DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFMC)

ENTERED

Stu for your files Benito

RECEIVED
NOV 05 1997
NM ENVIRONMENT DEPARTMENT
OFFICE OF THE SECRETARY

30 Oct 97

MEMORANDUM FOR MR. ED KELLY
ACTING CHIEF, SURFACE WATER QUALITY BUREAU
NEW MEXICO ENVIRONMENT DEPARTMENT
1190 ST. FRANCIS DRIVE
P.O. BOX 26110
SANTA FE NM 87502

orig → Nina
cc → Benito Garcia HRMB

FROM: 377 ABW/EMO
2000 Wyoming Blvd SE, Suite D-3
Kirtland AFB NM 87117-5659

SUBJECT: Incident #95-191; October 1997 Surface Water Monitoring Results, Request for No Further Action

1. Pursuant to the approved 7 Feb 96 Surface Water Monitoring Plan (PLAN) associated with the Navy F-18 Jet Crash Site-Canjilon, New Mexico, Incident #95-191, we are submitting the results of surface water samples collected on 16 Oct 97.

2. The site is located on U.S. Forest Service property approximately 10 miles northeast of the Canjilon Ranger Station in Northern New Mexico (see Atch 1). Surface water samples were collected from all three sample locations (see Atchs 2 and 3) as specified in the PLAN and described as follows.

- Location A (shown as site #9 on Atch 2) - receives surface water drainage from immediate area of initial impact crater
- Location B (see Atch 3) - receives surface water drainage from immediate area of initial impact crater and other areas effected by low level hydrocarbon contamination, tributary to Canada Sierra Creek
- Location C (see Atch 3) - Canada Sierra Creek at intersection with State Route 110, approximately ¼ mile east of the confluence of Canada Sierra Creek and El Rito Creek

3. Fairly low surface water flows were observed at all three sample locations. Samples collected from all three locations were analyzed for TPH (Method 8015 Modified), and BTEX and Naphthalene (Method 8260). The analytical methodology used for BTEX and Naphthalene was different than what was specified in the PLAN (the PLAN specified method 8020 for BTEX and method 8270 for Naphthalene). The change in methodology resulted in a substantial cost savings to Kirtland Air Force Base, and was discussed with and approved by Mrs. Nina Wells of your staff prior to initiation of the change. The new methodology provides the same detection limits specified in the PLAN.

KAFB1899

4. Results of all parameters tested from all three sample locations are reported at less than the method detection limits. The sample results are summarized below. The raw analytical results, as received from the laboratory are included as attachment 4.

Method/Analyte	Units	Detection Limits	Results for Location: A	B	C
TPH Diesel-Range (Mod 8015)					
Diesel-Range Petroleum Hydrocarbons	mg/l	0.5	<0.5	<0.5	<0.5
Volatiles (EPA 8260)					
Benzene	ug/l	1.0	<1.0	<1.0	<1.0
Ethylbenzene	ug/l	1.0	<1.0	<1.0	<1.0
Toluene	ug/l	1.0	<1.0	<1.0	<1.0
Xylenes (total)	ug/l	1.0	<1.0	<1.0	<1.0
Naphthalene	ug/l	1.0	<1.0	<1.0	<1.0

5. As specified in the 7 Feb 97 PLAN, the Oct 97 sampling event is the last scheduled sampling event. Sample results for all of the required sample events are summarized in attachment 5. Based on the results of all six sampling events, we request that no further action be taken at this site.

