



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFMC)
CERTIFIED MAIL: Z 106 120 485
RETURN RECEIPT REQUESTED

ENTERED

2:7 JUN 1995

377 ABW/EM
2000 Wyoming Blvd SE
Kirtland AFB NM 87117-5659

Ms. Nancy Morlock, Environmental Engineer
RCRA Permits Branch
U.S. EPA Region 6
1445 Ross Ave, Ste 1200
Dallas TX 75202-7233



Dear Ms. Morlock

In response to the EPA's 22 May 1995 letter concerning the Tijeras Arroyo Limited RFI report, the Restoration Branch had GCL, the original contractor for this project, respond to the EPA's comments. Their comments, with which we concur, are attached.

Please contact Mr. Christopher DeWitt at (505) 846-2773/0053 if you have any questions.

Sincerely

DAVID L. MARTIN, Major, USAF
Acting Director
Environmental Management Division

Attachment:
GCL Response to Comments

cc:
NMED-HRMB (Mr. Pullen)
AFCEE/ERD (Mr. Arnold)
377 ABW/EMC

KAFB1644



June 26, 1995

Mr. Rodney C. Arnold
Restoration Team Chief
AFCEE/ESR
8001 Inner Circle Dr., Ste. 2 (BLDG. 624W)
Brooks AFB TX 78235-5318

RE: RESPONSE TO EPA REGION 6 COMMENTS ON THE TIJERAS ARROYO LIMITED RFI
REPORT

Dear Mr. Arnold:

In response to your request, attached is GCL's review of the comments from EPA Region 6 on the Tijeras Arroyo Limited RFI report in the letter of May 25, 1995.

Comment 1. *"In Section 2.0 Project Activities, page 13, the RFI Report states that the New Mexico Environmental Improvement Division conducted an inspection of Kirtland Air Force Base (KAFB) in July 1990. The inspection revealed that KAFB was in violation of the New Mexico Water Quality Control Commission Regulations because inspectors noted the presence of refuse, including oil contaminants, in the arroyos.*

In September 1990, the New Mexico Environment Department (NMED) issued a notice of violation (NOV) which required that all contaminated soils be removed from the arroyos. In September 1991, the Tijeras Arroyo Soil Characterization Work Plan was prepared and subsequently approved by NMED and EPA.

The Tijeras Arroyo RFI Report states that this work plan and the RFI investigation partially satisfied the requirements of the NOV by providing a mechanism for determining whether contaminated soils requiring removal were present in the arroyos. However, the RFI Report does not specifically address or describe the contaminated areas noted by NMED. Therefore, it cannot be determined if these contaminated soils were sampled and characterized as a part of this RFI investigation. If characterization of these contaminated soils was included in the RFI investigation, the report should clarify their locations and the sampling activities. If not, the RFI Report should state that these areas were not specifically identified and sampled."

Response: The NOV, dated September 4, 1990 (see attachment 1), issued by the NMED to Kirtland Air Force Base (KAFB), stated general violations of section 2-201 of the WQCC regulations within and watercourses, and arroyos on the base. Exact violation locations were not specified in the NOV. The RFI work plan and investigation samples were designed and located in areas that would incorporate the NOV sites (arroyos), where appropriate. Therefore, the use of the term "partially

Mr. Rodney C. Arnold
June 26, 1995
Page 2

satisfied the requirements of the NOV" was used in the RFI report, as required by the RFI work plan. The samples collected in the associated areas (study areas 1 thru 12) were analyzed to verify the clean closure of the NOV sites.

All locations identified in the NMED's September 1990 NOV obtained approved clean closure status by the NMED, as shown in the August 19, 1994 and November 14, 1994 letters from NMED to Mr. Walter S. Darr III at Kirtland AFB (see attachment 1). These indicate all of the NOV requirements have now been fully satisfied.

In addition to this RFI, Tijeras Arroyo was the subject of an investigation conducted in conjunction with the RFI for Appendix I SWMUs. Part of the Appendix I RFI included surface water sampling during a precipitation event. It was noted that runoff from the base into Tijeras Arroyo contained no contamination above any levels detected in the water as it flowed onto the base. Additional soil sampling was conducted at three locations along Tijeras Arroyo as part of the Appendix I RFI. This information is available in the Stage 2A RFI report, dated December 1993.

