



## FACSIMILE TRANSMITTAL

U.S. EPA REGION 6  
 HAZARDOUS WASTE MANAGEMENT DIVISION  
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MACHINE NUMBER:	(505) 827-1544/2965	VERIFICATION NUMBER: (505) 827-1558/2754
FROM:	Nancy Rinehart Morlock EPA Region 6 RCRA Permits Branch New Mexico and Federal Facilities Section	
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OFFICE:	6.054	
DATE:	9/26/95	PAGES, INCLUDING COVER SHEET: 6
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<b>INFORMATION FOR SENDING FACSIMILE MESSAGES</b>		
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PANAFAX UF-766	(214) 665-2164	
COMMENTS: Steve / Lee: Attached is a draft Approval with Modifications for the Kirtland AFB Basewide Plan, which was submitted in March 1995. Please review and call with any questions or comments. I plan to issue the approval within the next 2 weeks (by Oct. 11). Thanks! Nancy		
Copies to:		

KAFB1678



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**CERTIFIED MAIL: RETURN RECEIPT REQUESTED**

Scott E. Streifert, Colonel  
Director, Environmental Management Division  
377 ABW/EM  
2000 Wyoming Boulevard SE  
Kirtland AFB, NM 87117-5659

Dear Colonel Streifert:

The Environmental Protection Agency (EPA) hereby approves the Kirtland Air Force Base (KAFB) Basewide Plan, dated March 3, 1995, with the attached modifications.

The Basewide Plan shall form the basis for all future Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plans submitted by KAFB. In lieu of submitting a complete RFI Work Plan each time a new solid waste management unit (SWMU) is identified, KAFB will only submit a site-specific sampling plan for the new SWMU. The sampling plan must, at a minimum, address the issues listed in the attached modifications.

If you have any questions or require additional information, please contact Ms. Nancy Morlock of my staff at (214) 665-6650.

Sincerely yours,

Allyn M. Davis, Director  
Multimedia Planning and  
Permitting Division

Attachment

cc: Mr. Benito Garcia  
New Mexico Environment Department

**Approval with Modifications  
Kirtland Air Force Base  
Basewide Plans**

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The Environmental Protection Agency (EPA) has completed a review of the March 3, 1995 Basewide Plan submitted by Kirtland Air Force Base (KAFB). The Basewide Plan is a work plan addressing all facets of environmental restoration activities at KAFB. It will serve as a standard Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan for any new solid waste management units (SWMUs) that are identified at KAFB. As a consequence of this approach, the topics presented within the Basewide Plan are broad and general. Detailed discussions of most subjects are deferred to future project-specific sampling plans.

**GENERAL COMMENT**

The Basewide Plan indicates that aquifer permeability will be evaluated by using single well permeability tests (slug tests). Conducting only slug tests is inadequate because of the complex geology beneath KAFB and the fact that slug test permeability values are only applicable for a small volume of an aquifer. The RFI Basewide Plan shall therefore be modified state that more rigorous testing procedures, such as multiple well pump testing, will be conducted.

**SPECIFIC COMMENTS**

1. Volume I, Section 3.2, Page 2 of 2  
The Basewide Plan indicates that data summaries will be included with each progress report. EPA may periodically request copies of all raw data and associated quality control (QC) documentation, in addition to the data summary tables presented in the quarterly progress reports. Therefore, this section shall be modified to state that raw data and QC documentation will be made available to EPA, upon request.
2. Volume II, Part I, Section 1.0, Page 1 of 2, Paragraph 2  
The terms "interim remedial action" and "remedial action" are used incorrectly. These terms shall be replaced with "interim measure" and "corrective measures", respectively.
3. Volume II, Part I, Section 4.1, Page 1 of 10, Paragraph 2  
The word "extrusive" is used incorrectly. It should be replaced with the word "nonintrusive."
4. Volume II, Part I, Table 4-1, Conduct Initial Field Data Collection Program  
Neither this table nor Part II, Section 4.0, specifies the

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data quality level (analytical support level) and the associated sample type and purpose. The Basewide Plan must specify each sample type and its associated data quality level.

The Basewide Plan indicates that initial screening samples may be used for comparisons with subsequent sample data. If so, the initial screening samples must be of the same data quality level. This statement shall be included in the Basewide Plan.

5. Volume II, Part I, Section 4.1.1, Page 4 of 10  
The Basewide Plan states that "methods prescribed by EPA and Gilbert can be used to determine an adequate population size such that an estimated mean of the population achieves a prespecified accuracy with respect to program DQOs." The Basewide Plan should list and describe these methods.
6. Volume II, Part I, Appendix A  
An SOP for borehole abandonment shall be added to Appendix A.
7. Volume II, Part I, Appendix A, SOP A1.2, Part 3  
The SOP should indicate that samples for volatile organic compound (VOC) analysis will not be collected with a pump that agitates the water column, such as a Waterra pump.
8. Volume II, Part I, SOP A3.6, Page 1 of 1  
This section discusses water level measurements but does not discuss how measurement devices are to be cleaned (decontaminated). This information shall be added to the Basewide Plan.
9. Volume II, Part I, SOP A3.7, Page 1 of 8  
This section discusses aquifer testing and states that observation wells should be located at a minimum distance equal to 1.5 to 2 times the aquifer thickness. Aquifer thickness at KAFB has not been discussed in the Basewide Plan or established in previous reports and is, therefore, considered undefined. Use of aquifer thickness to space observation wells may potentially result in distances too large to be useful. Observation wells in unconfined aquifers should be placed no further than 100 to 300 feet from the pumping well, as recommended by Driscoll (1986), unless mitigated by local conditions.

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**SUMMARY OF ISSUES TO BE INCLUDED IN PROJECT-SPECIFIC SAMPLING PLANS**

The following items shall be included in all future project-specific sampling plans:

- Current conditions
  - Nature and extent of contamination
  - Implementation of interim corrective measures
- Characterization of sources and contaminants
- Identification of potential receptors
- On-going facility-wide projects, as appropriate.
- <sup>Site</sup> Facility background information
  - Topography and surface drainage map (for site)
  - Location of all production and ground water monitoring wells <sup>NEAREST TO MAJOR SITE</sup>
  - Location of any injection wells onsite or near the facility
  - All known past hazardous waste treatment, storage, or disposal areas, regardless of whether they were active on November 19, 1980
  - All known past and present underground waste storage tanks or piping
  - Uses of surrounding land
  - All tanks, buildings, utilities, paved areas, easements, and rights-of-way (and areas other than major facilities shown on Figure 2-2 of the base-wide plan)
  - History and description of operation, generation of solid and hazardous waste, and activities related to treatment, storage, and disposal
- Spills of product and waste
  - Approximate dates
  - Materials and amounts spilled
  - Locations
  - Response actions taken
- Summary of permits requested and/or received
  - Enforcement actions taken and subsequent responses
- Air and water quality
- Data quality level (analytical support level) of the Field Data Collection Program, and the associated sample type and purpose (initial and subsequent sample data must be of the same data quality level.)

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- Thorough presentation and discussion of data comparison and the selected statistical methods
- Detailed description of procedures for aquifer testing and data analyses. Pump tests should be emphasized over slug tests as the preferred method to determine aquifer characteristics.
- Pertinent SOPs detailing all tasks associated with each specific investigation. Precision objectives for appropriate field instruments should be addressed.
- SOPs and data validation guidelines for all nonstandard analytical methods.
- Detailed descriptions of all preinvestigation nonintrusive sampling or assessment activities, and data reduction and interpretation activities, including relevant SOPs
- Detailed descriptions of all statistical methods and procedures to be used to (1) determine the minimum number of samples; (2) determine sample locations; and (3) compare sample results.
- Descriptions of all sampling equipment to be used during all investigative activities (this requirement is intended to prevent the use of incorrect sampling equipment, such as the Waterra pump for collection of VOC samples.)