



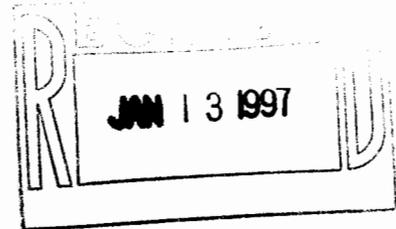
DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 49TH FIGHTER WING (ACC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO

07 JAN 1997

MEMORANDUM FOR US EPA REGION VI (6H-CS)

Attn: Mr. Gene Keeper
First Interstate Bank Tower
1445 Ross Avenue
Dallas Texas 75202-2733



FROM: 49 CES/CEV
550 Tabosa Ave
Holloman AFB NM 88330-8458

SUBJECT: Compliance Agreement Quarterly Report



1. Pursuant to the requirements set forth in Section X--REPORTING AND EXTENSIONS section of the Compliance Agreement signed on 20 December 1988, we hereby submit the 32nd Quarterly Progress Report (Atch 1). This report will provide a brief outline of events from 1 October-31 December 1996.
2. Documentation for the contents of the attached report is available upon request from the 49 CES/CEV office at Holloman AFB. If you have any questions or comments, please contact Dr. Fred M. Fisher at (505) 475-3931.


HOWARD E. MOFFITT
Deputy Base Civil Engineer

Attachment:
Compliance Agreement Report

cc: w/Atch
HQ ACC/JA
HQ ACC/CEVCM (Mr. Larry Isaacs)
ACC CES/ESVW (Mr. Jim Haggins)

49 FW/JA

NM Environment Department
Hazardous & Radioactive Materials Bureau
Box 26110
Santa Fe NM 87502-6110
Mr. Jerry Bober, and
Ms. Stephanie Kruse

Mr. Mark Wilson
Fish and Wildlife Service
2105 Osuna NE
Albuquerque NM 87113

AFCEE/CCR-D (Mr. Tom Manning)
P.O. Box 116
525 Griffin St
Dallas TX 75202

Mr. Mark Mercier
U.S. Army Corps of Engineers
Omaha District/CEMRO-ED-EA
215 N. 17th Street
Omaha NE 68102-4978

Mr. Robert Michna
Radian Corp
8501 Mo-Pac Blvd.
Austin TX 78720-1088

Mr. Dan Holmquist
Foster Wheeler Corp
Holloman AFB NM

Mr. Raymond P. Churan
Regional Environmental Officer
United States Department of the Interior
P.O. Box 649
Albuquerque NM 87103

**Holloman Air Force Base (HAFB) Federal Facilities Compliance Agreement (FFCA)
32nd Quarterly Progress Report, 1 October 1996-31 December 1996
Civil Engineer Environmental Flight, 49 CES/CEV, 30 December 1996**

1 Oct 1996: Conference call with HAFB, US Army Corps of Engineers-Omaha District (US ACE), Foster-Wheeler Environmental Corporation (FWENC), and Radian International LLC (Radian) to discuss refinements to lagoon closure alternative "Return to Original Contours."

1 Oct-21 Oct 1996: Interim remedial activities initiated. The lagoons still contain substantial water at this time, despite not receiving influent since 30 Jul 1996. Initial activities consist of pumping water from Lagoons D, E, and F into Lagoon C. During this work it became evident that the wet well of the golf course irrigation system is leaking into Lagoon F rapidly enough to impede progress in drying out this lagoon.

Pumping of water from the headworks of Lagoons A and B into the new wastewater treatment plant is under consideration at this time. Concerns were expressed by the plant operators about the chemical and microbiological characteristics of the water. Concerns about the chemical characteristics were readily addressed using the data in the *Site Characterization Report* (Radian, June 1995). The microbiological concerns were that filamentous bacteria or other organisms in the lagoon water may interfere with the settling process in the secondary clarifiers of the new plant. These concerns were addressed by collecting samples of lagoon water for microscopic analysis and for bench-top studies to evaluate how lagoon water will impact the settling process in the new plant. 2

3 Oct 1996: Received copy of letter from FWENC to US ACE reporting updated soil cover requirements for "Return to Original Contours" closure alternative.

3 Oct 1996: Submitted to US Environmental Protection Agency Region 6 (US EPA) and US Fish and Wildlife Service (US FWS) the results of (1) a comparison of analytes in Lagoon G to sediment benchmarks, and (2) estimates of DDT and breakdown product concentrations in waterfowl eggs. These actions were requested during the 3 Apr 1996 Stakeholders Closure Meeting. The results support previous conclusions that DDT and breakdown products are the chemicals of concern in Lagoon G. The levels exceeded some but not all benchmarks. Levels are expected to continue to decline and remedial actions in Lagoon G do not appear to be necessary.

3 Oct 1996: Scoping meeting with US ACE-Albuquerque District and contractors for design of the effluent pipeline from the new wastewater treatment plant to Lagoon G. The pipeline allows the continued use of Lagoon G as part of the new wastewater treatment plant project and was required for a Finding of No Significant Impact (FONSI) under the National Environmental Policy Act (NEPA). The new wastewater plant is, in turn, required to close the old lagoons.