Comment 2. *"Methylene chloride and bis(2-ethylhexyl)phthalate concentrations exceeded either ten times the blank concentration and/or detection limit in several samples from study areas 5, 6, 7, 8, 9, 10 and 12. The possibility of organics contamination in these areas should be reevaluated."*

Response: GCL has further evaluated methylene chloride and bis(2-ethylhexyl)phthalate for the possibility of contamination.

Concerning methylene chloride, no other VOC contaminants were detected out of the many soil and water samples analyzed, indicating that contaminants were not introduced into the environment. As stated in the RFI report, methylene chloride was detected in 11 samples, six of which were associated with laboratory contamination as evidenced by corresponding methylene chloride concentrations in the associated field blanks, equipment blanks, ambient blanks, and QA/QC laboratory samples. The remaining five detections of methylene chloride in soil samples are not attributed to contamination in the field because: 1) methylene chloride has been shown as a laboratory contaminant with respect to this project and, 2) based upon past and present waste disposal practices, no known sources of methylene chloride are located near Tijeras Arroyo or its tributaries. The fact that methylene chloride was found in some lab QA/QC samples indicates that methylene chloride contamination may have been present in the laboratory. Nevertheless, the highest concentration of methylene chloride was 31 ug/kg in soil sample TT-15 at 3 to 5 feet below grade, and the proposed action level is 90,000 ug/kg. Therefore, even if these levels of methylene chloride are considered by EPA as possible environmental contamination as opposed to laboratory contamination, the levels encountered are several orders of magnitude below the proposed action level.

Concerning bis(2-ethylhexyl)phthalate, no other semi-volatile organic compounds (SVOCs) were found in any of the soil and water samples, indicating that contamination was not introduced into the environment. In addition, there is no known source of bis(2-ethylhexyl)phthalate in Tijeras Arroyo or its tributaries. Bis(2-ethylhexyl)phthalate is a known constituent of latex. The field team wore latex gloves, therefore, the concentrations may be attributed to the latex gloves. The highest

Mr. Rodney C. Arnold
June 26, 1995
Page 3

concentration for bis(2-ethylhexyl)phthalate was 8,600 ug/kg for soil sample TA-2. This concentration is an order of magnitude below the proposed action level of 50,000 ug/kg. Using similar reasoning, as stated above, the levels observed in the Tijeras Arroyo samples are at least one order of magnitude below the proposed action level. Therefore, pending approval of the proposed action levels, no action is required.

The possibility of methylene chloride and bi(2-ethylhexyl)phthalate contamination is unlikely based on the lack of a known source of contamination, no other VOCs or SVOCs having been detected, and the low concentrations found in comparison with proposed soil action levels. Contamination is attributed to laboratory activities for methylene chloride and latex gloves used by the field team for bis(2-ethylhexyl)phthalate.

Comment 3. *"The following table displays the metals that exceeded their calculated preventative action limits (PAL) and/or the United States Geological Survey (USGS) background concentrations for the Albuquerque area. The proposed 40 CFR 264 Subpart S risk-based action levels are provided for further comparison."*

Response: As shown in the table in attachment 2, the concentrations of arsenic, barium and chromium that exceeded the PAL or USGS background levels for the Albuquerque area did not exceed the proposed 40 CFR 264 Subpart S risk-based action levels. Therefore, with respect to these three metals, and pending approval of the proposed action levels, no action is required.

The proposed action level for lead has not been established, but as stated in the RFI report, lead is a common element of barium, arsenic and lead composites found in alluvial deposits. All samples obtained in Tijeras Arroyo were tested for Total RCRA metals. Their potential leachability (toxicity characteristic leaching procedure: TCLP) was not determined. Although the concentration of leachable lead is generally lower than the total lead value from a sample. Further analysis of the samples with site-specific background metals concentrations may be performed upon completion of the joint KAFB/Sandia National Laboratory (SNL) background study (see comment 4).

