17	1.03	3.4	-	5.6	3.0	-	5.6
V, ppm	Topsoil	12:12	45	1.08	1.09	40	-	50	39	-	52
	Spoil	12:12	56	1.26	1.06	38	-	78	35	-	89
Y, ppm	Topsoil	12:12	27	1.11	1.08	22	-	32	22	-	33
	Spoil	12:12	32	1.23	1.11	22	-	41	21	-	48
Yb, ppm	Topsoil	12:12	1.6	1.10	1.10	1.3	-	1.8	1.3	-	1.9
	Spoil	12:12	1.6	1.25	1.15	1.1	-	2.5	1.0	-	2.5
Zn, ppm	Topsoil	12:12	41	1.08	1..02	39	-	49	35	-	48
	Spoil	12:12	56	1.14	1.04	47	-	66	43	-	73
Zr, ppm	Topsoil	11:12	420	1.51	1.51	260	-	>1000	180	-	960
	Spoil	12:12	300	1.35	1.37	190	-	600	160	-	550
Based on DTPA extraction (ppm)											
Cd	Topsoil	3:12	---	---	---	<0.05	-	0.05		---	
	Spoil	11:12	0.05	1.00	1.11	<.05	-	.05	0.05	-	0.05
Co	Topsoil	2:12	---	---	---	<.1	-	.1		---	
	Spoil	2:12	---	---	---	<.1	-	1.4		---	
Cu	Topsoil	12:12	.7	1.68	1.08	.5	-	2.2	.2	-	2.0
	Spoil	12:12	2.0	1.18	1.04	1.5	-	2.4	1.4	-	2.8
Fe	Topsoil	12:12	13	2.93	1.32	6.4	-	130	1.5	-	110
	Spoil	12:12	61	1.98	1.13	30	-	210	16	-	240
Mn	Topsoil	12:12	8.1	1.78	1.09	5.6	-	32	2.6	-	26
	Spoil	12:12	12	2.32	1.06	5.4	-	55	2.2	-	65
Ni	Topsoil	5:12	---	---	---	<.05	-	.4		---	
	Spoil	12:12	.2	2.23	1.22	.1	-	.9	.04	-	1.0
Pb	Topsoil	7:12	.1	4.13	---	<.1	-	1.5	.006	-	1.7
	Spoil	10:12	.5	2.74	1.45	<.1	-	1.4	.07	-	3.8
Zn	Topsoil	12:12	.4	2.25	1.43	.2	-	2.2	.08	-	2.0
	Spoil	12:12	1.5	1.89	1.05	.8	-	5.2	.4	-	5.4
Based on sodium acetate extraction (me/100 g)											
Ca	Topsoil	12:12	29	1.25	1.07	21	-	46	19	-	44
	Spoil	12:12	32	1.13	1.06	28	-	42	26	-	40
K	Topsoil	12:12	.2	1.22	1.13	.2	-	.3	.2	-	.3
	Spoil	12:12	.3	1.18	1.00	.3	-	.4	.2	-	.4
Mg	Topsoil	12:12	3.4	1.22	1.02	2.9	-	5.2	2.3	-	5.1
	Spoil	12:12	5.9	1.48	1.06	3.8	-	12	2.7	-	13
Na	Topsoil	12:12	1.0	2.63	1.26	.3	-	6.6	.2	-	6.5
	Spoil	12:12	6.0	4.42	3.39	.1	-	18	.8	-	44

Parameter	Soil horizon	Detection ratio	Geometric mean	Geometric deviation	Geometric error	Observed range			Baseline		
Based on water saturation extraction											
Ca, me/L	Topsoil	12:12	11	1.96	1.13	5.9	-	30	2.9	-	42
	Spoil	12:12	26	1.13	1.05	23	-	33	20	-	33
Cl, me/L	Topsoil	12:12	7.2	1.62	1.19	3	-	15	2.7	-	19
	Spoil	12:12	19	1.50	1.13	9	-	31	8.4	-	43
K, me/L	Topsoil	12:12	.4	1.46	1.20	.2	-	.7	.2	-	.9
	Spoil	12:12	.6	1.17	1.06	.5	-	.8	.4	-	.8
Mg, me/L	Topsoil	12:12	4.9	2.11	1.15	2.4	-	15	1.1	-	22
	Spoil	12:12	27	1.68	1.11	15	-	71	9.6	-	76
Na, me/L	Topsoil	12:12	21	3.15	1.10	6.5	-	120	2.1	-	210
	Spoil	12:12	260	1.69	1.10	97	-	500	91	-	740
SO_4, me/L	Topsoil	12:12	18	3.12	1.14	5	-	95	1.8	-	180
	Spoil	12:12	230	1.79	1.13	75	-	480	72	-	740
Specific conductance, mmhos/cm.	Topsoil	12:12	2.8	2.37	1.14	1.3	-	11	.5	-	16
	Spoil	12:12	9.6	1.70	1.45	4.0	-	17	3.3	-	28
Based on hot-water extraction (ppm)											
B	Topsoil	8:12	0.6	2.56	1.10	<0.5	-	3.5	0.09	-	3.9
	Spoil	11:12	1.8	2.91	1.46	.5	-	11	.2	-	15
Measured by specific ion electrode											
pH[1]	Topsoil	12:12	8.0	0.67	0.076	6.6	-	8.4	6.7	-	9.3
	Spoil	12:12	7.6	.87	.12	6.3	-	8.4	5.9	-	9.3
Based on replacement with sodium (me/100 g)											
Cation-exchange capacity.	Topsoil	12:12	17	1.62	1.08	12	-	46	6.5	-	45
	Spoil	12:12	36	1.41	1.08	22	-	68	18	-	72
Based on calculated parameters											
ESP[2], pct	Topsoil	12:12	3.1	2.28	1.28	1.0	-	13	0.6	-	15
	Spoil	12:12	13	4.12	3.14	.2	-	32	2.4	-	69
SAR[3]	Topsoil	12:12	7.6	2.26	1.11	2.7	-	25	1.5	-	39
	Spoil	12:12	51	1.56	1.06	20	-	78	21	-	120
Saturation index, pct.	Topsoil	12:12	28.2	1.15	1.07	24.4	-	38.7	22.1	-	36.0
	Spoil	12:12	50.2	1.23	1.07	33.0	-	61.9	33.9	-	74.2
Based on physical properties (percent)											
Sand	Topsoil	12:12	67	1.10	1.02	54	-	71	55	-	81
	Spoil	12:12	42	1.22	1.01	30	-	52	28	-	63
Silt	Topsoil	12:12	12	1.23	1.23	7.4	-	18	7.9	-	18
	Spoil	12:12	19	1.23	1.06	14	-	27	13	-	29
Clay	Topsoil	12:12	21	1.21	1.08	17	-	32	14	-	31
	Spoil	12:12	37	1.14	1.02	30	-	45	28	-	48

[1]Variance is arithmetic.
[2]Exchangeable sodium percentage.
[3]Sodium adsorption ratio.