FFCO

Mike S.

<-> Hazardous Waste Section
Ground Water Section

Department of Energy
Albuquerque Operations
Los Alamos Area Office
Los Alamos, New Mexico 87544

RECEIVED
OCT 18 1988

OCT 12 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

RECEIVED
OCT 14 1988
SURFACE WATER QUALITY BUREAU

Mr. Myron Knudson, Director
Water Management Division, 6W
U. S. Environmental Protection Agency
Allied Bank Tower at Fountain Place
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Mr. Knudson:

The Federal Facilities Compliance Agreement (FFCA) regarding National Pollutant Discharge Elimination System (NPDES) Permit NM0028355 requires progress reporting beginning October 1, 1986. The progress reports are to include, but not be limited to, all construction activities that have been completed, an update of those activities to be completed, and positive reporting of achievement of compliance. The enclosed report is organized according to the compliance schedule included in Attachment 1. C. of the FFCA, and provides positive reporting information concerning Outfall 05S.

Furthermore, this letter requests amendment of the FFCA regarding Outfalls 09S, 04S, 02A, and 05A and proposes interim effluent limitations and a schedule of compliance to allow design and construction of the physical modifications to improve the treatment systems. The imposition of interim effluent limitations for those Outfalls subject to the FFCA is crucial to allow engineering design and construction to proceed without incurring further NPDES permit violations.

I trust that this report satisfies the FFCA reporting requirement, and that the requested amendments of the FFCA can be approved in the near future. Should you have any further questions concerning this report, please feel free to call Donna Lacombe (FTS 843-5288) of my staff.

Sincerely,

Joyce Hester Larson for
Frank A. Baca
Acting Area Manager

Enclosure

1640

cc w/enclosure::
Kathleen Sisneros, NMEID, Santa Fe, NM
James Highland, USEPA, Region VI, Dallas, TX

LTP:DML:0011

FFCA REPORT AND AMENDMENT REQUEST

Outfall 01A

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 03A

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 05A

Final Design	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 01S

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 04S

Final Design Complete	Completed
Advertisement	Completed
Award of Construction Contract	Completed
Construction Complete	Completed
In Compliance with Final Limits	Completed

Outfall 05S

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 05S was sampled during May 1988 and pursuant to the FFCA requirement enumerated at Section VI C., the following analytical information demonstrates achievement of compliance.

Biochemical Oxygen Demand	28.0 mg/l
Total Suspended Solids	16.3 mg/l
pH (range)	7.1 to 7.4 standard units

Outfall 06S

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 10S

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Completion	Completed
In Compliance with Final Limits	Completed

Outfall 11S

Final Design Complete	Completed
Advertisement of Construction Contract	Completed
Award of Construction Contract	Completed
Construction Complete	Completed
In Compliance with Final Limits	Completed

REQUEST FOR AMENDMENT OF THE FFCA

By correspondence dated August 30, 1988, Administrative Order Docket No. VI-88-195 was issued regarding violations of NPDES permit NM0028355. A reply has been submitted under separate cover addressing the corrective actions that have been implemented to achieve and assure NPDES permit compliance. The reply referenced the existing FFCA and stipulated that an amendment request would be forthcoming to request that 4 Outfalls be added to the FFCA. These Outfalls (09S, 04S, 02A, and 03A) require more than 30 days to design and construct facilities to mitigate permit violations. The following information is provided to support our request for FFCA amendment in order to comply with AO Docket No. VI-88-195 and achieve compliance with NPDES permit NM0028355.

Outfall 09S

Outfall 09S discharges from a sanitary wastewater system located at Technical Area (TA) 53. The sanitary wastewater system consists of three oxidation lagoons, two of which are aerated. The discharge from this wastewater system was incorporated in the first FFCA dated March 9, 1983, because of chronic noncompliance with the NPDES permit. The FFCA required construction activities to achieve permit compliance by September, 1985. As a result, a third Hypalon-lined lagoon was constructed by the deadline, achieving the desired permit compliance.

In the 30 months elapsed since September, 1985 there have been 8 noncompliances reported for Outfall 09S. These noncompliances, as well as our desire to maximize environmental protection, prompted the initiation of a study in January 1988 of the wastewater system and to devise short and long-range plans to ameliorate and eliminate the noncompliance problems and assure environmental protection. Because the effluent from Outfall 09S contains activation products from high energy research activities (see NPDES reapplication, March 1985, Annual Summary Report of Operating Data, Liquid Waste Management), we are committed to assuring that radioactive wastewater effluents are discharged at the lowest feasible concentration below the Department of Energy's (DOE) Radiation Protection Standard.

With regard to long-range planning, a portion of the long-range sanitary wastewater treatment solution resides in the FY-88 Line Item project, "Sanitary Wastewater System Consolidation" (SWSC), which will provide area-wide wastewater collection and provide treatment at a single treatment facility, thus eliminating 9 individual treatment facilities and approximately 30 septic tanks throughout Los Alamos National Laboratory (LANL). The architect/engineer (A-E) for this project will begin detailed engineering design for this project this Fall. At this time it is our intent to amend the contract to include a study, estimate, and design for consolidating the TA-53 wastewater into the SWSC project. Additionally, consideration will be given to performing feasibility and cost analyses regarding construction of alternative wastewater treatment facilities at TA-53.

