



BRUCE KING  
GOVERNOR

Permit  
State of New Mexico

## ENVIRONMENT DEPARTMENT

JUDITH M. ESPINOSA  
SECRETARY

RON CURRY  
DEPUTY SECRETARY

Original - FEDERAL EXPRESS  
Copy - Telefax

July 16, 1992

Myron O. Knudson, P.E.  
Director  
Water Management Division (6W)  
U.S. Environmental Protection Agency  
1445 Ross Ave.  
Dallas, Texas 75202-2733

Re: State Certification NPDES Permit NM0028355 - UC/DOE Los Alamos  
National Laboratory

Dear Mr. Knudson:

Enclosed you will find the State of New Mexico Environment Department's conditional certification and comments on the referenced permit. This certification is provided to the Environmental Protection Agency (EPA) in accordance with the provisions of §401 of the federal Clean Water Act.

The Environment Department (ED) remains concerned with elements of the draft permit. The ED spent considerable time in providing detailed comments in the prior permit certification denial letter (August 7, 1991) and on the preliminary draft of this proposal (April 22, 1992). Yet, this permit proposal did not address many of the ED's previous comments, some of which were as simple as referencing the current version of the State's water quality standards. We are, however pleased that EPA did address in this proposal the State's previous concerns regarding adequate public notice by deleting the "add/delete" clause.

One of the major points of debate which has arisen over this permit is the correct listing of designated or attainable uses for the receiving streams. The ED recognizes that the debate over this issue could well consume several years. Therefore, in view of the fact that EPA has committed to issue a permit for only two years instead of the normal five year period, the State will, without dismissing its position on this matter, conditionally certify the permit solely and strictly based upon the general standards expressed in sections 1-102A-L of the *Water Quality Standards for Interstate and Intrastate Streams in New Mexico* (amended October 8, 1991) and other appropriate State law. In that these general standards apply to all waters of the State they are clearly applicable to these receiving waters.



Harold Ruane Building • 1190 St. Francis Drive • P.O. Box 26110 • Sa  
(505) 827-2850

FAX (505) 827-21



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EXHIBIT A

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The ED has also been concerned with the completeness of the permit application from which this permit was drafted. Moreover there have been errors in the application found by the ED and the Department of Energy Tiger Team which represented either lower than actual pollutant concentrations or a belief that pollutants were absent where past laboratory data documented them to be present. The two year permit will be advantageous in respect to resolving problems associated with this information deficiency.

If you have any questions regarding this matter please contact me at (505) 827-0187 or Glenn Saums of my staff at (505) 827-2827.

Sincerely,



Jim Piatt  
Chief  
Surface Water Quality Bureau

cc:

Kathleen M. Sisneros, Director NMED W&WMD  
Richard Mitzelfelt, NMED District II  
Allen Tiedman, Univ. of Calif. - LANL (Certified Mail P757 742 854)  
Jerry L. Bellows, USDOE - LAAO (Certified Mail P757 742 855)  
Ellen Caldwell, USEPA (6W-PS)  
Bill White, USDOJ-BIA Albuquerque Area Office  
Eric Ames, Esq. Representing: Concerned Citizen's for Nuclear Safety

Mr. Buck Wynn, Regional Administrator  
Environmental Protection Agency  
1445 Ross Avenue  
Dallas, Texas 75202-2733

Date: July 16, 1992

STATE CERTIFICATION

RE: Univ. of Calif./U.S. Dept. of Energy - Los Alamos National Laboratory  
NPDES No. NMO028355

Dear Mr. Wynn:

The New Mexico Environment Department has examined the application for and the proposed NPDES permit NMO028355 above. The following conditions are necessary to assure compliance with the applicable provisions of the Clean Water Act Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law. Compliance with the terms and conditions of the permit and this certification will provide reasonable assurance that the permitted activities will be conducted in a manner which will not violate applicable water quality standards and water quality management plan.

The State of New Mexico

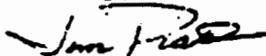
- (X) includes the following more stringent conditions and citation to the State or Federal requirements upon which those conditions are based (see attachments).
- ( ) certifies that the discharge will comply with the applicable provisions of Section 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law.
- ( ) waives its right to certify
- ( ) denies certification for the reasons stated in the attachment

In order to meet the requirements of State law, including water quality standards, and appropriate basin plan as may be amended by the water quality management plan, each of the conditions cited in the draft permit and the State certification shall not be made less stringent.

