

TA50



Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, New Mexico 87545
(505) 667-0666/FAX: (505) 667-5224

Date: September 27, 2010
Refer To: ENV-RCRA-10-181
LAUR: 10-06430

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 TA-50 Radioactive Liquid Waste Treatment Facility's Discharge Plan (DP-1132).

The Radioactive Liquid Waste Treatment Facility (RLWTF) has recently made a number of operational treatment changes to reduce concentrations of copper and zinc being discharged to National Pollutant Discharge Elimination System (NPDES) Outfall 051 due to the new stringent effluent limits, effective August 1, 2010. The newly installed ion exchange media to remove copper and zinc to the new effluent limits appear to be effective. However, when the ion exchange media effluent waters are placed in the existing RLWTF effluent tanks (referred to as the N. and S. Frac tanks), the water is then found to be greater than the discharge limits. The Laboratory will install a new 1,000 gallon polymeric tank in Room 38 of the RLWTF to receive the ion exchange media effluent water. This new tank will be referred to as Tank 38. This new tank should eliminate any residual copper and zinc contamination that is suspected to be in the N. and S. Frac tanks. New hoses will be installed in Rooms 34B, 36 and 38 at the RLWTF to move water from the ion exchange vessels in Room 34B to Tank 38. New hoses, also, will be installed to transfer the Tank 38 water back to either Frac tank in Room 34B for reprocessing and for connecting Tank 38 to the line used to discharge effluent to Outfall 051. To determine if Tank 38 contents meet discharge requirements, a representative sample of the Tank 38 contents will be collected. The representative sample will be obtained from the re-circulation line after the 1,000 gallon contents of Tank 38 have been re-circulated for 80 minutes at a rate of 50 gallons per minute (gpm). If discharge to the outfall is from Tank 38, a new NPDES compliance sampling location is proposed. This location



will be in Room 38, on the discharge side of the pump that will pump the Tank 38 contents to the outfall. Enclosure 1 shows an isometric drawing of Tank 38, associated piping, recirculation/discharge pump, proposed NPDES sampling location and flow paths during discharge to Outfall 051. If discharges to Outfall 051 are made from the Frac tanks, the presently approved NPDES compliance sampling location in Room 116 at the RLWTF will continue to be used.

Additionally, RLWTF effluent waters that are not within discharge limits to the outfall may need to be stored in the TA-50-250 Waste Management Risk Mitigation (WMRM) facility. New hoses will be installed to move water from the Frac tanks in Room 34B to tank #6 in the WMRM facility. A copy of the revised treatment schematic is enclosed (see Enclosure 2).

Please contact Bob Beers at (505) 667-7969 of the Water Quality and RCRA Group (ENV-RCRA) if you have questions.

