

TA50

permit

Los Alamos

NATIONAL LABORATORY

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Los Alamos, New Mexico 87545

Date: November 22, 2000
In Reply Refer To: ESH-18/WQ&H:00-0408
Mail Stop: K497
Telephone: (505) 665-1859

Mr. David Gurule
Area Manager
U.S. Department of Energy
Los Alamos Area Office
Los Alamos, New Mexico 87544

Mr. Joseph Vozella
Assistant Area Manager
Office of Environment
U.S. Department of Energy
Los Alamos Area Office
Los Alamos, New Mexico 87544

SUBJECT: RADIOACTIVE EFFLUENT QUALITY AT NPDES OUTFALL 051, TA-50, AUGUST, 2000

Dear Messrs. Gurule and Vozella:

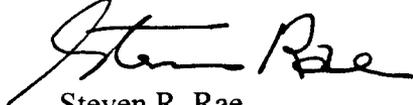
Enclosed is the monthly monitoring report for NPDES Outfall 051 for radioactive effluent quality data. This report includes the monthly value (monthly average) compared with the DOE Derived Concentration Guideline (DCG) value for each parameter analyzed. The monthly values are equal composites of all discharges that occurred during the month. Please note, this report also includes radioactive influent data for the TA-50 Treatment Facility and percent removal.

There were a total of 22 releases (1,619,670 Liters) to Mortandad Canyon during the monitoring period from the TA-50 Treatment Facility. The monthly composite results were 7.0 pCi/l for Strontium 90 (Sr-90) and 130,000 pCi/l for Tritium. There were no exceedances of DCGs for individual radionuclides during the monitoring period. Additionally, the sum of the fractions for the radionuclides did not exceed the DCG value of 1.

Per your request, we have included the monthly composite results for perchlorate and nitrate with this DCG Report. The monthly composite result for nitrate was 2.47 mg/l. The NM WQCC Regulation 3103 ground water standard for nitrate is 10 mg/l. The monthly composite for perchlorate was 530 ug/l. New Mexico currently does not have a ground water or surface water standard for perchlorate. However, California's drinking water action level for perchlorate is 18 ug/l. Please note, that nitrate and perchlorate results are not radioactive constituents and are being reported separately from the DCG Report.

Please contact me at 665-1859 or Mike Saladen at 665-6085 if additional information would be helpful.

Sincerely,



Steven R. Rae
Group Leader
Water Quality and Hydrology Group



Non Reg - NPDES

SR:MS/tml

Enclosures: a/s

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WQ&H File, w/enc., MS K497
CIC-10, w/enc., MS A150

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TA50 -1 EFFLUENT DISCHARGE & REMOVAL for AUGUST, 2000

Issued 20 Nov 2000 3:01:35 p.m.

| Species | Guideline as (uCi/ml) | Guideline as (Ci/L) | Effluent (Ci/L) | Exceeded | Influent (Ci/L) | % Removal |
|---------|-----------------------|---------------------|-----------------|----------|-----------------|-----------|
| Am-241 | 3.0e-8 | 30.0e-12 | 3.5e-12 | | 1.3e-9 | 99.731 |
| Cs-137 | 3.0e-6 | 3.0e-9 | 260.0e-12 | | 200.0e-12 | |
| Pu-238 | 4.0e-8 | 40.0e-12 | 2.8e-12 | | 8.6e-9 | 99.967 |
| Pu-239 | 3.0e-8 | 30.0e-12 | 1.1e-12 | | 3.2e-9 | 99.966 |
| Sr-89 | 2.0e-5 | 20.0e-9 | 9.8e-12 | | 4.8e-12 | |
| Sr-90 | 1.0e-6 | 1.0e-9 | 7.0e-12 | | 23.0e-12 | 69.565 |
| TRITIUM | 0.002 | 2.0e-6 | 130.0e-9 | | 16.0e-9 | |
| U-234 | 5.0e-7 | 500.0e-12 | 1.5e-12 | | 240.0e-12 | 99.375 |
| U-235 | 5.0e-6 | 5.0e-9 | 7.4e-12 | | 34.0e-12 | 78.235 |

22 discharges in AUGUST, 2000

1,619,670 liters (volume) discharged

NITRATE-N: Influent = 5.4 Mg/L, Effluent = 2.47 Mg/L.

**TA 50-1 Radioactive Liquid Wastewater Treatment Facility
Effluent Quality for August 2000**

| Parameter | Sample Type | Effluent Quality | California Action Level |
|-------------|-------------------|------------------|-------------------------|
| Perchlorate | Monthly Composite | 530 ug/l | 18 ug/l |

| Parameter | Sample Type | Effluent Quality | NM WQCC Standard |
|-----------|-------------------|------------------|------------------|
| Nitrate | Monthly Composite | 2.47 mg/l | 10 mg/l |