

LANL
TA 21

9/30/01

SUPPLEMENTAL ENVIRONMENTAL PROJECT

The U.S. Department of Energy (DOE) and the University of California at Los Alamos (UC) hereby agree to perform the Supplemental Environmental Project (SEP) at Los Alamos National Laboratory (LANL) as more fully described below.

Current Situation

Presently, a significant amount of non-radioactive wastewater is piped from Technical Area (TA)-48 and TA-21 to the Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50 where it is treated and then released through an NPDES permitted outfall in Mortandad Canyon. This wastewater is generated by blow-down discharges from a cooling tower at TA-21, and a boiler at TA-48. These uncontaminated sources were connected to the Radioactive Liquid Waste Collection System (RLWCS) in previous years when waste minimization, total quantity of water processed, and amount of effluent released at the RLWTF were of lesser concern than they are today.

(TA 48)

The two sources generate approximately 5,250 gallons per day which can amount to 30 to 80 per cent of the total treated by the RLWTF. Disconnecting the two sources from the RLWCS will result in an equivalent reduction in effluent discharged by the RLWTF at the NPDES permitted outfall in Mortandad Canyon. This reduction in volume discharged could significantly lessen sediment movement below the outfall.

TA-21 Project

The TA-21 work will consist of disconnecting the Cooling Tower 21-240 blow-down from the RLWCS and reconnecting it to the permitted gravity drain outfall (03A-158) at TA-21-209. Specifically the following work is proposed:

1. Disconnect the existing cooling tower overflow drain from discharge to the RLWCS lift station.
2. Disconnect the existing automatic cooling tower blow-down from the RLWCS drain in room 5513 of building 155.
3. Disconnect the existing manual blow-down from the tower loop cyclone separator to the RLWCS.
4. Combine the two blow-down drains (tower and separator) into a single line and extend this line to a drain located in room 166 of building 209 which is connected to the permitted outfall. Piping for this drain will involve the installation of approximately 330 feet of 1" copper pipe which will be routed overhead from room 155-5513 through the connecting hallways to room 209 - 166. Three wall penetrations will be required.

TA-48 Project

The proposed TA-48 work will consist of disconnecting the existing continuous boiler blow-down line from the Radioactive Liquid Waste Collection System and connecting it to the Sanitary Wastewater Collection System (SWS). Sanitary wastewater is treated by the



Consolidated Sanitary Treatment Facility at TA-46. The TA-46 SWS Facility is currently permitted under the LANL NPDES Permit No. NM0028355 to accept and treat this waste.

Unfortunately, an existing point of connection to the sanitary system is not readily available in or near the Building 48-1 boiler room, and substantial work will be needed to make the connection. The following work is proposed:

1. Disconnect and remove approximately 25 lineal feet of existing 3/8" copper drain line.
2. Install mini water-to-water heat exchanger to cool blow-down for discharge to sanitary sewer. Connect heat exchanger to boiler blow-down and makeup water supply.
3. Core drill north wall of Building 1 Room 244 and extend 3/4" copper blow-down drain from heat exchanger to wall opening.
4. Saw cut, remove, and dispose of approximately 10 square yards of existing access road paving
5. Excavate trench for sewer connection from north wall of Building 1 to sanitary sewer at centerline of access road. (Approximately 15 cubic yards).
6. Set prefabricated utility vault adjacent to north wall of building.
7. Install approximately 65 lf of 3" cast iron sanitary drain line.
8. Complete drain line extension from room 244 to utility vault. Provide an indirect (air break) connection to the sanitary drain line.
9. Install approximately 20 lf of cast iron vent line from the utility vault to 3' above roofline of building 1.
10. Back fill & compact sanitary drain trench
11. Install and insulate utility vault cover.
12. Repair asphalt cut. Reseed any vegetative cover.

Cost and Schedule

TOTAL SEP COSTS:

Total Project Cost for the two projects is estimated to be:

TA-21	\$ 35,000
TA-48	<u>50,000</u>
Total	\$ 85,000

Both projects are schedule for completion not later than September 30, 2001