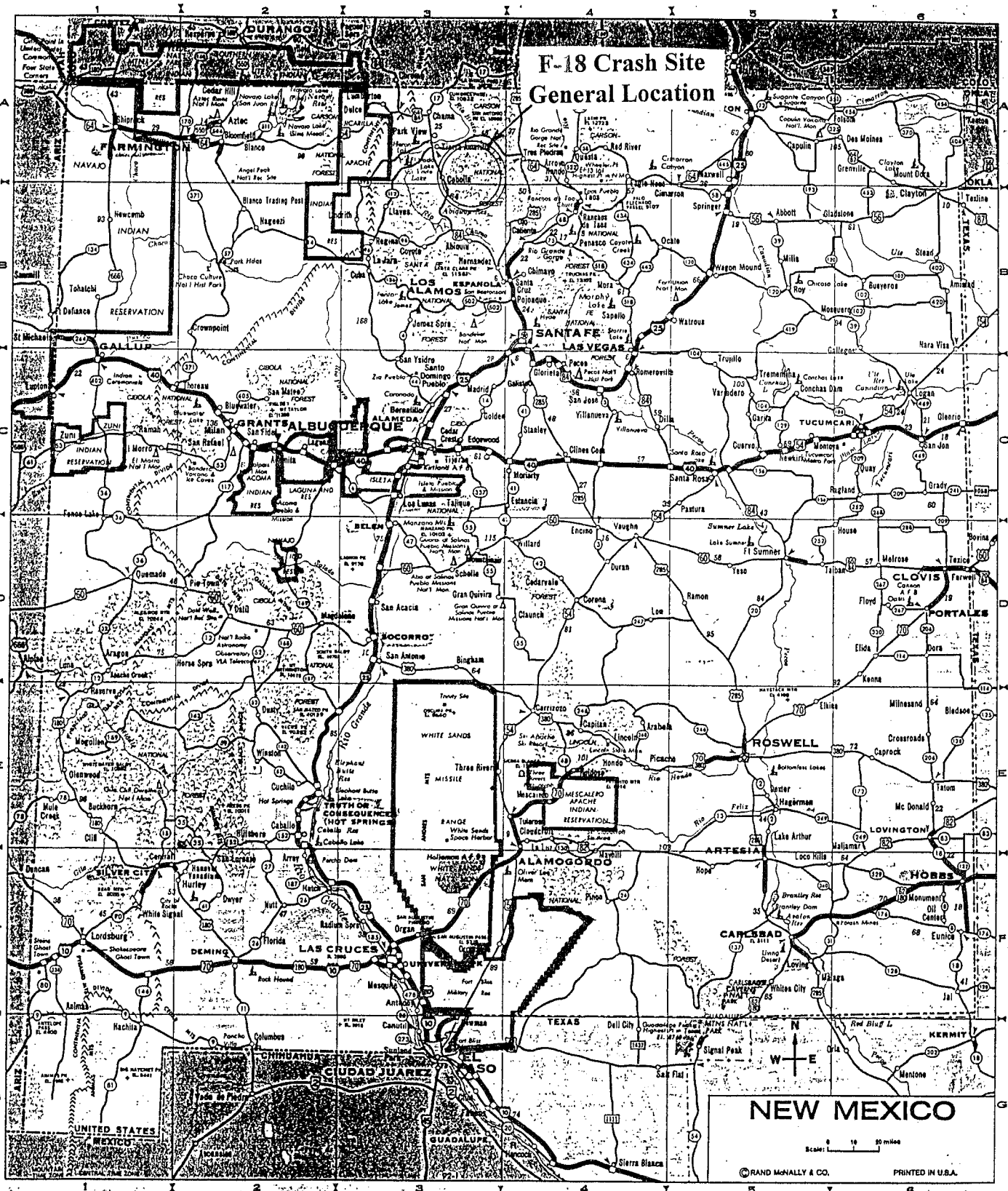
6. If you have any questions, feel free to call me at 846-8546, or my point of contact Mr. Patrick Montaño, 846-8577.

