

Permit

University of California
Environmental Health Services
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

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Mr. Myron G. Knudson, Director
Water Management Division (6W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Mr. Knudson:

**REFERENCE: NPDES PERMIT NO. NM0028355, ADMINISTRATIVE
ORDER DOCKET NO. VI-91-1329, QUARTERLY REPORT**

The Administrative Order dated August 29, 1991, specifies that the University of California, as co-permittee under the Laboratory's NPDES Permit, meet interim effluent limits and submit quarterly reports concerning corrective activities that are in progress in order to comply with NPDES Permit final effluent limits.

This Administrative Order was issued in conjunction with a Federal Facilities Compliance Agreement (FFCA) dated August 29, 1991, (Docket No. VI-91-1328) which was prepared by the EPA for the U.S. Department of Energy (DOE) as owner and co-permittee under the Laboratory's NPDES Permit.

Enclosed is a quarterly report which I am submitting under the Administrative Order in order to update you on the status of the Laboratory's corrective activities and to meet the specified reporting requirements of the Administrative Order.

Also enclosed is a request for revisions to the Administrative Order which are required in order to document corrective actions which are underway, to adjust milestone dates and to clarify reporting of potential violations under the Waste Stream Identification and Characterization Program. The Waste Stream Identification and Characterization Program developed by the Laboratory is a comprehensive effort to verify that each waste stream is included in the proper category of the Laboratory's NPDES Permit and that all outfalls are properly monitored.



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Mr. J. J. ...
Washington

February 10, 1992

Please be advised that the Laboratory is making every possible effort to correct violations of its NPDES Permit as soon as possible within budget constraints and within limitations imposed by other regulatory programs. Please call Steven Rae of the Laboratory's Environmental Protection Group (EM-8) at (505) 665-1859 if you need any additional information concerning the status of the Laboratory's corrective activities or requested revisions to the Administrative Order.

Sincerely,



Allen J. Tiedman
Associate Director
for Operations

AJT:SR/gz

Enc. 4/c

Cy: T. Gunderson, EM-DG, w/enc., MS K491
K. Hargis (EM-8:92-306), EM-8, w/enc., MS K490
R. Bohn, EM-8, w/enc., MS K490
S. Brown, LC/GEN, w/enc., MS A187
J. Bellows, DOE/LAAO, w/enc., MS A316
K. Twombly, DOE/LAAO, w/enc., MS A316
D. George, DOE/LAAO, w/enc., MS A316
J. Piatt, NMED, w/enc., Santa Fe, New Mexico
D. Ratkey, USEPA, w/enc., Dallas Texas
CRM-4, w/enc., MS A150
Circ. File, w/o enc.

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Quarterly Report for October 1, thru December 31, 1991

Los Alamos National Laboratory
Administrative Order Docket No. VI-91-1329
NPDES Permit No. NM0028355

<u>Outfall 02A</u>	<u>Required By</u>	<u>Completed</u>
Final Design Complete	Dec. 1988	(3-23-88)
Advertisement of Construction	Feb. 1989	(8-1-88)
Award of Construction Contract	April 1989	(8-10-88)
Construction Completion	Sept. 1989	(9-30-89)
In Compliance with Final Limits	Oct. 1989	(10-25-89)

Projects to improve the quality of effluent (boiler blowdown) from the TA-16 Steam Plant were completed in September, 1989. Additional corrective activities and a new schedule of compliance are being requested due to recent violations at the TA-16 Steam Plant. (Please see outfall 02A-007 listed below and the enclosed Request for Revisions to the Administrative Order Docket No. VI-91-1329).

<u>Outfall 05A</u>	<u>Required By</u>	<u>Completed</u>
Final Design Complete	Dec. 1988	(6-3-88)
Advertisement of Construction	Feb. 1989	(6-6-88)
Award of Construction Contract	April 1989	(6-6-89)
Construction Completion	Aug. 1989	(9-30-89)
In Compliance with Final Limits	Oct. 1989	(10-16-89)

Projects to improve the quality of effluent (high explosives wastewater) from TA-16 were completed in September, 1989.

