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Environmental Stewardship Division (ENV-DO)  
Water Quality & Hydrology Group (ENV-WQH)  
P.O. Box 1663, Mail Stop K497  
Los Alamos, New Mexico 87545  
(505) 667-7969/FAX: (505) 665-9344

Date: May 31, 2006  
Refer To: ENV-WQH: 06-118  
LA-UR: 06-3433

Mr. John Young  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

Mr. Christopher F. Vick  
Ground Water Quality Bureau  
New Mexico Environment Department  
P.O. Box 26110  
Santa Fe, New Mexico 87502-6110

**SUBJECT: REVISED FACT SHEETS, LAND APPLICATION OF DRILLING AND DEVELOPMENT WATER, LOS ALAMOS NATIONAL LABORATORY**

Dear Mr. Young and Mr. Vick:

In a May 12, 2006, letter (ENV-WQH: 06-092) Los Alamos National Laboratory requested NMED coordination in the land application of drilling and development water produced during the construction of seven new ground water monitoring wells. Attachment 1.0 of the May 12<sup>th</sup> letter contained an NOI Fact Sheet for each well. Please be informed that the NOI Fact Sheets for wells LAOI-3.2 and LAOI-3.2a contained incorrect information; the corrected sheets are attached within.

The original NOI Fact Sheets for LAOI-3.2 and LAOI-3.2a indicated that bentonite was used as a drilling additive during well drilling. No bentonite or any other drilling additives were used in the saturated intervals being monitored by these wells. Bentonite was used higher up in the boreholes to prevent the alluvial water from flowing down hole. Use of this bentonite may influence the chemistry of the contained waste water, but should not influence the chemistry of the groundwater being monitored.

Please contact me at (505) 667-7969 if you have questions regarding this correction.

Sincerely,

Bob Beers  
Water Quality & Hydrology Group



BB/lm

Attachment: a/s

Cy: J. Bearzi, NMED/HWB, Santa Fe, NM, w/att.  
W. Olson, NMED/GWQB, Santa Fe, NM, w/att.  
S. Yanicak, NMED/DOE/OB, Santa Fe, NM, w/att.  
M. Johansen, NNSA/LASO, w/att., MS A316  
K. Hargis, ENV-DO, w/o att., MS J591  
D. Stavert, ENV-DO, w/o att., MS J591  
T. George, ENV-ES, w/o att., MS J591  
M. Everett, ENV-ECR, w/att., MS M992  
J. Dewart, ENV-ERS, w/att., MS M992  
T. Grieggs, ENV-SWRC, w/o att., MS K490  
K. Vanderpoel, ENV-SWRC, w/att., MS K490  
S. Rae, ENV-WQH, w/att., MS K497  
T. Sandoval, ENV-WQH, w/o att., MS K497  
M. Saladen, ENV-WQH, w/att., MS K497  
ENV-WQH File, w/att., MS K497  
IM-9, w/att., MS A150

## NOI Fact Sheet LAOI-3.2 (Revised 5/30/06).

<b>Date:</b>	5/2/2006	<b>Well Type:</b>	intermediate
<b>Location (Canyon):</b>	Los Alamos	<b>Location (TA):</b>	73
<b>Static Water Level:</b>	15.8 ft.	<b>Alluvial Water?:</b>	yes
<b>Volume in Storage:</b>	3,385 gal	<b>Type of Storage:</b>	poly tanks (1) 55-gal drums (7)
<b>Source of Water:</b>	ground & decon water	<b>Drilling Additives:</b>	none
<b>Location of Land Applic.</b>	drill site	<b>Method of Applic.</b>	irrigation sprinklers

### Samples Collected

Sample Id	Collection Point	Filtered (y/n)	Composite (y/n)
CALA-05-63313	poly tank & drums	n	y
CALA-05-63314	poly tank & drums	n	y
CALA-05-63315	poly tank & drums	n	y
CALA-05-63316	poly tank & drums	n	y
CALA-05-63317	poly tank & drums	n	y
CALA-05-63318	poly tank & drums	n	y
CALA-05-66366	7 drums	y (metals)	y
CALA-05-66367	1 poly tank	y (metals)	y

### Analytical Results/Detections

Sample Id	Analyte	Result (ppb)	Analyte	Result (ppb)
CALA-05-63313	acetone	11.3	toluene	0.36J
CALA-05-63314	acetone	10.6	toluene	<1.0
CALA-05-63315	acetone	11.7	toluene	0.37J
CALA-05-63316	acetone	3.8J	toluene	0.38J
CALA-05-63317	acetone	11.9	toluene	0.41J
CALA-05-63318	acetone	12.4	toluene	0.43J
CALA-05-63313	benzoic acid	<20.4	bis (2-ethylhexyl)phthalate	2.7J
CALA-05-63314	benzoic acid	17.1J	bis (2-ethylhexyl)phthalate	2.3J
CALA-05-63315	benzoic acid	16.9J	bis (2-ethylhexyl)phthalate	2.1J
CALA-05-63316	benzoic acid	17.1J	bis (2-ethylhexyl)phthalate	35.1J
CALA-05-63317	benzoic acid	17.0J	bis (2-ethylhexyl)phthalate	7.7J
CALA-05-63318	benzoic acid	<20.2	bis (2-ethylhexyl)phthalate	3.8J
CALA-05-66366	less than 3103 standards			
CALA-05-66367	less than 3103 standards			

### Summary

The water in storage at the LAOI-3.2 drill site does not exceed any NM WQCC Regulation 3103 ground water standards or any applicable RCRA regulatory limits. The source of the toluene is believed to be the decon water generated during the cleaning of the drilling rig and rig-related machinery. The source of the acetone is unknown since no drilling additives were used at this well. The source of the benzoic acid is unknown. The source of the phthalates is believed to be the poly tanks. Los Alamos National Laboratory proposes to land apply the 3,385 gallons of water in storage at the LAOI-3.2 drill site in accordance with the NMED-approved Hydrogeologic Workplan NOI and Workplan Decision Tree (Revised 7/15/02).

# NOI Fact Sheet LAOI-3.2a (Revised 5/30/06)

<b>Date:</b>	5/3/2006	<b>Well Type:</b>	intermediate
<b>Location (Canyon):</b>	Los Alamos	<b>Location (TA):</b>	73
<b>Static Water Level:</b>	15.8 ft bgs	<b>Alluvial Water?:</b>	yes
<b>Volume in Storage:</b>	7,778 gal.	<b>Type of Storage:</b>	poly tanks(3), 20-yd rolloff w/water & cuttings
<b>Source of Water:</b>	ground & decon water	<b>Drilling Additives:</b>	none
<b>Location of Land Applic.</b>	drill site	<b>Method of Applic.</b>	irrigation sprinklers

## Samples Collected

Sample Id	Collection Point	Filtered (y/n)	Composite (y/n)
CALA-06-66636	1,500-gal poly	y (metals only)	n
CALA-06-66637	rolloff	y (metals only)	n
CALA-06-66638	2-3,000 gal poly	y (metals only)	y

## Analytical Results/Detections

Sample Id/Suite	Analyte	Result	3103 Standard	Exceedence (y/n)
<b>CALA-06-66636</b>				
VOA	acetone	4.46J ppb		
VOA	toluene	1.8 ppb	750 ppb	n
PAHs		ND		
metals (filtered)	manganese	24.9 ppb	200 ppb	n
CN, F, Cl, SO4, NO3, TDS		less than 3103 stds		
PCBs		ND		
Ra-226/228		ND		
<b>CALA-06-66637</b>				
VOA	acetone	14.2 ppb		
VOA	toluene	0.37J ppb	750 ppb	n
VOA	2-butanone	1.53J ppb		
PAHs		ND		
metals (filtered)	manganese	407 ppb	200 ppb	y
CN, F, Cl, SO4, NO3, TDS		less than 3103 stds		
PCBs		ND		
Ra-226/228		1.69 pCi/L	30 pCi/L	n
<b>CALA-06-66638</b>				
VOA	acetone	ND		
VOA	toluene	1.38 ppb	750 ppb	n
PAHs		ND		
metals (filtered)	manganese	89.4 ppb	200 ppb	n
CN, F, Cl, SO4, NO3, TDS		less than 3103 stds		
PCBs		ND		
Ra-226/228		ND		

## Summary

The water in storage at the LAOI-3.2a drill site does not exceed any NM WQCC Regulation 3103 ground water standards with the exception of manganese at a concentration of 407 ppb in one of three samples; in two samples the manganese concentrations were 24.9 ppb and 89.4 ppb, below the ground water standard of 200 ppb. The water in storage did not exceed any applicable RCRA regulatory limits. The source of the toluene is believed to be the decon water generated during the cleaning of the drilling rig and rig-related machinery. The source of the acetone is unknown since no drilling additives were used at this well. The source of the 2-butanone, detected in one of three samples, is unknown. Los Alamos National Laboratory proposes to coordinate the land application of the 7,778 gallons of water in storage in accordance with the NMED-approved Hydrogeologic Workplan NOI and the Workplan Decision Tree (Revised 7/15/02).