TERRY COOPER
Acting Chief, Operations
Environmental Management Division

Attachments:
1. Figure 1
2. Figure 2
3. Figure 3
4. Laboratory Results
5. Summary of Surface Water Sample Analytical Results

cc:
CMDR Don Roberts
Naval Air Station, Lemore CA

Figure 1



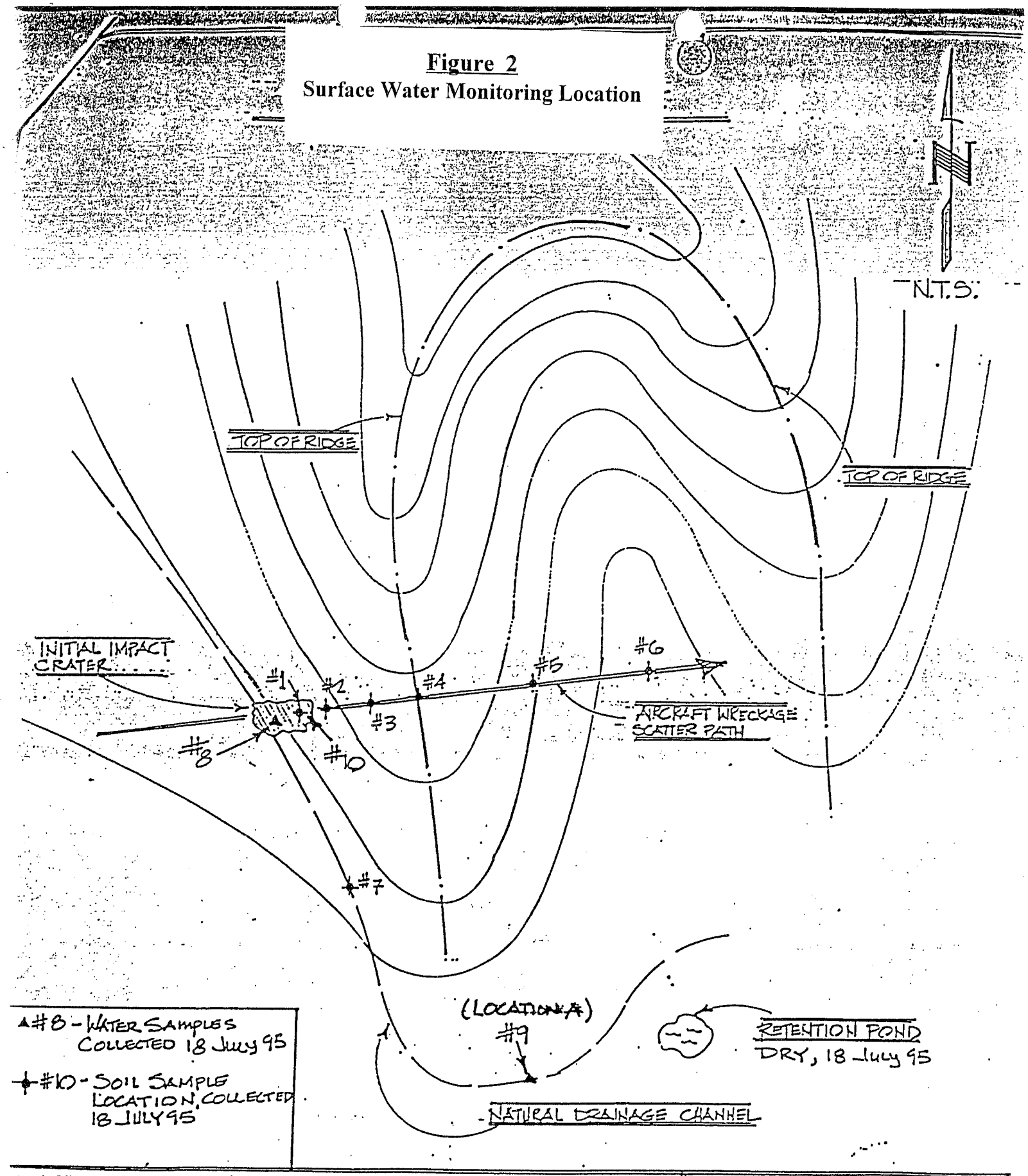
NEW MEXICO
Population: 1,521,779 (1990 Census)
Land Area: 121,336 Sq. Mi.
Capital: Santa Fe