Comment 4. *"Although the background study was site-specific to KAFB and PALs were calculated by using a rather liberal statistical methodology, KAFB consistently defaulted to the United States Geological Survey (USGS) observed concentrations in the Albuquerque area to determine whether detected concentrations indicated possible contamination. Only in study area 11 did the observed sample concentrations exceed both the PALs and USGS observed concentrations."*

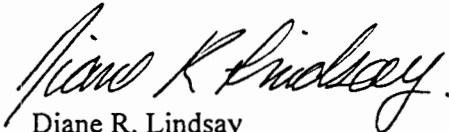
The report concludes that all concentrations detected-whether above the PALs and/or USGS observed concentrations-are within naturally occurring ranges for soil and placer deposits in the Albuquerque area. Based on the background study performed (1) contamination potentially exists within these study areas and requires further evaluation, or, (2) a more appropriate background study that provides representative site-specific concentrations needs to be performed."

Mr. Rodney C. Arnold
June 26, 1995
Page 4

Response: KAFB submitted a Background Study Work Plan to EPA in December of 1994 in response to a Stage 2A RFI Report Notice of Deficiency (NOD) from EPA. However, on May 19, 1995, KAFB requested that the work plan be withdrawn as Sandia National Laboratories (SNL) was scheduled to perform a similar background study at KAFB. In this same letter, KAFB proposed to the EPA that they combine their efforts with SNL to produce a facility wide background study, appropriate for both the DOE and the Air Force. On May 25, 1995, the EPA approved KAFB's request to work with SNL to develop a facility-wide background study that will address the entire KAFB complex (see attachment 3).

The SNL background study is scheduled for completion in December of 1995. Further evaluation of the data presented in the Tijeras Arroyo RCRA report should be performed at that time to negate or verify the "no action" recommendation.

Sincerely yours,
Geoscience Consultants, Ltd. (GCL)



Diane R. Lindsay
Staff Engineer

DRL/54065/DRLEPA2.LTR

Enclosures

cc: Christopher B. DeWitt, KAFB (w/enclosures)
Spencer S. Sepponen, ICF-Kaiser (w/enclosures)

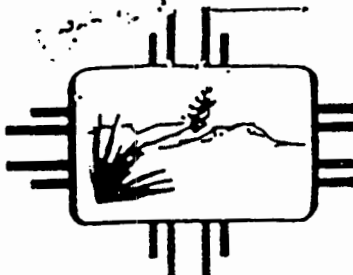
ATTACHMENT 1

September 4, 1990, letter from NMED to Colonel Edward Brannum,
Commander, KAFB

August 19, 1994, letter from NMED to Ms. Marsha Carra
at KAFB Environmental Management Division

November 14, 1994, letter from NMED to Mr. Walter Darr
at KAFB Environmental Management Division

9e



New Mexico Health and Environment Department

4, September 1990

Certified mail,
return receipt requested.

Colonel Edward Brannum
Commander, Kirtland Air Force Base
1606 ABW/CC
Kirtland AFB, NM. 87117-5000

GARREY CARRUTHER
Governor
DENNIS BOYD
Secretary
MICHAEL J. BURKHA
Deputy Secretary
RICHARD MITZELFEL
Director

RE: Notice of Violation.

Dear Colonel Brannum:

The Environmental Improvement Division (EID) of the New Mexico Health and Environment Department recently carried out an inspection of Kirtland Air Force Base, (KAFB) on 27, July 1990. The investigation found that KAFB is in violation of the Water Quality Control Commission (WQCC) Regulations, (copy enclosed). The inspectors found refuse was disposed of in arroyos on KAFB property. In addition, under the federal Clean Water Act (33 U.S.C. 1251 et seq.) the discharges KAFB makes into the arroyos may require a National Pollutant Discharge Elimination System, (NPDES) permit or permit reinstatement as KAFB was previously assigned permit number NM0000213.