<u>Outfall 02A-007</u>	<u>Required By</u>	<u>Completed/ Estimated</u>
Final Design Complete	April 1991	Comp. (4-30-91)
Construction Completed	Sept. 1991	Est. (9-1-92)
In Compliance with Final Limits	Oct. 1991	Est. (9-1-92)

A new pH treatment system has been designed to serve the TA-16 Steam Plant. Construction plans and specifications have been completed. National Environmental Policy Act (NEPA) review has been completed for this project and DOE approval has been obtained. The estimated completion date listed above is based upon the Laboratory's most optimistic time frame for initiating construction, ordering materials and completing all work.

That the amount of \$250,000 was allocated in October, 1991. The Laboratory is requesting a revisor to the Administrative Order to allow for completion of this project in accordance with the above estimated schedule. The revision is needed in order to allow for adequate time for fabrication of new treatment equipment and construction of the improvements. The proposed new treatment facilities and controls for the TA-16 Steam Plant were found to be much more complicated and costly than originally anticipated and additional time is required in order to complete this work in a satisfactory manner. (Please see the enclosed Request for Revisions to the Administrative Order Docket No. VI-91-1329).

Further, for this project in the amount of \$250,000 was allocated in October, 1991. The Laboratory is requesting a revisor to the Administrative Order to allow for completion of this project in accordance with the above estimated schedule. The revision is needed in order to allow for adequate time for fabrication of new treatment equipment and construction of the improvements. The proposed new treatment facilities and controls for the TA-16 Steam Plant were found to be much more complicated and costly than originally anticipated and additional time is required in order to complete this work in a satisfactory manner. (Please see the enclosed Request for Revisions to the Administrative Order Docket No. VI-91-1329).

<u>Outfall 03A</u>	<u>Required By</u>	<u>Completed</u>
Study Complete	Sept. 1991	(3-20-91)
Corrective Actions Complete	March 1992	(3-20-91)
In Compliance with Final Limits	July 1992	(4-20-91)

An abbreviated study of the high phosphorus concentrations in cooling water effluent has been completed. The source of the high phosphorus concentrations was found to be a water treatment chemical known as Formula 227-L which was being applied on a routine basis and when a cooling tower was being placed back into service. Operating procedures were revised in March, 1991, by the Engineering Maintenance Group (ENG-6) to prevent phosphorus violations due to the application of this chemical. Draft operating procedures were completed in September, 1991, to address all cooling tower work and to prevent violations of other effluent limits. Compliance with the final effluent limits for phosphorus has been achieved since the new procedures for application of Formula 227-L were implemented.

<u>Outfall 03A-023</u>	<u>Required By</u>	<u>Completed</u>
Complete Waste Stream Characterization of Storm Drainage System	Oct. 1991	(11-21-90)
Complete Other Corrective Actions	Oct. 1991	(12-20-91)
In Compliance with Final Limits	Jan. 1992	(12-20-91)

The storm drainage system discharging at Outfall 03A-023 has been completely surveyed and dye tested. All known drains and openings entering the storm drain system have been located. The sump at Building 287 has been cleaned and tied into the sanitary sewer. The sump at Building 105 has been re-routed to the sanitary sewer. This project was completed in December, 1991. All other corrective actions required to eliminate oil from entering the storm water system have been completed.

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	Phase I	Phase II
Outfall 040 (TA-16 Lagoons)		
Outfall 008 (TA-35 Lagoons)		
Outfall 128 (TA-46S Lagoons)		
Final Design Complete	Comp. (1-11-90)	Comp. (11-13-90)
Advertisement of Construction	Comp. (9-7-90)	Comp. (4-17-91)
Award of Construction Contract	Comp. (13-20-90)	Comp. (7-26-91)
Construction Completion	Est. (7-15-92)	Est. (9-1-92)
Special Facilities Completion & Facility Start-Up	Est. (10-1-92)	Est. (10-1-92)
In Compliance with Final Limits	Est. (10-1-92)	Est. (10-1-92)

Plans and specifications for the Sanitary Wastewater Systems Consolidation (SWSC) Project, Phase I and Phase II, have been completed. Phase I includes a new extended aeration, activated sludge treatment plant. Phase II includes new collection lines which are required to carry sanitary wastewater from existing facilities to the new treatment plant. The SWSC Project will eliminate seven of the Laboratory's nine sanitary wastewater facilities which are listed below.