Cities and Towns

Abiquiu B-3
Alameda C-3
Alamogordo E-4
Albuquerque C-3
Anthony F-3
Arroyo Hondo A-4
Artesia F-5
Aztec A-2
Belen D-3
Bernalillo C-3
Blanco A-2
Bloomfield A-2
Bluewater C-2
Capitan E-4
Carlsbad F-5
Carrizozo E-4
Cedar Crest C-3
Central F-1
Chama A-3
Cimarron A-5
Clayton B-6
Cloudcroft E-4
Clovis D-6
Crownpoint B-2
Cuba B-3
Deming F-2
Des Moines A-6
Dexter E-5
Dulce A-3
Eagle Nest A-4
Elida D-6
Espanola B-3
Estancia C-4
Eunice F-6
Farmington A-2
Ft. Sumner D-5
Gallup C-1
Grants C-2
Hagerman E-5
Hatch F-2
Hobbs F-6
Hondo E-4
Hurley F-2
Lake Arthur E-5
Las Cruces F-3
Las Vegas B-4
Logan C-5
Lordsburg F-1
Los Alamos B-3
Los Lunas C-3
Loving F-5
Lovington E-5
Magdalena D-2
Mescalero E-4
Moriarty C-4
Mosquero B-6
Mountainair D-3
Penasco B-4
Portales D-6
Quemado D-1
Questa A-4
Ranchos de Taos B-4
Raton A-5
Reserve E-1
Roswell E-5
Roy B-5
Ruidoso E-4
San Antonio D-3
San Jon C-6
San Jose C-4
San Lorenzo F-2
San Mateo C-2
San Rafael C-2
Santa Fe B-4
Santa Rosa C-5
Santo Domingo Pueblo C-3
Shiprock A-1
Silver City F-1
Socorro D-3
Springer B-5
Taos B-4
Tatum E-6
Thoreau C-2
Tierra Amarilla A-3
Tohatchi B-1
Truth or Consequences E-2
Tucumcari C-6
Tularosa E-4
Vaughn D-4
Yeso D-5
Zuni C-1