KAFB is in violation of section 2-201 of the WQCC regulations. Refuse was found in watercourses on base at Outfall 0097-NP-030, and the ARES site. The inspectors noted refuse in arroyos in the form of oil contaminants and other unwholesome materials. Section 2-201 of the WQCC regulation states in part, "No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise."

The following state regulations and statutes may also apply to disposing of refuse and wastewater in this manner:

1. Sections 1-201 and 1-203 of the WQCC regulations.
 2. Section 30-8-1 Public Nuisance (NMSA 1978).
 3. Section 30-8-2 Polluting Water (NMSA 1978).
- (Copy of statutes enclosed.)

There are many storm sewer collection lines on base which are plumbed to arroyos. There are also many wastewater collection systems on base, and available evidence indicates they are plumbed to the storm sewer lines. It is unknown, to base and state personnel, precisely which stormwater collection systems are receiving

¹NPDES permit number NM0000213 was issued to KAFB in October 1974 and terminated by the EPA in July 1975 upon KAFB's request and submittal of an affidavit of no discharge.

Kirtland AFB
4, September 1990
Page 2

contributions of wastewater from other systems. The watercourse involved is a water of the United States, as defined in the Code of Federal Regulations, 40 CFR 122.2. Discharge of pollutants to these watercourses are subject to federal requirements pursuant to the federal Clean Water Act administered by the United States Environmental Protection Agency (EPA).

KAFB is currently not permitted to discharge wastewater to a water of the United States. Therefore, pursuant to section 2-100 of the WQCC regulations, KAFB discharges of contaminants to a watercourse are also subject to section 2-101 of the WQCC regulations. KAFB is required to assure its effluents are in compliance with section 2-101. Please refer to the enclosed regulations.

The allowance of discharges of pollutants entrained in storm water, or refuse, without a federal NPDES permit is a violation of Section 301 of the federal Clean Water Act. As a federal facility, KAFB is subject to Executive Order (12088), which requires full compliance with the federal Clean Water Act. The state and federal programs should not be confused nor should you interpret this letter to represent the EPA's position on this matter. EID has referred this matter to EPA for its consideration.

Violations of the WQCC regulations are subject to enforcement pursuant to the New Mexico Water Quality Act i.e., (NMSA 74-6-10). The EID seeks your voluntary compliance with the aforementioned regulations. The EID requests that within 30 days of receipt of this letter that KAFB submit a plan and schedule to: (1) Clean all contaminated soil from the arroyos. (2) Conduct a waste stream characterization with identification of source and chemical constituents for all discharges to surface waters. (3) Contact the EPA to request guidance on further action to comply with the federal Clean Water Act.

³Section 301. (a) of the federal Clean Water Act (33 USC 1251 et. seq.) states: "[e]xcept as in compliance with sections 302, 306, 307, 318, 402, and 404 of this Act, the discharge of any pollutant by any person shall be unlawful" (emphasis added). Section 402 establishes the NPDES permit program. Section 402 (p) (1) exempts discharges composed entirely of stormwater.

Kirtland AFB
4, September 1990
Page 3

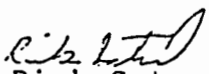
You may use the following addresses for correspondence:

Bob Hiller
Environmental Protection Agency
Region VI
Enforcement Section (6W-ET)
First Interstate Bank Building
1445 Ross Avenue
Dallas, TX 75202

Rick Gatewood
Surface Water Section
Surface Water Quality Bureau
New Mexico Environmental
Improvement Division
1190 St Francis Drive
Santa Fe, NM 87503

The Division is seeking your cooperation and voluntary compliance. If you have any questions, please feel free to contact me at 827-2794.

Sincerely:


Rick Gatewood
Water Resource Specialist
Surface Water Quality Bureau

enclosure: New Mexico statutes
WQCC regulations
Report of Field Investigation

cc with Field Investigation Only: Albuquerque, NMEID District I
Office
Bob Hiller, USEPA, 6W-ET
John Gould, EMD, KAFB
LT. Don Hickman, EMD, KAFB

August 19, 1994

Marsha F. Carra, Acting Chief
Compliance
Environmental Management Division
2000 Wyoming Boulevard SE
Kirtland AFB, New Mexico 87117-5659

RE: Refuse in a watercourse, Arroyo Clean-up Project -
Site numbers 1,2,3,5,6,8 and 10.


