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**CERTIFIED LETTER - RETURN RECEIPT REQUIRED**

December 22, 2000

Colonel Jefferey A. Remington  
Cannon Air Force Base  
100 S DL Ingram Blvd Ste 100  
Cannon Air Force Base, New Mexico 88103-5214



**RE: Discharge Plan Renewal Approval, DP-873, Cannon Air Force Base**

Dear Colonel Remington:

Pursuant to Water Quality Control Commission (WQCC) Regulation 3109, the application for discharge plan renewal for DP-873 submitted by Colonel Loyd Utterback for the discharge of 1,130,000 gallons per day of domestic and industrial waste from the Cannon Air Force Base (CAFB) is hereby approved subject to the conditions listed below. The facility is located approximately 7 miles west of Clovis in Sections 12, 13, 24, 25, and 30 of T2N, R34E and , Sections 19, 20, and 24 of T2N, R35E, Curry County. In approving this discharge plan, the New Mexico Environment Department (NMED) has determined that the requirements of WQCC Regulation 3109.C have been met.

The approved CAFB treatment and disposal system is briefly described as follows:

Up to 1,130,000 gallons per day of domestic and industrial wastewater will be treated and disposed of as follows: Raw wastewater from CAFB enters the wastewater treatment plant, flows through a bar screen for solids removal and is pumped to one of two sequencing batch reactor (SBR) basins for aeration and clarification. Wastewater is then chlorinated and dechlorinated. Treated effluent is discharged to an unlined playa lake, the north holding impoundment, or a synthetically lined holding pond at the golf course, then it is land applied onto 52 acres of native grasses or is used for landscape irrigation. Sludge from the SBR units goes to an aerobic digester then to asphalt lined sludge drying beds. Discharges of untreated wastewater to the north holding impoundment will only occur under emergency conditions. Ground water below the site is at a depth of approximately 277 feet and has a total dissolved solids concentration of approximately 535 milligrams per liter.

The approved discharge plan renewal consists of the material submitted by CAFB dated August 6, 1999. In addition, the discharge plan includes information and materials submitted as part of the original discharge plan approved on December 8, 1994 and the materials for modification dated June 24, 1998. The discharge shall be managed in accordance with the approved plan and is subject to the conditions listed below.

However, approval of this discharge plan does not relieve you of your responsibility to comply with any requirements of the previously approved discharge plan, DP-873, and modifications to the discharge permit, the New Mexico Water Quality Act, WQCC Regulations, any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

### **CONDITIONS FOR APPROVAL**

**Operational Plan** – CAFB shall supplement the operational plan under the Specific Requirements section as follows:

The concentration of total nitrogen in the treated and disinfected effluent shall not exceed 15 milligrams per liter.

**Contingency Plan** – CAFB shall supplement the contingency plan under the Specific Requirements section as follows:

1. If an effluent sample indicates that the effluent from the treatment plant contains total nitrogen concentrations greater than 15 mg/l, a confirmatory sample shall be analyzed for total nitrogen within 7 days. If this sample confirms that the effluent contains greater than 15 mg/l total nitrogen, the following contingency plans shall be enacted:
  - a. NMED shall be notified immediately that the contingency plan is being enacted,
  - b. effluent sampling and analysis shall be conducted on a monthly basis,
  - c. CAFB shall examine the Operation and Maintenance Log for improper operational procedures, and conduct a physical inspection of the treatment system to detect abnormalities in the system. Any abnormalities discovered shall be corrected.
  - d. If after 30 days, the effluent is not below 15 mg/l total nitrogen, CAFB shall submit a corrective action plan for NMED approval to upgrade the treatment plant to achieve the effluent limit. This plan shall be submitted within 60 days of the original confirmation of exceeding the effluent limit. The corrective action plan shall be implemented immediately upon NMED approval.
  - e. When effluent sampling and analysis confirm that the total nitrogen concentration

is less than 15 mg/l total nitrogen for three consecutive monthly samples, CAFB shall return to quarterly effluent monitoring.

The reason for this condition is to comply with WQCC Regulation 3107.A.10 by providing a contingency plan to address potential impacts to ground water quality.

2. If ground water monitoring indicates an increasing trend for a water contaminant for 4 consecutive quarters or if the WQCC Regulation 3103 numerical standard is exceeded for a water contaminant by more than 2 times, CAFB shall collect a confirmation sample from the monitoring well with the contamination within 15 days to confirm the initial sample results. Upon confirmation of groundwater contamination, CAFB shall submit a corrective action plan to NMED if a ground water corrective action plan under the authority of the NMED Hazardous Waste Bureau (HWB) will not address the ground water contamination that violates WQCC Regulations. The corrective action plan shall include a site investigation to define the source, nature and extent of ground water contamination and a proposed abatement option. The site investigation and abatement option shall be consistent with the requirements and provisions of sections 4101, 4103, 4105.B., 4106.E, 4107 and 4112 of the WQCC Regulations. The corrective action plan shall also provide appropriate source control measures. The corrective action plan shall be submitted to NMED for approval within 30 days of confirmation of ground water contamination, and shall be initiated within 30 days of NMED approval.

**Closure Plan** – CAFB shall supplement the closure plan under the Specific Requirement section as follows:

1. In the event that the SBR units are taken out of service and/or the north impoundment is closed permanently, CAFB shall remove all solids from the basins and the impoundment and dispose of them in a manner that is consistent with the solids management plan under the active permit at the time, or submit an alternative disposal method to the NMED for approval.
2. In the event that CAFB discontinues discharging to the north impoundment and the playa lake, post closure sampling of monitoring wells shall continue at the frequency required under the active permit for 2 years. If ground water monitoring indicates that WQCC standards have been violated during post closure monitoring, CAFB shall implement the contingency plan stated in the above section. If ground water monitoring indicates that all ground water standards have been met and NMED, GWQB will no longer require ground water monitoring, CAFB shall abandon monitoring wells that are not in use under the authority of the NMED, HWB in accordance with NMED Monitor Well Construction and Abandonment Guidelines (copy enclosed).

### **SPECIFIC REQUIREMENTS**

The terms and conditions of this approval contain specific requirements which are summarized below.

**Operational Plan** – CAFB will treat and dispose of wastewater and solids as described in the following operational plan:

1. Up to 1,130,000 gallons per day of domestic and industrial wastewater from CAFB passes through a mechanical or manual bar screen, and a parshall flume and into the influent pump station. Wastewater is pumped into 1 of 2 sequencing batch reactor basins (SBR) for aeration, clarification, nitrification, and denitrification. Effluent from the SBR units flows through a serpentine chamber for chlorination and dechlorination.
2. Treated effluent is discharged to an unlined playa lake, the north holding impoundment, or the synthetically lined holding pond at the golf course for land application onto 52 acres of native grasses with a center pivot sprinkler, or for landscape irrigation at CAFB recreation areas in accordance with NMEID Policy for the Use of Domestic Wastewater Effluent for Irrigation, December 1985. Notification is provided to residents of military housing occupants within 100 meters of the irrigated areas and signs have been posted informing the public of the use of treated wastewater for irrigation.
3. Treated wastewater from the golf course pond may be discharged to the storm drainage system if the golf course is saturated due to heavy precipitation events and the golf course pond water will dilute with storm water. This discharge will be consistent with all National Pollutant Discharge Elimination System (NPDES) permit requirements.
4. Solids from the SBR units are pumped to the aerobic sludge digester. Digested sludge goes to asphalt lined sludge drying beds for drying. Sludge drying beds are equipped with an under drain system that returns liquids to the SBR units.
5. Dried sludge is stockpiled on 2 paved areas surrounded by a 2 foot high concrete wall until sludge has been deemed Class A per 40 CFR Part 503, Standards for the Use of Disposal of Sewage Sludge. Dried sludge is disposed of at a landfill or used for small scale landscaping onsite in a manner that complies with all local, state, and federal laws. Any disposal of sludge that is not consistent with this requirement will be subject to NMED approval through a discharge plan modification.
6. CAFB will refurbish the north holding impoundment by; removing remaining sludge and placing it in the south holding impoundment and, placing a bentonite and/or flexible membrane liner in the impoundment. Completion of these tasks will be completed in a time frame consistent with closure activities for the south impoundment under the authority of the NMED, HWB. Any area designated to receive untreated wastewater will be lined with a synthetic liner in a manner that is consistent with New Mexico Environment Department (NMED), Ground Water Quality Bureau (GWQB) Guidelines for Liner Material and Site Preparation for Synthetically-Lined Lagoons (copy enclosed).
7. Prior to refurbishing the north holding impoundment, untreated wastewater may be discharged to the north holding impoundment under emergency conditions. CAFB will

notify the GWQB prior to discharging untreated wastewater to the north impoundment.

8. After refurbishing the north holding impoundment, CAFB may discharge untreated wastewater to the area that has been designated and has been synthetically lined.