The Department reserves the right to amend or revoke this certification if such action is necessary to ensure compliance with the State's water quality standards and water quality management plan or appropriate State law.

Please contact Glenn Saums (505) 827-2827, if you have any questions concerning this certification. Comments pertaining to this draft permit are included in the attached enclosure.

Sincerely,



Jim Piatt  
Bureau Chief  
Surface Water Quality Bureau

**State Certification**  
**NPDES Permit # NM0026355**  
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**CONDITIONS OF STATE CERTIFICATION**

1. The NPDES permit application indicates that priority or toxic pollutants and radiological substances exist in discharges from numerous outfalls in concentrations which may be detrimental to the ecological conditions of the receiving waters. In keeping with EPA's "Third Round permitting policy" and Clean Water Act §101.(a)(3) as well as the State's implementation of water quality standards, the State has evaluated the permit for limiting these pollutants to acceptable levels. Based upon this review a condition for appropriate permit limits is made through application of §§1-102.F. & G. of *Water Quality Standards for Interstate and Intrastate Streams in New Mexico* as amended October 8, 1991, and effective November 12, 1991 (WQS). These water quality standards have been adopted by the State of New Mexico as required by §303 of the federal Clean Water Act and in accordance with the New Mexico Water Quality Act (NMSA 1978). This condition is necessary to protect the State's water quality standards.

Any outfall, described in the application or any outfall for which EPA has other reason to believe, discharges effluent with concentrations of a pollutant listed in the following table at or above the concentration listed shall be limited through a daily maximum effluent limit based upon the numeric water quality standard specified in the table below. Effluent limitations based upon the standards provided must be calculated in accordance with EPA practice and the New Mexico Interim Guidance for Implementation of Water Quality Standards through National Pollutant Discharge Elimination System Permit provided to EPA by NMED letter to Mr. Jack Ferguson June 25, 1991. In cases of non-perennial streams, the water quality standard will effectively be the effluent limit as the critical low flow (4Q3) will be zero (see also WQS §1-105.B). If the pollutant concentration reported in the permit application or other documentation is greater than the numeric WQS in the table or is reported as "less than" a detection limit which is greater than the "minimum quantifiable level" (MQL) established by EPA Region VI, then an effluent limit must be included in the permit. If a reported concentration is both less than the established WQS and EPA MQL, no limit will be required as a condition to this certification. If the calculated effluent limitation is less than the MQL set by EPA, the ED agrees to allow limits which reflect the MQL. However, if these MQLs change during the term of the proposed permit, the permit limits must change accordingly. Please use

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the same language which has been developed by NMED and EPA for chlorine limitations in municipal NPDES permits where this problem arises.

Table of WQS

<u>Pollutant</u>	<u>WQS*</u>	
Aluminum	5.0 mg/l	
Ammonia	0.10 mg/l (as N)	
Arsenic	74 ug/l	
Boron	0.75 mg/l	
Cadmium	0.5 ug/l	
Chromium	0.23 ug/l	
Cobalt	0.05 mg/l	
Copper	0.2 ug/l	
Lead	4.5 ug/l	
Mercury	0.03 ug/l	
Selenium	8.6 ug/l	
Vanadium	0.05 mg/l	
Zinc	3.6 ug/l	
Beryllium	52.0 ug/l	
Cyanide	8.0 ug/l	
Nickel	13.1 ug/l	
Silver	0.1 ug/l	
Radium-226&228	30.0 pCi/l	
Tritium**	20,000 pCi/l	(where tritium meets definition of pollutant at 40 CFR 122.2)

\* All values are total. Where partition coefficients are available for conversion of dissolved numeric water quality standards to total values, they have been employed in conformance with the June 25, 1991, "New Mexico Interim Guidance for Implementation of Water Quality Standards through NPDES permits."

\*\* Based upon EPA Water Quality Criteria 1972 (a.k.a.: the "Bluebook") recommendation to apply human drinking water standards. The State has codified these requirements at § 207 NM Environmental Improvement Board Water Supply Regulations.

2. Fecal coliform effluent limitations must be included in the permit at all outfalls discharging sanitary wastewater in accordance with Work Element 6 of the New Mexico Water Quality Management Plan. Under §208 of the Clean Water Act and 40 CFR 130.12(a), the EPA may not issue an NPDES permit that is in conflict with a state-adopted water quality management plan.

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The fecal coliform limit for these outfalls must be 500/100ml daily maximum.