Dear Ms. Carra:

Correspondence from your office dated August 11, 1994 requested that the referenced areas be approved for closure. Based on verbal communications with your staff and a site inspection conducted by Peter Monahan and Rich Powell of my staff, on July 11, 1994, the New Mexico Environment Department/Surface Water Quality Bureau approves your request for closure.

You are reminded that your August 11 letter lists two areas (5 and 10) where native vegetation is to be established during the next growing season and lists one area (10) where a fence is to be installed. This approval is conditioned upon these activities being completed within the agreed upon schedule.

If you have any questions concerning this matter, please contact Rich Powell of my staff at (505) 827-2798.

Sincerely,


Jim Piatt
Chief
Surface Water Quality Bureau

Bruce King
Governor

Judith M. Espinosa
Secretary

Ron Curry
Deputy Secretary

Herold Annex Building

1505 Grand Drive

Albuquerque, NM 87103

Phone: (505) 261-1000

Telex: (505) 261-2650

Fax: (505) 272-2336

Internet: (505) 272-2336

WWW: www.nm.gov

E-mail: nm@nm.gov

Internet: www.nm.gov

WWW: www.nm.gov

E-mail: nm@nm.gov

Internet: www.nm.gov

WWW: www.nm.gov

E-mail: nm@nm.gov

November 14, 1994

Mr. Walter S. Darr III, Chief
Compliance
Environmental Management Division
2000 Wyoming Boulevard SE
Kirtland AFB, New Mexico 87117-5659

RE: Refuse in a watercourse, Arroyo Clean-up Project -
Site numbers 4, 7, 9, 11 and 12.

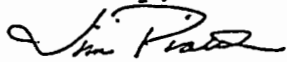
Dear Mr. Darr:

Correspondence from your office dated October 21, 1994 and November 8, 1994 requested that the referenced areas be approved for closure. Based on verbal communications with your staff and site inspections conducted by Rich Powell of my staff, on October 26 and November 2, 1994, the New Mexico Environment Department/Surface Water Quality Bureau approves your request to close these areas. This action closes the Department's files on the last of the refuse in a watercourse sites identified in its September 4, 1990 Notice of Violation letter to Colonel Edward Brannum, Commander, KAFB. Since this matter is now closed, it is no longer necessary to submit quarterly progress reports to the Department as required in its May 15, 1991 correspondence to Colonel Jack A. Martines, Director Environmental Management Services, KAFB.

Three sites (5, 9 and 10) were approved for closure pending establishment of suitable native vegetation. The Department requires notification of the current status of these areas or that vegetation has been successfully re-established on the yearly anniversary of this correspondence.

Thank you for your attention to this matter. The Department appreciates the efforts expended by KAFB to clean up these sites in a satisfactory manner. If you have any questions concerning this matter, please contact Rich Powell of my staff at (505) 827-2798.

Sincerely,


Jim Piatt
Chief
Surface Water Quality Bureau



STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

Bruce King
Governor

Judith M. Espinosa
Secretary

Ron Curry
Deputy Secretary

Harold Runnels Building
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850
FAX (505) 827-2836

DRUG FREE

ATTACHMENT 2

Table of Metal Concentrations that Exceed Background Levels

Attachment 2

Tijeras Arroyo RFI Metal Concentrations that Exceed Background Levels

Metal	Study Area & Sample No.	Sample Depth (feet)	Concentration (milligrams per kilogram)			
			Sample	PAL	USGS	Proposed Subpart S Action Level
Arsenic	9,TA-2	25	7	3.7	6.5-10	80
	11,TA-7	10	5.3			
	11,TA-9	5	8.8			
	11,TA-9	95	17.3			
Barium	11,TA-7	10	307	266.2	>1000	4000
	11,TA-9	25	295			
	11,TA-9	95	1340			
	5,TT-9	25	320			
	7,TT-12	25	314			
	7,TT-17	5.5	883			
	10,TA-3	95	29.2			
10-TA-5	75	18.7				
11,TA-7	5	17.1				
11,TA-7	10	30				
11,TA-9	10	23.4				
11,TA-9	25	22.4				
11,TA-9	95	47.2				
Chromium	2,TT-5	25	17.5	23.1	15	Not established
	5,TT-9	25	20.6			
	11,TA-9	95	39.1			
	4,TT-7	29	54.5			