Atch 1

Figure 2
Surface Water Monitoring Location

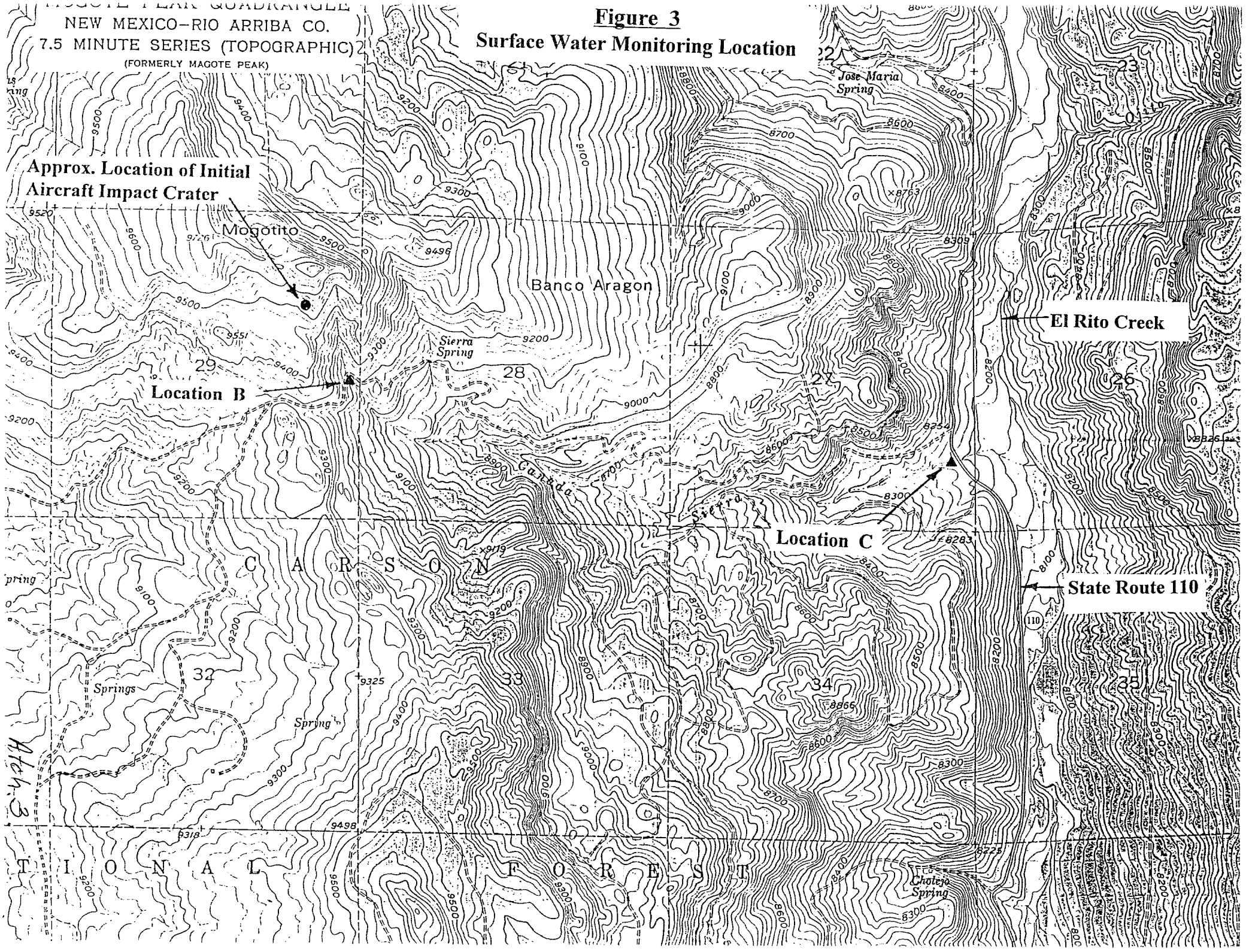


SITE LOCATION: APPROX. 10 MILES NE OF CANJILON RANGER STATION, NORTHERN NEW MEXICO, U.S. FOREST SERVICE LAND, (SEE FIGURE 1 FOR GENERAL LOCATION)

#5 — DENOTES APPROXIMATE LOCATION OF SOIL SAMPLE COLLECTION SITE, SAMPLES COLLECTED 20 MAY 95

Atch. 2

Figure 3
Surface Water Monitoring Location



ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002
972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

Customer Name: Kirtland AFB, 377 ABW/EMO
Date Received: October 18, 1997 at 10:00:00
Date Reported: October 22, 1997
Submission #: 9710000210
Project: F-18 CRASH SITE

SAMPLES The submission consisted of 6 samples with sample I.D.'s shown in the attached data tables.

TESTS The samples listed in the attached result pages were analyzed for:
* BTEX & NAPHTHALENE (EPA 8020)
* SAMPLE ON HOLD
* TPH DIESEL-RANGE (MOD 8015)

Distribution Of Reports
1-Mr. Patrick Montano of Kirtland AFB, 377 ABW/EMO
Ph. 505-846-8577 Fax 505-846-0400

Respectfully Submitted,
Anachem,Inc.

Howard H. Hayden, B.S.
Chemist

Submission #: 9710000210 lims

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a $20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials.

92510 to 92515

Client Name: Kirtland AFB, 377 ABW/EMO
Submission #: 9710000210
Project Name: F-18 CRASH SITE
Report Date: 10/22/97

Client Sample #: 971016 1045 SITE B

Laboratory ID #: 92510 *Order Type: Normal Matrix: Liquid*
Sample Container: *2xVOA Vial,Liter Amber Bottle*
Sampling Location: *CANJILON, NM*
Sampling Date : *10/16/97*
Temperature (Celcius):4

BTEX & NAPHTHALENE (EPA 8020)

Analyte	Results(ug/l)	Detection Limit
Benzene	<1.0	1.0
Toluene	<1.0	1.0
Ethyl Benzene	<1.0	1.0
Xylenes	<1.0	1.0
Naphthalene	<1.0	1.0