It is understood that LANL was supposed to eliminate all sanitary outfalls by July, 1992, with the exception of 05S and 13S. However, this has not occurred and fecal coliform limitations apply to all discharges of treated domestic wastewater in New Mexico. Compliance with these limitations can be addressed in the permittee's Federal Facility Compliance Agreement (FFCA) or through a compliance schedule developed by EPA's Enforcement Branch. A waiver for sources without chlorination shall not be written into the permit as currently proposed by the permit writer; especially one that includes a schedule which terminates on a date that violates the permittee's current FFCA and Administrative Order. (See endnotes: 1, 2 & 3).

- 3. A Chemical Oxygen Demand (COD) effluent limitation of 125 mg/l shall be included in the permit for those outfall categories which exhibited COD values in excess of this value in samples taken either for the permit application or for past Discharge Monitoring Reports. These categories should include, but are not limited to, 051, 045, 055, 094 and all other categories which have a probability of exceeding this value. This limit for these outfalls is necessary in order for conditions of this permit to be compatible with appropriate State regulation which may be found at § 2-101 of the New Mexico Water Quality Control Commission Regulations, as amended through August 18, 1991. (See endnotes: 2 & 3)
- 4. Mass based effluent limits for Biochemical Oxygen Demand (BOD5) and Total Suspended Solids must be included at outfall 12S. Mass-based effluent limits are required for NPDES permits at 40 CFR 122.45. Mass-based limits should be calculated using "long term daily average" and "design maximum" flows at this facility. (See endnote: 3)
- 5. Limitations and monitoring requirements for radium, tritium, or other naturally occurring and accelerator produced radiological contaminants contributed to the wastewater treatment facilities at TA-50 (outfalls 050 and 051) and TA-53 (outfall 09S) should be included in the permit. We agree with the draft permit that tritium needs to be limited at TA-53; however, we feel the discharge limitation should be 20,000 pCi/l (see above table of WQS). This number should also be applied at Outfalls 050 and 051. (See endnotes: 1, 2 & 3)

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**COMMENTS WHICH ARE NOT CONDITIONS OF CERTIFICATION**

1. The permit is based on an incomplete and inaccurate NPDES application Form-2C. 40 CFR 122.21 states that, "[a]n applicant is expected to know or have reason to believe that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analysis of pollutant" (emphasis added). This knowledge must be conveyed on the permit application in order for the application to be representative of the nature of the discharges to be permitted. This was not done in regards to several of LANL's discharges. For example, although LANL had records which indicated that tritium was present at outfall 09S, it was reported as "believed absent" in the permit reapplication. The University of California Waste Management Group's 1990 Annual Report also listed nickel, arsenic, and silver concentrations for outfall 051; however, these pollutants are also reported as believed absent in LANL's 1990 permit reapplication. LANL has tried to refute this concern by indicating that the information was contained, in some instances, in supporting documents attached to the permit application. However, when critical information is not in the key reference (Form 2-C), is misleading, or is buried in a document literally inches thick, it is not readily usable and is more likely to be lost in oversight than applied. This problem should be reviewed by the Laboratory in the next permit application. (See endnotes: 1 & 2)
2. The fact sheet indicates the permit was prepared using *Water Quality Standards for Interstate and Intrastate Streams in New Mexico, June 29, 1991*. The water quality standards were later amended October 8, 1991 and replaced the previous edition. The amendments became effective November 12, 1991. Further, the fact sheet indicated that water quality based effluent limits were based on the minimum average seven consecutive day flow which occurs with a frequency of once in ten years (7Q10). In the October 1991 amendments, Section 1-105.B. of *Water Quality Standards for Interstate and Intrastate Streams in New Mexico* was revised and redefined "critical low flow" to be the minimum average four consecutive day flow which occurs with a frequency of once in three years (4Q3). (See endnote: 1)
3. In general, effluent monitoring frequency needs to be reviewed and, in most cases, increased in order to be representative of LANL's discharges. The Environment Department Surface Water Quality Bureau, at EPA's request, previously developed

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and submitted a monitoring plan which outlines what the State believes would be appropriate sampling frequencies for each category. A copy of that plan is attached. (Attachment 1) (See endnote: 1)