ATTACHMENT 3

May 19, 1995, letter from Christopher DeWitt at KAFB Environmental Management Division to Ms. Nancy Morlock at the EPA Region 6 RCRA Permits Branch

May 25, 1995, letter from Mr. David Neleigh at the EPA Region 6 RCRA Permits Branch to Mr. Christopher DeWitt at KAFB Environmental Management Division



DEPARTMENT OF THE AIR FORCE
 HEADQUARTERS 377TH AIR BASE WING (AFMC)
 CERTIFIED MAIL: Z 106 120 480
 RETURN RECEIPT REQUESTED

File
16-8-2
CBP
9
7/2

19 May 1995

377 ABW/EMR
 2000 Wyoming Blvd SE
 Kirtland AFB NM 87117-5659

Ms. Nancy Morlock, Environmental Engineer
 RCRA Permits Branch
 U.S. EPA Region 6
 1445 Ross Ave, Ste 1200
 Dallas TX 75202-7233

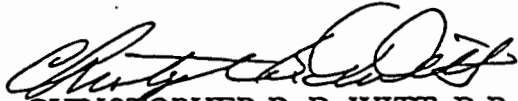
Receipts for cert.
mail attached
to ey of EDD
Pts letter in
16-1-3

Dear Ms. Morlock

I am writing to request the withdrawal of the draft KAFB Background Study Work Plan, as submitted in December 1994 and as required by the Stage 2A RFI Report Notice of Deficiency (NOD). As you know, Sandia National Laboratories (SNL) is also in the process of conducting a facility wide background study. To prevent duplication of effort, we are combining our efforts with SNL's to produce a facility wide background study report that can be utilized by both the Department of Energy and the Air Force.

I elected to put our support and assistance toward SNL's ongoing effort, which is significantly ahead of our schedule. We are providing data access and other technical support via our contract with the United States Geological Survey in order to assist SNL in meeting milestones for this project. The final result will be an approved background study report that can be utilized by both agencies.

Sincerely


 CHRISTOPHER B. DeWITT, R.P.G
 Chief, Restoration Branch
 Environmental Management Division

cc:
 SNL Org 7581 (Warren Cox [7581], Franz Lauffer [7574])
 DOE/KAO (John Gould)
 NMED-HRMB (Steve Pullen)
 USACE Omaha (Larry Janis, Sandy Frye)
 Foster Wheeler Env. (Dan Mantooth)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAY 25 1995

Mr. Christopher DeWitt, R.P.G.
Chief, Restoration Branch
Environmental Management Division
377 ABW/EMR
2000 Wyoming Boulevard SE
Kirtland AFB, NM 87117-5659

Dear Mr. DeWitt:

The Environmental Protection Agency (EPA) hereby approves your May 19, 1995 request to withdraw the draft Kirtland Air Force Base (KAFB) Background Study Work Plan, as submitted in December 1994.

The EPA approval is based upon the fact that KAFB is working with Sandia National Laboratories (SNL) to develop a facility-wide background study that will address the entire Kirtland Air Force Base complex. The EPA strongly encourages KAFB and SNL to work together on this and other site-wide issues that lend themselves to combined, collective efforts.

Please contact Nancy Morlock of my staff at (214) 665-6650 if you have any questions or require additional information.

Sincerely yours,

A handwritten signature in black ink, appearing to read "David W. Neleigh".

David W. Neleigh, Chief
New Mexico and Federal Facilities
Section, RCRA Permits Branch

cc: Mr. Warren Cox
Sandia National Laboratories
Mr. Benito Garcia
New Mexico Environment Department
Mr. John Gould
Department of Energy
Mr. Tony Trujillo
Department of Energy



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber