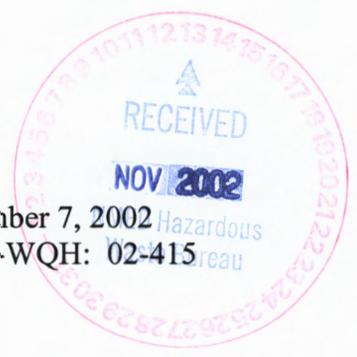


TA 54



*Risk Reduction & Environmental Stewardship Division
Water Quality & Hydrology Group (RRES-WQH)
PO Box 1663, MS K497
Los Alamos, New Mexico 87545
(505) 667-7969/Fax: (505) 665-9344*

Date: November 7, 2002
Refer to: RRES-WQH: 02-415



Mr. John Young
Hazardous Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502

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

SUBJECT: NOTICE OF INTENT TO DISCHARGE, HYDROGEOLOGIC WORKPLAN WELL R-23

Dear Mr. Young and Mr. Frischkorn:

On November 1, 2002, your agency concurred with Los Alamos National Laboratory's proposal to land apply approximately 65,000 gallons of ground water produced during the development of Hydrogeologic Workplan Well R-23 (personal communication, Mr. Bob Beers, Los Alamos National Laboratory, and Mr. John Young, New Mexico Environment Department). The Laboratory's proposal to discharge development water from Workplan Well R-23 was made in accordance with the requirements of the Hydrogeologic Workplan Notice of Intent (NOI) submitted to your agency on August 2, 2001, and subsequently revised on July 16, 2002. Under the Hydrogeologic Workplan NOI, when development water produced from a Hydrogeologic Workplan Well exceeds a New Mexico Water Quality Control Commission (NM WQCC) Regulation 3103 ground water standard or a RCRA regulatory limit the Laboratory will coordinate disposal with the NMED. Since the development water produced from Workplan Well R-23 exceeds the NM WQCC Regulation 3103 ground water standard for manganese (Mn), your agency's concurrence was requested.

The Laboratory has containerized approximately 65,000 gallons of ground water produced during the development of Workplan Well R-23. Workplan Well R-23 is located on Pajarito Road near the intersection with State Road 4. Development water from Workplan Well R-23 will be land applied to the drill site (depth to groundwater is 827 ft.) or to the dirt road leading to Mortandad Canyon from Technical Area (TA)-52 (depth to groundwater is 1260 ft.). The preferred land application site is the R-23 drillsite, but wetland, habitat, and access issues may preclude use of this site. As required by the Workplan NOI, no ponding, pooling, or run-off of the discharged water will be permitted. Information regarding the quality of the development water is provided below.

Water Quality Data

Attachment 1.0 contains analytical reports (metals, general chemistry, perchlorate, nitrate, tritium, and high explosives) from the sampling of containerized development water from Workplan Well R-23.



✓

All samples were filtered prior to analysis. Sample results were compliant with all NM WQCC Regulation 3103 ground water standards with the exception of the following contaminant:

Contaminant	Screening Result (mg/L)	NM WQCC ground water standard (mg/L)
Mn	0.44	0.2

No perchlorate, tritium, or high explosives (HE) were detected in the Workplan Well R-23 development water at concentrations greater than the analytical laboratory's Method Detection Limits (MDLs).

Please call me at (505) 667-6969 or Roy Bohn of the Laboratory's Environmental Restoration Project (RRES-R) at (505) 665-5138 if additional information is required.

Sincerely,



Bob Beers
Water Quality & Hydrology Group

BB/tml

Enclosures: a/s

- Cy: M. Leavitt, NMED/GWQB, Santa Fe, NM, w/enc.
J. Davis, NMED/SWQB, Santa Fe, NM, w/enc.
J. Bearzi, NMED/HWB, Santa Fe, NM, w/enc.
J. Vozella, DOE/OLASO, w/o enc., MS A316
G. Turner, DOE/OLASO, w/enc., MS A316
M. Johansen, DOE/OLASO, w/enc., MS A316
B. Ramsey, RRES-DO, w/o enc., MS J591
K. Hargis, RRES-DO, w/o enc., MS J591
D. Stavert, RRES-EP, w/enc., MS J591
C. Nylander, RRES-GP, w/o enc., MS M992
S. Rae, RRES-WQH, w/enc., MS K497
D. Rogers, RRES-WQH, w/o enc., MS K497
M. Saladen, RRES-WQH, w/o enc., MS K497
J. McCann, RRES-WQH, w/o enc., MS M992
R. Bohn, RRES-R, w/enc., MS M992
D. Volkman, FWO-UI, w/o enc., MS K718
RRES-WQH File, w/enc., MS K497
IM-5, w/enc., MS A150

ATTACHMENT 1.0

HYDROGEOLOGIC WORKPLAN
WELL R-23

CONTAINERIZED DEVELOPMENT WATER

ANALYTICAL REPORTS:

- GENERAL CHEMISTRY
 - METALS
 - PERCHLORATE
- NITRATE/NITRITE
 - HE
 - TRITIUM

SAMPLE DATE:

October 17, 2002

R-23
DEVELOPMENT
H₂O

Certificate of Analysis

Company : Los Alamos National Lab
Address : PO Box 1663
TA-3, Bldg. 271, Drop Pt. 01U
Los Alamos, New Mexico 87545
Contact: Keith Greene
Project: Groundwater Project

Report Date: October 25, 2002

Page 1 of 1

Client Sample ID: GW23-02-49608 1/3
Sample ID: 69084001
Matrix: Ground Water
Collect Date: 17-OCT-02
Receive Date: 19-OCT-02
Collector: Client
Project: LANL00401
Client ID: LANL004

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scint												
<i>LSC, Tritium Dist, Liquid</i>												
Tritium		ND	140	44.1	250	pCi/L		JS1	10/23/02	1125	209717	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.

Reviewed by _____

R-23 Development Water
Screening Results

ER

ER WATER SAMPLES

SAMPLE ID	DESCRIPTION	DATE MM/DD/YY	ER Req#	Ag ppm	Al Std.D.		Alk(Lab) ppm CaCO3	As Std.D.		B Std.D.	
					ppm +/-			ppm +/-	ppm +/-		
GW23-02-49608	R-23 development water	10/17/02	1328S	<0.001	0.013	0.001	95.1	0.0010	0.0001	0.029	0.001

R-23 Development Water
Screening Results

ER

SAMPLE ID	Ba Std.D.		Be	Br	C TIC	C TOC	Ca Std.D.		Cd	Cl	Cl03	Cl04	Co
	ppm	+/-	ppm	ppm	ppm	ppm	ppm	+/-	ppm	ppm	ppm	ppm	ppm
GW23-02-49608	0.047	0.001	<0.001	0.04	21.5	26.5	25.1	0.1	<0.001	3.72	<0.02	<0.004	0.0012

R-23 Development Water
Screening Results

ER

SAMPLE ID	Std.D. +/-	CO3 ppm	Cr ppm	Std.D. +/-	Cs ppm	Cu ppm	Std.D. +/-	F ppm	Fe ppm	Std.D. +/-	Hardness CaCO3 ppm	HCO3 ppm	Hg ppm	Std.D. +/-
GW23-02-49608	0.0001	0	0.0022	0.0001	<0.001	0.0014	0.0001	0.29	0.21	0.01	84.6	116	<0.0002	

R-23 Development Water
Screening Results

ER

SAMPLE ID	K Std.D.		Li Std.D.		Mg Std.D.		Mn Std.D.		Mo Std.D.		Na Std.D.		Ni Std.D.		NO2 ppm
	ppm	+/-	ppm	+/-	ppm	+/-	ppm	+/-	ppm	+/-	ppm	+/-	ppm	+/-	
GW23-02-49608	2.75	0.03	0.029	0.001	5.33	0.05	0.44	0.01	0.0031	0.0001	16.5	0.3	0.0026	0.0001	<0.02

R-23 Development Water
Screening Results

ER

SAMPLE ID	NO3 ppm	N total ppm	Oxalate ppm	Pb ppm	pH Lab	PO4 ppm	Rb ppm	Std.D. +/-	Sb ppm	Se ppm	Si ppm	Std.D. +/-	SiO2 ppm calc
GW23-02-49608	2.07	0.47	<0.02	<0.001	7.34	<0.05	0.006	0.001	<0.001	<0.001	31.2	0.4	66.8

R-23 Development Water
 Screening Results

ER

SAMPLE ID	SO4	Sn	Sr Std.D.		Th	Ti	Tl	U Std.D.		V std.D.		Zn Std.D.		HMX
	ppm	ppm	ppm	+/-	ppm	ppm	ppm	ppm	+/-	ppm	+/-	ppm	+/-	ppm
GW23-02-49608	11.2	<0.001	0.11	0.01	<0.001	<0.001	<0.001	0.0011	0.0001	0.005	0.001	0.001	0.001	<0.01

R-23 Development Water
Screening Results

ER

SAMPLE ID	RDX ppm	1,3,5-TNB ppm	1,3-DNB ppm	TNT ppm	NB 2a-4,6-DNT ppm	2,4-DNT ppm	Acetate ppm	Formate ppm
GW23-02-49608	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	+	+

HYDROGEOLOGIC WORKPLAN
WELL R-23

CONTAINERIZED DEVELOPMENT WATER

ANALYTICAL REPORTS

- GENERAL CHEMISTRY
 - METALS
 - PERCHLORATE
- NITRATE/NITRITE
 - HE
 - TRITIUM

SAMPLE DATE:

October 17, 2002