A study and conceptual engineering design is also scheduled for FY-89 to simultaneously develop long-range solutions, including enhanced treatment and wastewater consolidation, during the same compliance schedule, for the radioactive wastewater effluent at TA-53. In the meantime, short-term wastewater solutions have already been conceptually designed to segregate the sanitary and radioactive wastewater at TA-53. The short-

term solutions will immediately provide environmental protection by preventing the discharge of radioactive wastewater, and will facilitate the eventual collection and treatment of non-radioactive sanitary wastewater by the Sanitary Wastewater Consolidation System (SWSC), thus eliminating Outfall 09S. For the short-term, the sanitary wastewater would be isolated and treated in two of the aerated oxidation ponds prior to discharge. All radioactive wastewater would be separately collected and routed to the existing Hypalon-lined oxidation pond, where the effluent would be retained and evaporated without discharge to "waters of the U.S.". This short-range project is presently under detailed engineering design. Construction is scheduled to commence in March, 1989 and be completed by July, 1989. In order to accomplish these short and long-range environmental improvements, the following schedule of compliance and interim effluent limitations are proposed for inclusion in the FFCA regarding Outfall 09S.

COMPLIANCE SCHEDULE FOR PERIOD OF COMBINED SHORT AND LONG-RANGE PROJECTS:

Interim Compliance Limitations:

Effluent Characteristics	Discharge Limitation		
Outfall 09S (TA-53)	Daily Avg. (lb/day)	Daily Avg. (mg/l)	7-day Avg. (mg/l)
Flow (MGD)	N/A	N/A	N/A
BOD (5day)	42	70	150
TSS	54	90	150
pH (range)	5.5 to 11.0		

Compliance Schedule:

Outfall 09S (TA-53) Long-Range Projects (reflecting completion of the SWSC project)

Final design completion	October 1989
Advertisement of construction	December 1989
Award of construction contract	February 1990
Construction completion	January 1992
Special facilities completion and facility startup	June 1992
In compliance with final limits	July 1992

Outfall 04S

Outfall 04S discharges from two small sanitary wastewater oxidation lagoons, located east of TA-18. Although significant efforts have been expended to correct infiltration by replacing sewer trunk line, two engineering studies have been performed producing conceptual designs for treatment plant upgrades, and a detailed design and cost estimate have been prepared for constructing sand filtration treatment units, further corrective actions are needed to provide adequate wastewater treatment to prevent NPDES permit violations. Although this facility is due to be replaced by the SWSC project in 1992, additional short-term treatment improvements bear consideration at present. Therefore, we propose to: perform additional infiltration analyses and correct sources of infiltration; perform pilot-scale studies of rock/sand filtration in-situ, toward development of full-scale application; and study seasonal discharge and other operational alternatives in order to achieve permit compliance.

Interim Compliance Limitations:

Effluent Characteristics		Discharge Limitation	
Outfall 04S (TA-18)	Daily Avg. (lb/day)	Daily Avg. (mg/l)	7-day Avg. (mg/l)
Flow (MGD)	N/A	N/A	N/A
BOD (5day)	2.5	60	90
TSS	2.5	60	150
pH (range)	5.5 to 11.0		

Compliance Schedule:

Final design completion	October 1989
Advertisement of construction	December 1989
Award of construction contract	February 1990
Construction completion	January 1992
Special facilities completion and facility startup	June 1992
In compliance with final limits	July 1992

Outfall 02A

Boiler blowdown effluent occasionally exceeds NPDES permit limitations for TSS and pH. A consulting engineering firm was retained to study the boiler blowdown category and make recommendations on treatment system upgrades. Engineering reports prepared during July, 1988 contained various technical recommendations including: installation of heating equipment to raise demineralizer water supply temperatures; enlargement of anion demineralizer beds; installation of automatic

controls; installation of pH neutralization facilities and equipment; suspended solids control facilities; and other operation and maintenance items. The following schedule of compliance and interim effluent limitations are proposed for inclusion in the FFCA regarding 02A.

Interim Compliance Limitations:

Effluent Characteristics	Discharge Limitation		
Outfall 02A	Daily Avg. (lb/day)	Daily Avg. (mg/l)	Daily Max. (mg/l)
Flow (MGD)	N/A	N/A	N/A
TSS	N/A	180	250
Total Iron	N/A	20	60
Total Copper	N/A	2	2
Total Phosphorus	N/A	30	60
Sulfite (as SO3)	N/A	45	80
Total Chromium	N/A	Report	Report
pH (range)	6.0 to 9.0		

Compliance Schedule:

Final design complete	December 1988
Advertisement of construction	February 1989
Award of construction contract	April 1989
Construction complete	September 1989
In compliance with final limits	October 1989

Outfall 05A

High explosive wastewater periodically exceeds the NPDES permit limits for chemical oxygen demand (COD). The COD violations are usually the result of the presence of organic solvents in the wastewater as a result of manufacturing and processing high explosives. Although various aeration techniques have been employed to reduce the COD, and aggressive operational programs have been instituted to reduce the amount of solvents in the wastewater, further wastewater treatment is deemed necessary to control COD in the effluent. During June, 1988 solvent distillation equipment was purchased for installation in high explosive processing buildings, in an effort to reduce solvent levels in the wastewater. This equipment is presently being installed and will be pilot-tested during October, 1988. In order to fully test the new equipment, properly install it, design and install additional equipment, and otherwise improve treatment technology for COD control, the following schedule of compliance and interim effluent limitations are proposed for inclusion in the FFCA with regard to Outfall 05A.

Interim Compliance Limitations:

Effluent Characteristics	Discharge Limitations		
Outfall 05A	Daily Avg. (lb/day)	Daily Avg. (mg/l)	Daily Max. (mg/l)
Flow (MGD)	N/A	N/A	N/A
COD	N/A	1000	2000
TSS	N/A	60	90
pH (range)	6.0 to 9.0		

Compliance Schedule:

Final design completion	December 1988
Advertisement of construction	February 1989
Award of construction contract	April 1989
Construction completion	August 1989
In compliance with final limits	October 1989