

NM0028355
Permit
Modification

Environment, Safety, Health & Quality
P.O. Box 1663, K491
Los Alamos, New Mexico 87545
(505) 667-4218/FAX: (505) 665-3811

National Nuclear Security Administration
Los Alamos Site Office, A316
3747 West Jemez Road
Los Alamos, New Mexico 87545
(505) 667-5794/FAX (505) 667-5948

Date: December 9, 2010
Refer To: ENV-RCRA-10-239
LAUR: 10-08215

Ms. Sonia Hall
U.S. Environmental Protection Agency, Region 6
Water Quality Protection Division
Planning and Analysis Branch (6 EN)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Ms. Hall:

SUBJECT: LOS ALAMOS NATIONAL LABORATORY, NPDES PERMIT NO. NM0028355, NOTICE OF PLANNED CHANGE AT NPDES OUTFALL 051

The National Pollutant Discharge Elimination System (NPDES) Permit No. NM0028355 for the National Nuclear Security Administration (NNSA) and Los Alamos National Security, LLC (LANS) requires the permittee(s) to notify the U. S. Environmental Protection Agency (EPA) regarding any physical alterations or additions to the permitted facility that could significantly change the nature or increase the quantity of pollutants discharged (see Part III.D.1.a. *Reporting Requirements*).

The Radioactive Liquid Waste Treatment Facility (RLWTF) plans to add hardness to the facility effluent waters. Hardness will be added by the addition of soluble calcium and/or magnesium salts to the RLWTF process water or effluent water. The purpose of adding hardness to the water is to reduce the toxicity of copper and zinc to the *Daphnia Pulex* organism. These metals have been shown to be major contributors to the failed Whole Effluent Toxicity (WET) tests at Outfall 051.

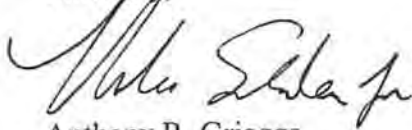
The RLWTF treatment processes reduce the hardness of the effluent water to essentially zero hardness by the use of the clarifier (which operates as a softener) and the reverse osmosis treatment operation. This reduction of hardness exacerbates the toxicity of the copper and zinc to the *Daphnia Pulex* organism.

The hardness salts will be added either to the North or South Frac Tanks or to Tank 38. The hardness of the RLWTF effluent water will be adjusted to approximately 75 mg/L as CaCO₃ using the calcium and/or magnesium salts.

A copy of the revised treatment schematic is enclosed (see Enclosure 1).

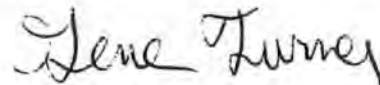
Please contact Marc Bailey at (505) 665-8135 or Mike Saladen at (505) 665-6085 of the Water Quality and RCRA Group (ENV-RCRA) if you have questions or need additional information.

Sincerely,



Anthony R. Grieggs
Group Leader
Water Quality & RCRA Group (ENV-RCRA)
Los Alamos National Security, LLC

Sincerely,



Gene Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Site Office
National Nuclear Security Administration

ARG:GT:MB/lm

Enclosure: a/s

Cy: Brent Larsen, USEPA Region 6, Dallas, TX, w/enc.
Isaac Chen, USEPA Region 6, Dallas, TX, w/enc.
Glenn Saums, NMED/SWQB, Santa Fe, NM, w/enc.
William Olson, NMED/GWQB, Santa Fe, NM, w/enc.
George Rael, LASO-EO, w/enc., A316
Steve Yanicak, LASO-GOV, w/enc., M894
Michael B. Mallory, PADOPS, w/o enc., AI02
Robert L. McQuinn, ADHHO, w/o enc., K778
Carl A. Beard, ADSMS, w/o enc., E585
J. Chris Cantwell, ADESHQ, w/o enc., K491
Dennis Hjeresen, ENV-DO, w/o enc., (E-File)
Robert Mason, TA55-DO, w/enc., E583
Hugh McGovern, TA-55-RLW, w/enc., E518
Pete Worland, TA-55-RLW, w/enc., E518
Mike Saladen, ENV-RCRA, w/enc., (E-File)
Marc Bailey, ENV-RCRA, w/enc., (E-File)
Bob Beers, ENV-RCRA, w/enc., (E-File)
Cindy Blackwell, LC-LESH, w/o enc., A187
ENV-RCRA File, w/enc., K490
IRM-RMMSO, w/enc., A150

ENCLOSURE 1

LANL Radioactive Liquid Waste Treatment Facility (TA-50)
Process Schematic (as of 12/06/2010)

