



State of New Mexico
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2918 phone
(505) 827-2965 fax



FAX TRANSMITTAL

DATE 6-19-03 TIME 7:45am

PAGE 1 OF 14

PLEASE DELIVER THE FOLLOWING PAGES TO:

TO: John Young

AGENCY LOCATION: NMED - HWB

TELEPHONE: 428-2538 FAX: 428-2567

FROM: Curt Frischkorn

AGENCY LOCATION: NMED - GWQB

TELEPHONE: 827-0078 FAX: 505-827-2965

COMMENTS: NOI for purge H₂O from
LAO-0.3 & LAOI-1.1



3135



Risk Reduction & Environmental Stewardship Division
Water Quality & Hydrology Group (RRES-WQH)
PO Box 1663, MS K497
Los Alamos, New Mexico 87545
(505) 665-1859 / Fax: (505) 665-9344

MAR 20 2003

Date: March 18, 2003
Refer to: RRES-WQH: 03-067

TA-2
(Los Alamos Canyon, TA-41, Alluvial well LAO-03 and Intermediate well LAOI-1.1)

Mr. Curt Frischkorn
Ground Water Protection Bureau
New Mexico Environmental Department
P.O. Box 26110
Santa Fe, New Mexico 87502

SUBJECT: ADDENDUM TO NOTICE OF INTENT TO DISCHARGE (NOI), WELL DEVELOPMENT WATER AND PURGE WATER ASSOCIATED WITH THE ENVIRONMENTAL RESTORATION PROGRAM'S PILOT STUDY

Dear Mr. Frischkorn:

The Laboratory's Water Quality and Hydrology Group (RRES-WQH) is submitting the enclosed Notice of Intent (NOI) to Discharge pursuant to Section 20.6.2.1201 NMAC of the New Mexico Water Quality Control Commission (NMWQCC) Regulations. This NOI applies to the discharge of groundwater from the alluvial well LAO-0.3 and intermediate well LAOI-1.1 (see Enclosure 1). Both of these wells are located in Los Alamos Canyon (see Enclosure 2). RRES-WQH would like to add these wells as an addendum to the Pilot Study NOI dated April 3, 1996.

The total estimated discharge will be approximately 15 to 50 gallons of purge water prior to sampling of each well. The proposed method of discharge is land application to the surrounding site in such a manner to prevent any runoff. Available analytical data for LAO-0.3 and LAOI-1.1 are also enclosed for your review (Enclosure 3).

The proposed discharge area has been reviewed by the Laboratory's Environmental Restoration staff familiar with the area and determined to have no SWMUs or PRSs that could be impacted by this discharge. All discharges will be performed in a manner that will eliminate any impact to a stream course, including best management practices (BMPs) to control runoff as necessary.

Mr. Curt Frischkorn
RRES-WQH:03-067

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March 18, 2003

Please contact Mark Haagenstad at (505) 665-2014 should you have questions or need additional information regarding this matter.

Sincerely,



Steven Rae
Group Leader
Water Quality & Hydrology Group

SR:MH/yg

Enclosures: a/s

Cy: M. Leavitt, NMED/GWQB, Santa Fe, New Mexico, w/enc.
J. Davis, NMED/SWQB, Santa Fe, New Mexico, w/enc.
B. Lucas, NMED/SWQB, Santa Fe, New Mexico, w/enc.
B. Hoditschek, NMED/DOE OB, Santa Fe, New Mexico, w/enc.
S. Yanicak, NMED/DOE OB, w/enc., MS J993
B. Ramsey, RRES-DO, w/o enc., MS J591
K. Hargis, RRES-DO, w/o enc., MS J591
D. Stavert, RRES-EP, w/o enc., MS J591
A. Pratt, RRES-DO, w/o enc., MS D462
M. Saladen, RRES-WQH, w/o enc., MS K497
A. Crowder, RRES-DO, w/o enc., MS M327
R. Bohn, RRES-R, w/enc., MS M992
P. Longmire, EES-5, w/o enc., MS J534
RRES-WQH File, w/enc., MS K497
IM-5, w/enc., MS A150