**Monitoring Plan** – CAFB will conduct monitoring as follows and will report results to the GWQB by the 15<sup>th</sup> of February, May, August, and November of each year:

1. Wastewater volumes will be submitted as follows:
  - a. wastewater volumes into the treatment plant will be recorded monthly and reported quarterly,
  - b. effluent volumes discharged to the playa lake, the north holding impoundment, the 52 acre land application area, the golf course pond, and effluent used to irrigate the golf course and family recreation areas, to include golf course driving range and tree farm, will be recorded monthly and reported quarterly.
2. Wastewater effluent quality data will be submitted as follows:
  - a. fecal coliform counts analyzed and recorded monthly, and reported quarterly,
  - b. quarterly analysis and reporting of nitrate as nitrogen (NO<sub>3</sub>), total Kjeldahl nitrogen (TKN), Chloride (Cl), and total dissolved solids (TDS) concentrations,
  - c. annual analysis and reporting of organics by EPA methods 624 and 625.
3. Ground water quality data will be submitted as follows for monitor wells P, O, and N:
  - a. quarterly reporting of water level elevations taken prior to purging wells, and
  - b. quarterly analysis and reporting of NO<sub>3</sub>, TKN, Cl, and TDS concentrations.
4. Ground water quality data will be submitted as follows for monitor wells E, F, G, and H:
  - a. quarterly reporting of water levels from all four wells taken when water levels from wells P, O, and N are measured, and
  - b. annual analysis and reporting of NO<sub>3</sub>, TKN, Cl, and TDS from monitor well G.
5. Land Application Data Sheets (LADS, copy enclosed) will be submitted quarterly for wastewater applied to:
  - a. the 52 acres of native grasses designated to receive wastewater from the playa lake, and
  - b. the golf course and family recreation areas, to include golf course driving range and tree farm.

**Contingency Plan** – CAFB will implement contingency activities as follows:

1. CAFB will maintain a written record of any seeps, spills, and/or leaks of effluent, leachate, process fluids, or water contaminants not authorized in the operational plan outlined above. For spills that could; a) result in injury, b) be detrimental to human health, animal or plant life or property, c) interfere with public welfare or the use of property, or d) migrate off CAFB, CAFB will initiate the notification and corrective actions as required by WQCC Regulation 1203. Within 24 hours of the incident, CAFB will verbally notify NMED and provide the information outlined in WQCC regulation 1203.A. Within seven days of discovering the incident, a written report shall be submitted verifying the oral notification and providing any additional pertinent information or changes. Within 15 days of the incident, CAFB shall submit a corrective action report describing actions taken and/or to be taken to remedy the impact of the spill and to prevent future spills.
2. For small spills of untreated wastewater, CAFB will place lime on all material that comes in contact with wastewater to destroy pathogenic organisms and control odors within 4 hours of discovery by the Environmental Flight.

**Closure Plan** – CAFB will implement closure activities as follows:

1. CAFB will remove sludge from the north holding impoundment and transfer it to the south impoundment. A soil cap will be placed on the sludge in the south holding impoundment to reduce infiltration of storm water. These closure activities will be completed in accordance with closure requirements under the authority of the NMED, HWB.
2. Should the useful life of the WWTP be exceeded or the plant is no longer capable of achieving minimum water quality standards, the system will be abandoned and influent piping to the SBR basins will be capped.

### **GENERAL DISCHARGE PLAN REQUIREMENTS**

In addition to any other requirements provided by law, approval of discharge plan, DP-873, is subject to the following general requirements:

#### **Monitoring and Reporting**

Monitoring and reporting shall be as specified in the discharge plan and supplements thereto. These requirements are summarized on the attached sheet(s). Any inadvertent omissions from this summary of a discharge plan monitoring or reporting requirement shall not relieve you of responsibility for compliance with that requirement.

#### **Record Keeping**

1. The discharger shall maintain at the facility, a written record of ground water and wastewater quality analyses.

The following information shall be recorded and shall be made available to the NMED upon request.

- a. The dates, exact place and times of sampling or field measurements.
  - b. The name and job title of the individuals who performed the sampling or measurements.
  - c. The dates the analyses were performed.
  - d. The name and job title of the individuals who performed the analyses.
  - e. The analytical techniques or methods used.
  - f. The results of such analyses, and
  - g. The results of any split sampling, spikes or repeat sampling.
2. The discharger shall maintain a written record of any spills, seeps, and/or leaks of effluent, leachate and/or process fluids not authorized by this discharge plan.
  3. The discharger shall maintain a written record of the operation, maintenance and repair of facilities/equipment used to treat, store and/or dispose of wastewater; to measure flow rates; and/or to monitor water quality. This will include repairs, replacement or calibration of any monitoring equipment and repairs or replacement of any equipment used in CAFB's waste or wastewater treatment and disposal system.