4 Oct 1996: Submitted 31st Quarterly Progress Report

22 Oct-18 Nov 1996: Water removal from Lagoon D is essentially complete. Sludge in Lagoon D is about 6"-12" deep and is being successfully dried by disking. Water removal from Lagoon E is a continuing process because of leakage from the golf course irrigation system. Sludge in Lagoon E is found to be deeper than expected, especially in a trench found along the downgradient (southern) edge, where the sludge is estimated to be up to 6 feet deep. The bottom of the trench appears to be 3 feet below the water table. Some progress is made in the shallower parts of Lagoon E.

Microbiological examination and bench top studies of lagoon water indicate it should not impact the secondary clarifiers of the new wastewater treatment plant. However, the new plant has developed settling problems from an unknown source and the decision is made to delay pumping of lagoon water into the plant.

6 Nov 1996: Received internal review copy of revisions to *Sewage Lagoon Closure Plan* and *Corrective Measures Study* reflecting refinements to "Return to Original Contour" closure alternative.

12 Nov-13 Nov 1996: Meetings in Albuquerque (1) with US ACE - Albuquerque District, contractors, and US Dept of Agriculture Jornada Experimental Range to visit City of Albuquerque Rio Puerco land application site and initiate discussions for pilot studies to land apply biosolids for arid range reclamation, and (2) with US ACE - Albuquerque District and contractors, to finalize Sludge Management Plan for the new wastewater treatment plant. This plan is being developed to implement federal goals to encourage the recycling and beneficial use of sewage sludge (49 FR 24358, 12 Jun 1984; 58 FR 9248, 19 Feb 1993). Data on sludge in the lagoons C-G indicates it meets 40 CFR 503.13 "Clean Sludge" standards for metals. Sludge from the new wastewater plant is expected to be of equal or higher quality, and therefore will be suitable for beneficial uses such as a soil amendment in croplands or degraded rangeland.

18 Nov 1996: Received internal review copy of next round of revisions to *Sewage Lagoon Closure Plan* and *Corrective Measures Study* reflecting refinements to "Return to Original Contour" closure alternative.

18 Nov-17 Dec 1996: Attempt is made to fill Lagoon E trench with concrete rubble and other clean fill to make the sludge separate from the water and begin drying. The result of this effort is mainly to displace sludge and the associated water to higher areas within the lagoons. Transportation of concrete rubble is very expensive and is halted after one month.

21 Nov 1996: Trial pumping for 12 hour of 50 gal/min. from the Lagoons headworks (above A and B) into the new wastewater treatment plant is initiated. No adverse effects are detected.

21 Nov 1996: Meeting with US ACE - Albuquerque District and contractors to review 35% design of Lagoon G pipeline.

2 Dec 1996: Submitted to New Mexico Environment Department the revisions to *Sewage Lagoon Closure Plan* and *Corrective Measures Study* reflecting refinements to "Return to Original Contour" closure alternative.

2 Dec 1996: Operation of the new Wastewater Treatment Plant is turned over by USACE-Albuquerque District to HAFB. HAFB is operating the plant by contracting to a small business which will man the plant 16 hours/day week days and 8 hours/day weekends. The new plant uses an extended-aeration activated-sludge process to produce effluent meeting 40 CFR 133 secondary treatment standards that is a significant improvement compared to the old lagoons. The new plant is required to complete the closure of the old lagoons as required by the FFCA.

4 Dec-11 Dec 1996: Personnel from US FWS Bosque del Apache National Wildlife Refuge installed additional water control structures in the constructed wetlands to better regulate flow. Even though no discharge other than precipitation and runoff has been received since July 1996, the water level in Lagoon G is still too high to allow access to install the new water control structure. As a result, at least one additional visit by Bosque del Apache personnel will be required to complete the constructed wetlands.

The constructed wetlands and the continued use of Lagoon G are part of the new wastewater treatment plant project and are required for a Finding of No Significant Impact (FONSI) under the National Environmental Policy Act (NEPA). The new wastewater plant is, in turn, required to close the old lagoons.

5 Dec 1996: Repairs are made to the golf course irrigation wet well which are only partly successful in stopping water loss to Lagoons E and F.

9 Dec 1996: Pumping of 100,000 gal/day from the Lagoons headworks (above A and B) into the new wastewater treatment plant is initiated.

11 Dec 1996: Conference call between US ACE - Holloman Resident Office, US ACE - Omaha District, and FWENC to discuss progress of interim actions at the lagoons. It was decided to quit hauling cement rubble to Lagoon E to displace sludge because much more sludge appeared to be below the water table than was anticipated. Instead, sludge will be transferred from Lagoon E to Lagoon D, which is now relatively dry. In D it can be spread, dried and, if necessary, mixed with dry soil from the dikes. Water will continue to be pumped from C up into A and B, and from there into the new wastewater treatment plant.

18 Dec-31 Dec 1996: Interim activities in Lagoon E shift to moving wet sludge to Lagoon D as described above. This appears to be successful in drying out the sludge. Pumping of water from headworks to new wastewater treatment plant continues with no observed adverse effects on the new plant.