ENCLOSURE 1**NOTICE OF INTENT****MAR 20 2003****1. Name and address of facility making the discharge.**

Los Alamos National Laboratory
Risk Reduction and Environmental Stewardship – Environmental
Characterization and Remediation Group (RRES-ECR)
P.O. Box 1663
Los Alamos, New Mexico 87545

2. Location of the discharge (In Township, Range and Section, if available).

At alluvial well LAO-0.3 and intermediate perched well LAOI-1.1 (see Enclosure 2). The land application area will be located on the generally flat canyon bottom outside of the floodplain. An assessment will be conducted at each proposed land application site prior to discharge. Discharge location:
Northing: 1,774,511.64
Easting: 1,624,799.01

3. The means of discharge. (To lagoon, Flowing stream, Water course, Arroyo, Septic tank, other).

The water will be to the surface of the land in the vicinity of the well. The discharge will not be made to a watercourse. If at any time the land application site shows signs of ponding or run-off, all discharge operations will be immediately halted. The site will be evaluated for the need of any additional BMPs and the discharge will not start again until the site has returned to an appropriate condition (i.e., no standing water or visible run-off).

4. The estimated concentration of contaminants (if any) in the discharge.

The concentrations of contaminants in the discharge are expected to be equivalent to the concentrations of contaminants found in the aquifer(s) during previous sampling analyses. Analytical data for samples from these aquifers can be viewed from Enclosure 3.

5. The type of operation from which the discharge is derived.

Purging of wells prior to sampling.

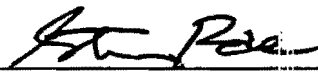
ENCLOSURE 1 (continued)**6. The estimated flow to be discharged per day.**

Routine well sampling is expected to generate approximately 15 to 50 gallons of purge water per sampling event. Daily discharge volumes are dependent on the capacity of the soil, weather conditions, and equipment considerations.

7. The estimated depth to Ground-Water (if available).

Approximately 360 feet to the intermediate perched zone and 900 feet to the regional aquifer.

Signed: _____



Date: _____

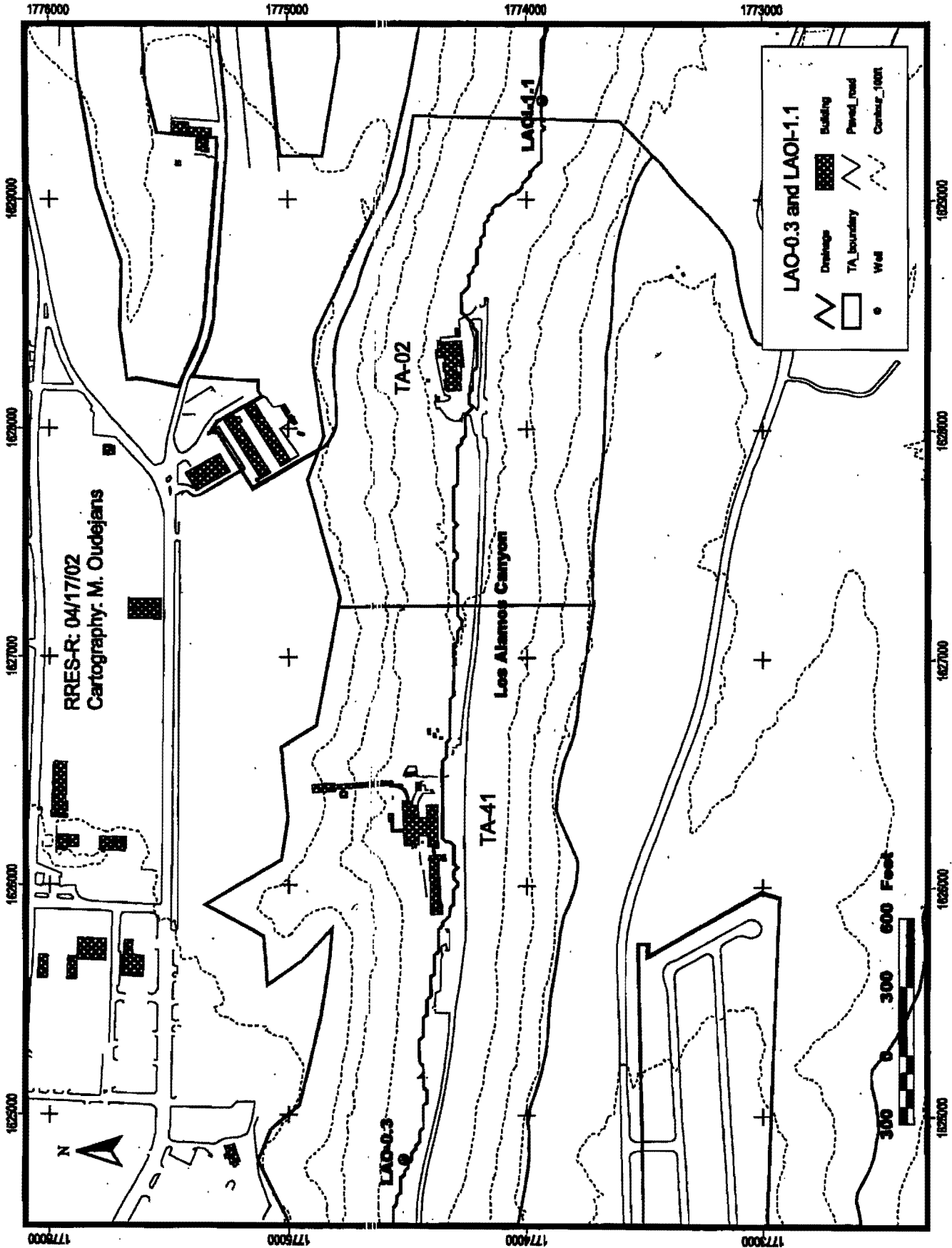


Steven Rae, Group Leader

Risk Reduction and Environmental Stewardship Division

Water Quality and Hydrology Group

ENCLOSURE 2



Analytical for LAOI-1.1

Inorganic Analysis

Location Name	Sampling Date	Field Prep	Analyte Desc	Std Result	Unit of Measurement
LAOI(A)-1.1	11/01/95	NA	Alkalinity-CO3	1000	ug/L
LAOI(A)-1.1	11/01/95	NA	Alkalinity-CO3+HCO3	45000	ug/L
LAOI(A)-1.1	11/01/95	NA	Aluminum	1200	ug/L
LAOI(A)-1.1	11/01/95	NA	Ammonia	90	ug/L
LAOI(A)-1.1	11/01/95	NA	Antimony	20	ug/L
LAOI(A)-1.1	11/01/95	NA	Arsenic	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Barium	100	ug/L
LAOI(A)-1.1	11/01/95	NA	Beryllium	5	ug/L
LAOI(A)-1.1	11/01/95	NA	Boron	100	ug/L
LAOI(A)-1.1	11/01/95	NA	Cadmium	5	ug/L
LAOI(A)-1.1	11/01/95	NA	Calcium	5000	ug/L
LAOI(A)-1.1	11/01/95	NA	Chloride	1000	ug/L
LAOI(A)-1.1	11/01/95	NA	Chromium	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Cobalt	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Copper	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Fluoride	200	ug/L
LAOI(A)-1.1	11/01/95	NA	Iron	400	ug/L
LAOI(A)-1.1	11/01/95	NA	Lead	3	ug/L
LAOI(A)-1.1	11/01/95	NA	Lithium	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Magnesium	1000	ug/L
LAOI(A)-1.1	11/01/95	NA	Manganese	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Mercury	0.2	ug/L
LAOI(A)-1.1	11/01/95	NA	Molybdenum	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Nickel	20	ug/L
LAOI(A)-1.1	11/01/95	NA	Nitrate-Nitrite as N	400	ug/L
LAOI(A)-1.1	11/01/95	NA	pH	7	Std Units
LAOI(A)-1.1	11/01/95	NA	Phosphorus (Expressed as PO4)	80	ug/L
LAOI(A)-1.1	11/01/95	NA	Potassium	5000	ug/L
LAOI(A)-1.1	11/01/95	NA	Selenium	5	ug/L
LAOI(A)-1.1	11/01/95	NA	Silica Dioxide	77040	ug/L
LAOI(A)-1.1	11/01/95	NA	Silver	10	ug/L

WQCL = 10 ug/l

ENCLOSURE 3

Location Name	Sampling Date	Field Prep	Analyte Desc	Std Result	Unit of Measurement
LAOI(A)-1.1	11/01/95	NA	Sodium	13000	ug/L
LAOI(A)-1.1	11/01/95	NA	Specific Conductance	96	uS/cm
LAOI(A)-1.1	11/01/95	NA	Strontium	40	ug/L
LAOI(A)-1.1	11/01/95	NA	Sulfate	10000	ug/L
LAOI(A)-1.1	11/01/95	NA	Thallium	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Tin	20	ug/L
LAOI(A)-1.1	11/01/95	NA	Total Dissolved Solids	160000	ug/L
LAOI(A)-1.1	11/01/95	NA	Total Kjeldahl Nitrogen	500	ug/L
LAOI(A)-1.1	11/01/95	NA	Total Suspended Solids	35000	ug/L
LAOI(A)-1.1	11/01/95	NA	Vanadium	10	ug/L
LAOI(A)-1.1	11/01/95	NA	Zinc	40	ug/L

ENCLOSURE 3

Organic Analysis

Location Name	Sampling Date	Std Result	Analyte Desc	Std Uncert	Unit of Measurement	Result
No Organic Compounds Detected.						

RAD Analysis

Location Name	Sampling Date	Field Prep	Analyte Desc	Std Result	Std Uncert	Unit of Measurement
LAOI(A)-1.1	11/01/95	NA	Gross alpha	3.67	1	pCi/L
LAOI(A)-1.1	11/01/95	NA	Gross beta	6.7	1	pCi/L
LAOI(A)-1.1	11/01/95	NA	Uranium-234	0.3	-	pCi/L
LAOI(A)-1.1	11/01/95	NA	Uranium-235/236	0.07	-	pCi/L
LAOI(A)-1.1	11/01/95	NA	Uranium-238	0.16	-	pCi/L

ENCLOSURE 3

Analytical for LAO-0.3

Inorganic Analysis

ANALYTE NAME	COLLECTION DATE	FIELD PHEP	BEGIN DEPTH	END DEPTH	DEPTH UNITS	MIN	QUANT LMT	SAMPLE VALUE	REPORTING UNITS	LEAD QUALIFIER
Alkalinity-CO3+HCO3	08-Nov-01	F	8.29	9.5	FT	730	1000	96900	UG/L	NQ
Alkalinity-CO3+HCO3	28-May-02	F	8.25	8.35	FT	0.73	1	79000	UG/L	NQ
Aluminum	08-Nov-01	F	8.29	9.5	FT	34	50	42.8	UG/L	J
Aluminum	08-Nov-01	NF	8.29	9.5	FT	34	50	754	UG/L	NQ
Aluminum	28-May-02	NF	8.25	8.35	FT	15	50	471	UG/L	NQ
Antimony	28-May-02	F	8.25	8.35	FT	0.28	2	0.334	UG/L	J
Arsenic	08-Nov-01	F	8.29	9.5	FT	0.15	3	2.18	UG/L	J
Arsenic	08-Nov-01	NF	8.29	9.5	FT	0.15	3	1.16	UG/L	J
Barium	08-Nov-01	F	8.29	9.5	FT	0.16	2	57.4	UG/L	NQ
Barium	08-Nov-01	NF	8.29	9.5	FT	0.16	2	59	UG/L	NQ
Barium	28-May-02	F	8.25	8.35	FT	0.22	5	71.6	UG/L	NQ
Barium	28-May-02	NF	8.25	8.35	FT	0.22	5	75.8	UG/L	NQ
Beryllium	08-Nov-01	F	8.29	9.5	FT	0.034	0.2	0.02	UG/L	J+
Beryllium	08-Nov-01	NF	8.29	9.5	FT	0.034	0.2	0.03	UG/L	J
Boron	08-Nov-01	F	8.29	9.5	FT	3	50	8.39	UG/L	J
Boron	08-Nov-01	NF	8.29	9.5	FT	3	50	5.67	UG/L	J
Calcium	08-Nov-01	F	8.29	9.5	FT	38	100	20700	UG/L	J
Calcium	08-Nov-01	NF	8.29	9.5	FT	38	100	20700	UG/L	J
Calcium	28-May-02	F	8.25	8.35	FT	5.5	100	29600	UG/L	NQ
Calcium	28-May-02	NF	8.25	8.35	FT	5.5	100	30100	UG/L	NQ
Chloride	08-Nov-01	F	8.29	9.5	FT	50	230000	30500	UG/L	J
Chloride	28-May-02	F	8.25	8.35	FT	0.32	2	86700	UG/L	NQ
Fluoride	08-Nov-01	F	8.29	9.5	FT	14	1600	123	UG/L	J
Fluoride	28-May-02	F	8.25	8.35	FT	0.055	0.1	151	UG/L	NQ

ENCLOSURE 3

ANALYTE NAME	COLLECTION DATE	DETD. PREP.	BEGIN DEPTH	END DEPTH	DEPTH UNITS	NO.	QUANT. LIT.	SAMPLE VALUE	REPORTING UNITS	QUALIFIER
Iron	08-Nov-01	NF	8.29	9.5	FT	21	50	404	UG/L	NQ
Iron	28-May-02	F	8.25	8.35	FT	13	50	13.2	UG/L	J
Iron	28-May-02	NF	8.25	8.35	FT	13	50	291	UG/L	NQ
Lead	28-May-02	NF	8.25	8.35	FT	0.05	2	0.402	UG/L	J
Magnesium	08-Nov-01	F	8.29	9.5	FT	4.5	20	5100	UG/L	J
Magnesium	08-Nov-01	NF	8.29	9.5	FT	4.5	20	5170	UG/L	J
Magnesium	28-May-02	F	8.25	8.35	FT	5.2	20	7410	UG/L	NQ
Magnesium	28-May-02	NF	8.25	8.35	FT	5.2	20	7520	UG/L	NQ
Manganese	08-Nov-01	F	8.29	9.5	FT	2.9	10	1.21	UG/L	J
Manganese	08-Nov-01	NF	8.29	9.5	FT	2.9	10	13.3	UG/L	J
Manganese	28-May-02	NF	8.25	8.35	FT	8.1	25	9.14	UG/L	J
Molybdenum	08-Nov-01	F	8.29	9.5	FT	0.59	10	2.36	UG/L	J
Molybdenum	08-Nov-01	NF	8.29	9.5	FT	0.59	10	2.74	UG/L	J
Molybdenum	28-May-02	F	8.25	8.35	FT	0.2	0.5	1.85	UG/L	NQ
Molybdenum	28-May-02	NF	8.25	8.35	FT	0.2	0.5	1.89	UG/L	NQ
Nitrate-Nitrite as N	08-Nov-01	F	8.29	9.5	FT	6.9	50	90	UG/L	J
Nitrate-Nitrite as N	28-May-02	F	8.25	8.35	FT	0.01	0.05	70	UG/L	NQ
Perchlorate	08-Nov-01	F	8.29	9.5	FT	0.958	4.6	2.94	UG/L	J

