

HAFB-92 Blue



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 49TH FIGHTER WING (TAC)
HOLLOMAN AIR FORCE BASE NM 88330-5000

REPLY TO
ATTN OF 49 CES/CEV

12 MAY 1992

SUBJECT HAFB Lagoon Groundwater Assessment Monitoring Results.

TO DISTRIBUTION (See Atch 1)

1. Please find at Atch 2 the document by Radian Corp "Assessment Monitoring Results: Appendix IX and Confirmation Sampling" for the Sep 1991 and Feb 1992 groundwater sample collections at the Holloman AFB Lagoons. At Atch 3, (for NMED only) are the laboratory reports signed by the laboratory manager. We would like to schedule a conference call before the end of May to discuss these results and our proposed response. Dr Fred Fisher will contact you to make arrangements for the conference call.

2. The assessment monitoring indicates a low level of groundwater contamination by organochlorine pesticides. Radian Corp found alpha-benzene hexachloride (BHC) in Well MW-5 and delta-BHC in Well MW-7 in both the Sep 1991 and Feb 1992 samples, therefore confirming the presence of these contaminants. Radian Corp also detected other pesticides in either the Sep 1991 or Feb 1992 samples, including aldrin, dieldrin, beta-BHC, gamma-BHC (lindane), 4,4'DDD, endosulfan I, endosulfan sulfate, endrin, heptachlor, and heptachlor epoxide. The concentrations of the individual contaminants did not exceed 0.5 parts per billion. Please note that the Quality Assessment laboratory for the Feb 1992 sampling, the US Army Corps of Engineers, Missouri River Division (MRD) Laboratory in Omaha, NE, did not detect any organochlorine pesticides. Detection limits for the MRD Laboratory were about 5X higher than those for Radian Corp. This partially explains the difference between the two labs. We can offer no explanation at present for the failure of MRD labs to detect at least some of the pesticides.

3. The aquifer below Holloman AFB is naturally saline, exceeding New Mexico Human Health Standards or federal primary and secondary drinking water Maximum Contaminate Levels for total dissolved solids, sulfate, and chloride. Based on the New Mexico Water Quality Control Commission Regulations (WQCC 82-1, as amended through 18 Aug 1991, Parts 3-100 through 3-103) and "Guidelines for Groundwater Classification Under the EPA Groundwater Protection Strategy", (EPA, 1986), the groundwater is not considered a source or a potential source of drinking water.

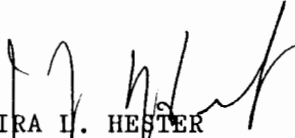
4. The levels of organochlorine pesticides were unrelated to levels of total organic carbon (TOC), the increase of which triggered the assessment monitoring. The increased downgradient TOC undoubtedly results from the large amount of non-hazardous organic matter accumulated in the lagoons owing to their primary function as a wastewater treatment facility, (closure scheduled for 1996). Therefore, TOC is not a useful parameter for detecting contamination at the Holloman lagoons, and we propose to eliminate it from the detection monitoring program. Instead, we propose to add method 8080 organochlorine pesticides for a subset of the wells to the detection monitoring program.

Readiness is our Profession

5. A related issue is the use of a single upgradient well (MW-1) for comparison with downgradient wells. The well originally designated as the second upgradient well (S-2) was found to be downgradient during unusually wet periods, and was eliminated from the monitoring network by EPA in 1991. A single well cannot estimate spatial variation in groundwater chemistry which recent data from a basewide survey of 83 monitoring wells shows to be very high (Radian Corp study in progress). Use of a single well to estimate background therefore increases the risk of false positives, (RCRA Groundwater Monitoring Technical Enforcement Guidance Document, EPA, 1986). Accordingly, we have constructed two new upgradient wells which we will propose to add to the monitoring network in another communication.

6. In view of the low level of contamination and the nonpotable, saline aquifer, we propose to return to the detection monitoring program modified to eliminate TOC and add method 8080 pesticides on some wells. We propose that assessment monitoring in the future be triggered by increases of an order of magnitude compared to values established during assessment monitoring. We would like to discuss in the conference call the possibility of installing two additional monitoring wells downgradient from lagoons A and C where the pesticides were detected. As these wells will be located on land administered by the Bureau of Land Management, it will be appropriate to involve them in the decision process.

7. If you have any questions, please contact Dr Fred Fisher at (505) 479-3921.


IRA L. HESTER
Colonel, USAF
Commander, 49 Support Group

- 3 Atch
- 1. Distribution List
- 2. Assessment Monitoring Results
- 3. Laboratory Results for Assessment Monitoring (NMED only)