4. The permit should include specific language which requires all sampling to be representative of the nature and amount of "normal" discharges from all outfalls. For example, DOE's Tiger Team Report cites instances where NPDES sampling was performed early on a Monday morning at facilities where no activities had occurred over the weekend. (See endnote: 1)
5. The permit application indicates LANL is discharging effluent from outfalls 050 and 051 with concentrations of up to 356 mg/l of nitrate+nitrite (as N). Data included in the University of California (UC-LANL) Waste Management Group's (EM-7) 1990 annual report on the operation of the Radiological Liquid Waste Treatment Plant list concentrations up to a maximum of 475 mg/l. The permit should require separate monitoring and reporting of nitrate+nitrite (as N), and total nitrogen (TKN + total nitrate + nitrite - as N). Future effluent limitations may be necessary to protect New Mexico's groundwater standard of 10 mg/l nitrate (as N). The data supplied during the two year term of this permit can be used to determine this need. A monitoring frequency of 1/month would be adequate. Concurrent temperature and pH measurements should also be required with each ammonia sample so that the un-ionized portion of total ammonia can be properly calculated. (See endnote: 1)
6. The permit should require that radionuclides be monitored and reported for all outfalls which may discharge wastewater from activities involving radioactive materials which can be regulated under the definition of pollutant at 40 CFR 122.2. This definition includes Radium and accelerator produced isotopes such as Tritium. This requirement should apply to any outfall discharging a "regulated" radionuclide including those which discharge a mixture of regulated and non-regulated radioactive waste. (See endnote: 3)
7. The exact sampling locations specified for a number of outfalls are unclear. The permit should, at a minimum, clarify that sample collection sites must be located at the facility outfall prior to mixing with any additional waste stream. (See endnotes: 2 & 3)
8. The EPA should fully evaluate the need for additional effluent

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limitations at outfall 01S. LANL has identified 36 photographic discharges from the TA-3 area which contribute to outfall 01S. The rinse water from these discharges may combine for a total of 10,000 - 20,000 gallons per day to a single sanitary outfall. In the NPDES permit application, LANL establishes that the influent to the sanitary wastewater treatment plant contains contributions from food preparation facilities, automobile repair shops, photographic darkrooms, and other industrial and research type activities. Therefore, appropriate limitations for the probable contaminants present in these research and industrial contributions must be established in the permit for all sanitary outfalls receiving wastewater of a categorical nature. NMED believes that all categorical contributions to sanitary wastewater treatment plants must either be eliminated or addressed by effluent limitations in the permit. These limits should also be considered for outfall 13S since outfall 01S is one of the effluent discharge pipes which will be consolidated under LANL's Sanitary Waste System Consolidation (SWSC) plan. As part of the SWSC, effluent formerly discharged at outfall 01S will become a part of the effluent from outfall 13S. (See endnotes: 2 & 3)

9. In a meeting between laboratory personnel and ED staff on July 15, 1992, LANL indicated their desire to have additional time to prepare and submit their Discharge Monitoring Reports (DMRs). Part I, Section C. of the permit currently requires that DMRs be submitted within 15 days of the end of the monthly reporting period. LANL has requested this requirement be extended to 30 days to allow confirmation of analytical results taken late in the month. The State does not object to such an extension.

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Endnotes:

1. This comment was previously provided to EPA in NMED's April 22, 1992 letter on EPA's preliminary draft permit.
2. This comment was previously provided to EPA in NMED's January 31, 1991 letter regarding EPA's first working draft submitted to UC-LANL/DOE on October 9, 1990.
3. This comment was previously provided to EPA in NMED's August 7, 1991 certification denial.

# NMED Suggested Monitoring Frequencies for LANL Outfalls Permitted Under NPDES # NM0028355

OUTFALL CATEGORY	SMALL		MEDIUM		LARGE	
	FLOW	FREQUENCY	FLOW	FREQUENCY	FLOW	FREQUENCY
03A - 38 PIPES NON CONTACT COOLING WATER 0.02 GPM - 103 GPM	< 5 GPM	1/90 DAYS	N/A	N/A	> 5 GPM	1/30 DAYS
04A - 41 PIPES NON CONTACT COOLING WATER 0.000001 MGD - 0.020 MGD	< 3 GPM	1/90 DAYS	N/A	N/A	> 3 GPM	1/30 DAYS
05A - 18 PIPES HIGH EXPLOSIVES 0.000001 MGD - 0.012 MGD	< 1.0 GPM	1/90 DAYS	> 1.0 GPM	1/30 DAYS	N/A	N/A
06A - 13 PIPES PHOTO WASTE 0.000005 MGD - 0.0126 MGD	< 0.04 GPM < 20,000 GPM	1/90 DAYS	0.04 GPM - 2 GPM	1/30 DAYS	> 2.0 GPM	1/7 DAYS