ENCLOSURE 3

ANALYTE NAME	COLLECTION DATE	FIELD PREP	BEGIN DEPTH	END DEPTH	DEPTH UNITS	MDL	QUANT LMT	SAMPLE VALUE	REPORTING UNITS	PLAN QUANTIFIER
Potassium	08-Nov-01	F	8.29	9.5	FT	7.1	100	4280	UG/L	J
Potassium	08-Nov-01	NF	8.29	9.5	FT	7.1	100	4420	UG/L	J
Potassium	28-May-02	F	8.25	8.35	FT	17	100	4540	UG/L	NQ
Potassium	28-May-02	NF	8.25	8.35	FT	17	100	4670	UG/L	NQ
Silicon Dioxide	28-May-02	F	8.25	8.35	FT	9.8	100	13700	UG/L	NQ
Silicon Dioxide	28-May-02	NF	8.25	8.35	FT	9.8	100	15600	UG/L	NQ
Sodium	08-Nov-01	F	8.29	9.5	FT	8.1	100	36300	UG/L	J
Sodium	08-Nov-01	NF	8.29	9.5	FT	8.1	100	36300	UG/L	J
Sodium	28-May-02	F	8.25	8.35	FT	14	100	51000	UG/L	NQ
Sodium	28-May-02	NF	8.25	8.35	FT	14	100	51600	UG/L	NQ
Sulfate	08-Nov-01	F	8.29	9.5	FT	62	250000	6260	UG/L	J
Sulfate	28-May-02	F	8.25	8.35	FT	0.19	0.4	12700	UG/L	NQ
Total Phosphorus	28-May-02	F	8.25	8.35	FT	0.011	0.05	50	UG/L	NQ
Uranium	08-Nov-01	F	8.29	9.5	FT	0.018	0.2	0.08	UG/L	J
Uranium	08-Nov-01	NF	8.29	9.5	FT	0.018	0.2	0.11	UG/L	J
Vanadium	08-Nov-01	F	8.29	9.5	FT	1.1	5	0.776	UG/L	J
Vanadium	08-Nov-01	NF	8.29	9.5	FT	1.1	5	1.54	UG/L	J
Vanadium	28-May-02	F	8.25	8.35	FT	0.61	5	0.977	UG/L	J
Vanadium	28-May-02	NF	8.25	8.35	FT	0.61	5	1.29	UG/L	J

ENCLOSURE 3

Organic Analysis

ANALYTE NAME	COLLECTION DATE	FIELD PREP	BEGIN DEPTH	END DEPTH	DEPTH UNITS	MDL	QUANT. LMT	SAMPLE VALUE	REPORTING UNITS	LANI QUALIFIER
DDD[4,4'-]	08-Nov-01	NF	8.29	9.5	FT		0.0057	0.0075	UG/L	J-
DDE[4,4'-]	08-Nov-01	NF	8.29	9.5	FT		0.0048	0.0073	UG/L	J-
DDT[4,4'-]	08-Nov-01	NF	8.29	9.5	FT		0.0062	0.024	UG/L	J-
Dissolved Organic Carbon	08-Nov-01	F	8.29	9.5	FT		0.041	3660	UG/L	NQ
Dissolved Organic Carbon	28-May-02	F	8.25	8.35	FT	13082	0.025	2240	UG/L	NQ
Total Organic Carbon	08-Nov-01	NF	8.29	9.5	FT		41	3730	UG/L	NQ
Total Organic Carbon	28-May-02	NF	8.25	8.35	FT	13082	0.025	1640	UG/L	NQ

RAD Analysis

ANALYTE NAME	COLLECTION DATE	FIELD PREP	BEGIN DEPTH	END DEPTH	DEPTH UNITS	MDA	SAMPLE VALUE	UNCEP. AMTY	REPORTING UNITS	LANI QUALIFIER
Plutonium-239/240	28-May-02	NF	8.25	8.35	FT	0.0067	0.0419	0.01	PCI/L	NQ
Strontium-90	28-May-02	NF	8.25	8.35	FT	0.075	0.135	0.031	PCI/L	NQ
Strontium-90	28-May-02	F	8.25	8.35	FT	0.077	0.119	0.031	PCI/L	NQ
Uranium-234	08-Nov-01	NF	8.29	9.5	FT	0.041	0.0492	0.016	PCI/L	NQ

ENCLOSURE 3

ANALYTE NAME	COLLECTION DATE	FIELD IDENT	BEGIN DEPTH	END DEPTH	DEPTH UNITS	MBA	SAMPLE VALUE	UNITS	REPORTING UNITS	LAB QUALIFIER
Uranium-234	28-May-02	NF	8.25	8.35	FT	0.039	0.0464	0.015	PCI/L	NQ
Uranium-234	28-May-02	F	8.25	8.35	FT	0.03	0.0719	0.015	PCI/L	NQ
Uranium-238	08-Nov-01	NF	8.29	9.5	FT	0.01	0.0421	0.013	PCI/L	NQ
Uranium-238	28-May-02	F	8.25	8.35	FT	0.03	0.0529	0.013	PCI/L	NQ