01S	TA-3 Tricking Filter Plant
02S	TA-9 Lagoon & Sand Filters
03S	TA-16 Tricking Filter Plant
04S	TA-18 Lagoons
07S	TA-46N Lagoon & Sand Filters
10S	TA-35 Lagoons & Sand Filters
12S	TA-46S Lagoons

A contract has been awarded for construction of the new treatment plant (Phase I) and construction is now approximately 60 percent complete. Additional sampling of several locations along the proposed collection lines was required in order to verify that solid waste management units will be avoided and to comply with the Laboratory's Resource, Conservation and Recovery Act (RCRA) Permit. This sampling has been completed and analytical results show that no solid waste management units will be disturbed due to collection line construction. A contract has been awarded for the collection line construction (Phase II) which is now approximately 35 percent complete. It is anticipated that the additional sampling and revisions to the final plans and specifications will cause a delay of approximately three months in the completion of Phase II. The estimated completion date for Phase II is September 1, 1992, and the estimated start-up date of the SWSC Project is October 1, 1992.

Funding for this project in the amount of \$16.7 million has been allocated by the DOE. The Laboratory is requesting a revision to the Administrative Order to allow for completion of this project in accordance with the above estimated schedule. This revision is needed in order to allow for compliance activities related to the Laboratory's RCRA Permit and design changes required for the RCRA compliance. It is anticipated that compliance with final effluent limits will be delayed approximately three months from July, 1992,

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to October, 1992. (Please see the enclosed Request for Revisions to the Administrative Order Docket No. VI-91-1329).

<u>Outfall 058 (TA-21 Package Plant)</u>	<u>Phase I</u>	<u>Phase II</u>
Final Design Complete	Comp. (5-2-90)	Comp. (4-29-91)
Advertisement of Construction	Comp. (5-2-90)	Not Applicable
Award of Construction Contract	Comp. (5-2-90)	Not Applicable
Construction Completion	Comp. (8-14-90)	Not Applicable
Special Facilities Completion & Facility Start-Up	Comp. (8-14-90)	Not Applicable
In-Compliance with Final Limits	Comp. (8-14-90)	Not Applicable

Phase I included conversion of two sludge beds into sand filters to be used for removal of solids and polishing of effluent from the TA-21 Package Plant. This project has been completed and final effluent limits have been attained. Phase II includes modifications to the aeration basin and other improvements to the TA-21 Package Plant. Based upon effluent testing results gathered since the completion of Phase I, it appears that construction of Phase II will not be necessary to consistently meet final effluent limits. The plans for Phase II improvements are being retained in order to complete this project if required in the future.

Due to reduction of programs and staff at TA-21, the flow of sanitary wastewater to the TA-21 Package Plant has been insufficient to justify continued operation of this facility at the present time. Wastewater influent has been generally less than 1,000 gallons per day and this amount is presently being collected in the aeration basin and transported by pumper truck to the TA-3 Trickling Filter Plant. This additional flow from TA-21 has had no significant impact on the quantity or quality of the effluent from the TA-3 Plant which receives in excess of 200,000 gallons per day. The TA-21 Package Plant has been put on standby status until a final decision can be made by Laboratory management to shutdown this facility.

<u>Outfall 098 (TA-53 Lagoons)</u>	<u>Required By</u>	<u>Completed/ Estimated</u>
Final Design Complete	March 1991	Comp. (3-15-91)
Advertisement of Construction	Jan. 1992	Est. (2-15-92)
Award of Construction Contract	March 1992	Est. (3-15-92)
Construction Completion	July 1992	Est. (7-15-92)
Special Facilities Completion & Facility Start-Up	July 1992	Est. (7-31-92)
In Compliance with Final Limits	Aug. 1992	Est. (8-31-92)

The TA-53 Lagoons will be eliminated by construction of three lift stations and force mains to carry wastewater to the TA-3 Trickling Filter Plant. Plans for this project have been completed and are being prepared for bidding. Sampling of several locations along the proposed force main route may be required in order to verify that solid waste management units will be avoided and to comply with the Laboratory's Resource, Conservation and Recovery Act

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NEPA (National Environmental Policy Act) review has been completed for this project and EOE approval has been obtained.