### **Inspection and Entry**

In accordance with § 74-6-9.B & E NMSA 1978 and WQCC Regulation 3107.D., the discharger shall allow the Secretary or his authorized representative, upon the presentation of credentials, to:

1. Enter at regular business hours or at other reasonable times upon the discharger's premises or where records must be kept under the conditions of this discharge plan.
2. Inspect and copy, during regular business hours or at other reasonable times, any records required to be kept under the conditions of the discharge plan.
3. Inspect, at regular business hours or at other reasonable times, any facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this discharge plan.
4. Sample or monitor, at reasonable times for the purpose of assuring discharge plan compliance or as otherwise authorized by the New Mexico Water Quality Act, any effluent at

any location before or after discharge.

### **Duty to Provide Information**

In accordance with § 74-6-9.B NMSA 1978 and WQCC Regulation 3107.D., the discharger shall furnish to the NMED, within a reasonable time, any relevant information which it may request to determine whether cause exists for modifying, terminating and/or renewing this discharge plan or to determine compliance with this plan. The discharger shall furnish to the NMED, upon request, copies of records required to be kept by this discharge plan.

### **Spills, Leaks and Other Unauthorized Discharges**

This approval authorizes only those discharges specified in the discharge plan. Any unauthorized discharges violate WQCC Regulation 3104, and must be reported to the NMED and remediated as required by WQCC Regulation 1203. This requirement applies to all seeps, spills, and/or leaks discovered from the CAFB wastewater collection and disposal system.

### **Retention of Records**

The discharger shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this discharge plan, and records of all data used to complete the application for this discharge plan, for a period of at least five years from the date of the sample collection, measurement, report or application. This period may be extended by request of the Secretary at any time.

### **Enforcement**

Failure to grant the Secretary or his authorized representative access to the records required to be kept by this discharge plan or to allow an inspection of the discharge facilities or to the collection of samples is a violation of this discharge plan and the WQCC Regulations. Such violations as well as other violations of the discharge plan, may subject the discharger to a compliance order, a compliance order assessing a civil penalty or an action in district court pursuant to § 74-6-10 NMSA 1978, and/or modification or termination of this discharge plan pursuant to § 74-6-5.L NMSA 1978. Penalties assessed as part of a compliance order shall not exceed \$15,000 per day for violations of the terms of this permit or the requirements of § 74-6-5 NMSA 1978, and shall not exceed \$10,000 per day for violations of other sections of the Water Quality Act.

### **Modifications and/or Amendments**

The discharger shall notify NMED, pursuant to WQCC Regs. 3107.C, of any modifications or additions to the CAFB's wastewater disposal system, including any increase in wastewater flow rate or wastewater storage and disposal management changes to the system as approved under this discharge plan. The discharger shall obtain NMED's approval, as a discharge plan modification, prior to any increase in the quantity or concentration of constituents in the leachate above those

approved in this plan. Please note that WQCC Regs. 3109.E and F provide for possible future amendment of the plan.

### **Other Requirements**

Please be advised that the approval of this plan does not relieve CAFB of liability should your operation result in actual pollution of surface or ground water which may be actionable under other laws and/or regulations.

### **RIGHT TO APPEAL**

If CAFB is dissatisfied with this action taken by NMED, CAFB may file a petition for hearing before the WQCC. This petition shall be in writing to the Water Quality Control Commission within thirty (30) days of the receipt of this letter. Unless a timely request for hearing is made, the decision of the NMED shall be final.

### **TRANSFER OF DISCHARGE PLAN**

Pursuant to WQCC Regulation 3111, prior to any transfer of ownership, the discharger shall provide the transferee a copy of the discharge plan, including a copy of this approval letter and shall document such to the NMED.

### **PERIOD OF APPROVAL**

Pursuant to WQCC Reg. 3109.G.4., this discharge plan approval is for a period of 5 years. This approval will expire December 22, 2005, and you must submit an application for renewal at least 120 days before that date.

On behalf of the staff of the Ground Water Pollution Prevention Section, I wish to thank you and for your cooperation during the discharge plan review.

Sincerely,



Marcy Leavitt, Chief  
Ground Water Quality Bureau

ML:PAB/pab

enc: Discharge Plan Summary - DP-873  
Land Application Data Sheets  
Guidelines for Liner Material and Site Preparation for Synthetically-Lined Lagoons  
NMED Monitor Well Construction and Abandonment Guidelines

Colonel Remington, DP-873

December 22, 2000

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xc: Carlos Romero, Dist. Manager, NMED Dist. 4  
~~NMED, HWB~~  
Paul Saavedra, Office of the State Engineer