Sincerely,



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

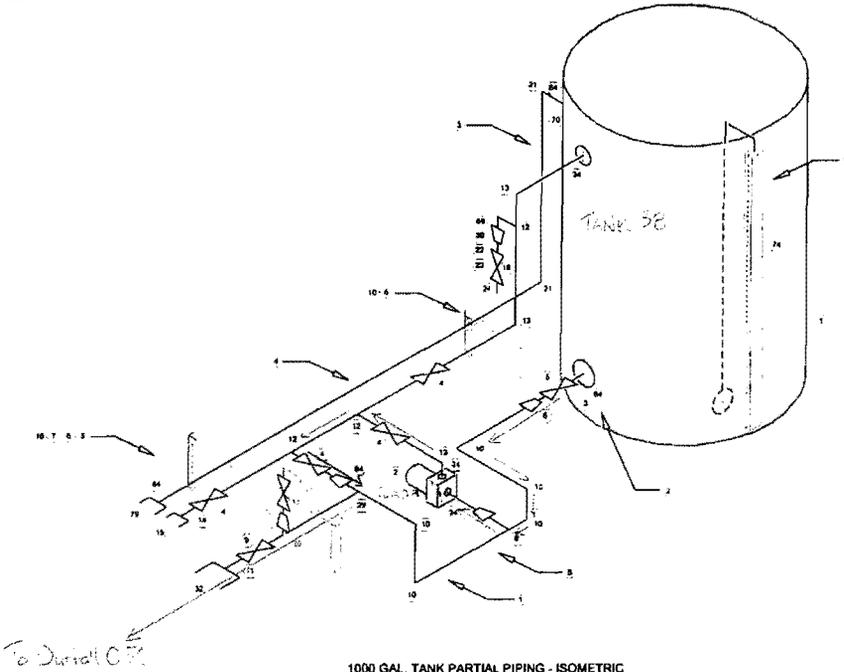
ARG:BB/lm

Enclosures: a/s

Cy: Glenn Saums, NMED/SWQB, Santa Fe, NM, w/enc.  
James Bearzi, NMED/HWB, Santa Fe, NM, w/enc.  
Hai Shen, LASO-EO, w/enc., A316  
Gene Turner, LASO-EO, w/enc., A316  
Steve Yanicak, LASO-GOV, w/enc., M894  
Michael Mallory, PADOPS, w/o enc., A102  
Robert L. McQuinn, ADHHO, w/o enc., K778  
J. Chris Cantwell, ADESHQ, w/o enc., K491  
Robert Mason, TA55-DO, w/enc., E583  
Denny L. Hjeresen, ENV-DO, w/enc., (E-File)  
Randy Johnson, ENV-ES, w/enc., E500  
Mike Saladen, ENV-RCRA, w/enc., (E-File)  
Bob Beers, ENV-RCRA, w/enc., (E-File)  
Hugh McGovern, TA-55 RLW, w/enc., E518  
Pete Worland, TA-55-RLW, w/enc., E518  
Cindy Blackwell, LC-LESH, w/o enc., A187  
ENV-RCRA File, w/enc., K490  
IRM-RMMSO, w/enc., A150

**ENCLOSURE 1**

PROJECT LOCATION



1000 GAL. TANK PARTIAL PIPING - ISOMETRIC  
SCALE: NONE

GENERAL NOTES

1. SCALE - NONE.
2. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED AN EQUAL BY SPECIFYING ARCHITECT/ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED.
3. REFER TO BILL OF MATERIALS (BOM) IN REFERENCED DCF FOR MATERIAL CALLOUTS AND INSPECTION REQUIREMENTS.
4. ALL ITEMS ML-1.
5. ALL INSTALLATION SHALL CONFORM WITH TO LANL STANDARDS.
6. FIELD ADJUST PIPE DIMENSIONS.

KEYED NOTES

- 1 DISCHARGE HOSE & ASSOCIATED PIPING - 4" MINIMUM
- 2 TANK CONNECTION - 2" NPTF (DISCHARGE)
- 3 TANK CONNECTION - 1-1/2" NPTF (INLET)
- 4 EXTEND 2" LINE TO PIPE SUPPORT AND CONNECT HOSE TO DRAIN IN ROOM 38 IF EXISTING DRAIN IN ROOM 38 IS PERMANENTLY BLOCKED. INSTALL THROUGHWALL FITTING AS HIGH AS POSSIBLE.
- 5 INSTALL PIPE SECTIONS AT LEAST 3" APART
- 6 PIPING WEIGHTS LESS THAN 8 LBS/LFT. ANCHORING NON STRUCTURAL. NO SS! REQUIRED.
- 7 ATTEMPT TO EQUATE OUTLET LINE HEIGHT TO THE SAME HEIGHT AS THE TANK DISCHARGE (UNION STRUT FOOTING MIGHT NOT BE REQUIRED. OR CONSIDER ADDING A PIECE OF UNISTRUT UNDERNEATH PIPE SUPPORT).
- 8 ANCHOR PUMP TO THE FLOOR OR CONSIDER USING UNISTRUT, 3/4" STEEL PLATE AND 3/4" HILTI ANCHORS IN ADDITION TO THE PUMP FOOT AND ANCHOR TO THE FLOOR.
- 9 INSTALL LEVEL FLOATS & SCALE PER MANUFACTURER INSTRUCTIONS.
- 10 BOM ITEMS 53 TO 59.

3									
2									
1									
No.	Date	Drawn	ADC	Description	QTY	CODE	CHK	ELB	APP

**ENGINEERING STANDARDS PROGRAM**  
**Radioactive Liquid Waste Treatment Facility (RLWTF)**

INTERIM DRAWING SUPPORTING DCF-15-TA88-001-048		REVISED	J.C. Ruchmans
TA88-001 1000 GAL TANK		REVISED	J.C. Ruchmans
SUPPORT ROOM		REVISED	C. Deiborn
PARTIAL PIPING ISOMETRIC		DATE	
BLDG-001	ROOM-38	TA-50	
DATE	DATE	DATE	DATE
Los Alamos National Laboratory		UNIT	F-8000
Los Alamos, NM 87545		1 OF 2	
CLASSIFICATION	UNCLASSIFIED	REV	REV
PROJECT NUMBER	N/A	OTHER PROJECT	DCP-15-TA88-001-048-01

**ENCLOSURE 2**

**LANL Radioactive Liquid Waste Treatment Facility (TA-50)  
Process Schematic (as of 09/13/2010)**