The elimination of the TA-53 Lagoons was not included in the original SWSC Project because of their distance from the central Laboratory area. Elimination of these lagoons will be accomplished as a separate project. Sanitary wastewater from TA-53 will eventually be treated by the SWSC Project when the TA-3 Trickling Filter Plant is shut down.

The intermediate completion date of January, 1992, for advertisement of construction has not been met due to a delay in the NEPA review and in the completion of contract documents for the project. This delay is not expected to affect the August, 1992, date for compliance with final effluent limits.

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Schedule for Waste Stream Identification and Characterization

<u>Sanitary Outfalls/ Industrial Categories</u> Number of Outfalls in Parentheses	<u>Required By</u>	<u>Completed/ Estimated</u>
01A TA-3 Power Plant (1)-100%	Oct. 1991	Comp. (June,1991)
02A Boiler Blowdown (2)-100%	Oct. 1991	Comp. (June,1991)
05A H.E. Wastewater (21)-50%	Oct. 1991	Comp. (Sept.1991)
06A Photo Wastewater (13)-100%	Oct. 1991	Comp. (Dec.1991)
12S Printed Circuit (1)-100%	Oct. 1991	Comp. (Dec.1991)
03A Treated Cooling Water (40) - 100%	Jan. 1992	(8) Comp. (Dec.1991)
04A Non-Contact Cooling Water (49) - 50%	Jan. 1992	(20) Comp. (Dec.1991)
05A H.E. Wastewater (21) - 100%	Apr. 1992	Comp. (Dec. 1991)
02S TA-9 Lagoon (1) - 100%	Apr. 1992	Comp. (Dec. 1991)
03S TA-16 Treatment Plant (1) - 100%	Apr. 1992	Comp. (Sept. 1991)
01S TA-3 Treatment Plant (1) - 100%	July 1992	
051 TA-50 Rad Treatment Plant (1) - 50%	July 1992	
07S TA-46N Lagoons (1) - 100%	Oct. 1992	
12S TA-46S Lagoons (1) - 100%	Oct. 1992	
04S TA-18 Lagoons (1) - 100%	Jan. 1993	
10S TA-35 Lagoons (1) - 100%	Jan. 1993	
09S TA-53 Lagoons (1) - 100%	Apr. 1993	
04A Non-Contact Cooling Water (49) - 100%	July 1993	
051 TA-50 Rad Treatment Plant (1) - 100%	July 1993	
05S TA-21 Treatment Plant (1) - 100%	July 1993	

Field surveys for waste stream identification and characterization work have been completed for the TA-3 Power Plant, the TA-16 and TA-21 Steam Plants, 100% of the H.E. outfalls, 100% of the photo wastewater outfalls, the printed circuit board outfall and the TA-9 and TA-16 sanitary treatment facilities. Draft reports have been completed for most of these surveys. Work on waste stream characterization surveys and reports is ahead of schedule for the H.E. outfalls, and TA-9 and TA-16 sanitary facilities. Work is behind schedule for the treated cooling water outfalls and non-

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Contact cooling water outfalls. Approximately eight treated cooling water outfalls and 20 non-contact cooling water outfalls are completed. Overall work on waste stream characterization surveys and reports is on schedule to complete all such work by July, 1983.

Work remaining on these outfalls includes quality assurance review of the draft reports and implementation of corrective actions. Efforts to accelerate quality assurance reviews and implementation of corrective actions are being taken. Adjustments to the schedule for waste stream characterization are proposed in order to move work at TA-53 ahead and to re-schedule other work. (Please see the enclosed Request for Revisions to the Administrative Order Docket No. VI-9-1329).