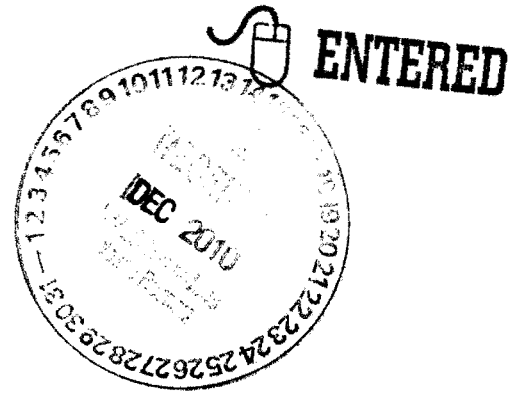


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Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, New Mexico 87545
(505) 667-7969/FAX: (505) 665-9344

Date: December 15, 2010
Refer To: ENV-RCRA-10-243
LAUR: 10-08215

Mr. William C. Olson, Bureau Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2250
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Dear Mr. Olson:

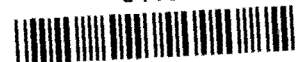
**SUBJECT: TA-50 RADIOACTIVE LIQUID WASTE TREATMENT FACILITY,
DISCHARGE PLAN (DP-1132), MINOR MODIFICATION**

In accordance with 20.6.2.3107 of the New Mexico Water Quality Control Commission Regulations, Los Alamos National Laboratory (the Laboratory) is notifying you of a minor modification to the Technical Area (TA)-50 Radioactive Liquid Waste Treatment Facility's Discharge Plan (DP-1132).

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 National Pollutant Discharge Elimination System (NPDES) 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 calcium and/or magnesium salts.



A copy of the RLWTF's revised treatment schematic is enclosed (Enclosure 1).

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

Sincerely,



Robert Beers
Water Quality & RCRA Group (ENV-RCRA)
Los Alamos National Security, LLC

Enclosure: a/s

Cy: Marcy Leavitt, NMED/SWQB, Santa Fe, NM, w/enc.
James Bearzi, NMED/HWB, Santa Fe, NM, w/enc.
Steve Yanicak, LASO-GOV, w/enc., M894
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Carl A. Beard, ADSMS, w/o enc., E585
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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)
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)**