TPH DIESEL-RANGE (MOD 8015)

Analyte	Results(mg/l)	Detection Limit
Diesel-Range Petroleum Hydrocarbons	<0.5	0.5

Client Sample #: 971016 1130 SITE A

Laboratory ID #: 92511 *Order Type: Normal Matrix: Liquid*
Sample Container: *2xVOA Vial,Liter Amber Bottle*
Sampling Location: *CANJILON, NM*
Sampling Date : *10/16/97*
Temperature (Celcius):4

BTEX & NAPHTHALENE (EPA 8020)

Analyte	Results(ug/l)	Detection Limit
Benzene	<1.0	1.0
Toluene	<1.0	1.0
Ethyl Benzene	<1.0	1.0
Xylenes	<1.0	1.0
Naphthalene	<1.0	1.0

TPH DIESEL-RANGE (MOD 8015)

Analyte	Results(mg/l)	Detection Limit
Diesel-Range Petroleum Hydrocarbons	<0.5	0.5

Client Sample #: 971016 1325 SITE C

Laboratory ID #: 92512 *Order Type: Normal Matrix: Liquid*
Sample Container: *2xVOA Vial,Liter Amber Bottle*
Sampling Location: *CANJILON, NM*
Sampling Date : *10/16/97*
Temperature (Celcius):4

BTEX & NAPHTHALENE (EPA 8020)

Analyte	Results(ug/l)	Detection Limit
Benzene	<1.0	1.0
Toluene	<1.0	1.0
Ethyl Benzene	<1.0	1.0
Xylenes	<1.0	1.0
Naphthalene	<1.0	1.0

TPH DIESEL-RANGE (MOD 8015)

Analyte	Results(mg/l)	Detection Limit
Diesel-Range Petroleum Hydrocarbons	<0.5	0.5

Report To: Kirtland AFB, 377 ABW/EMO
Lab Number: 9710000210

Project: F-18 Crash Site

QUALITY CONTROL DATA

METHOD	ANALYST	MATRIX	DATE EXTRACTED	DATE ANALYZED
BTEX/NAPTHALENE 8020	Howard Hayden	Liquid	-----	10/18/97

SPIKE COMPOUND	SPIKE AMOUNT	% REC 1	% REC 2	% REC QC LIMIT	% VAR.	% VAR QC LIMIT
Benzene	100 ppb	91.6	95.9	80-120	4.5	20.0
Toluene	100 ppb	86.8	91.4	80-120	5.0	20.0
Ethyl Benzene	100 ppb	81.7	85.8	80-120	4.8	20.0
Xylenes	300 ppb	81.3	85.3	80-120	4.7	20.0

QUALITY CONTROL DATA

METHOD	ANALYST	MATRIX	DATE EXTRACTED	DATE ANALYZED
8015 Mod.	Joni Henderson	Solid	10/21/97	10/21/97

SPIKE COMPOUND	SPIKE AMOUNT	% REC 1	% REC 2	% REC QC LIMIT	% VAR.	% VAR QC LIMIT
Diesel Fuel	6085 ppm	109	103	20-150	5.5	30

F-18 Crash Site - Summary of Surface Water Sample Analytical Results

Sample Collection Date			14 May 1996			14 August 1996			23 October 1996		
		Detection	Results for Location			Results for Location			Results for Location		
Method/Analyte	Units	Limits	A	B	C	A	B	C	A	B	C
TPH Diesel-Range (Mod 8015)											
Diesel-Range Petroleum Hydrocarbons	mg/l	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	*(1)*	< 0.5	< 0.5
Volatiles (EPA 8260)											
Benzene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*(1)*	< 1.0	< 1.0
Ethylbenzene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*(1)*	< 1.0	< 1.0
Toluene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*(1)*	< 1.0	< 1.0
Xylenes (total)	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*(1)*	< 1.0	< 1.0
Naphthalene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*(1)*	< 1.0	< 1.0

Sample Collection Date			5 June 1997			19 August 1997			16 October 1997		
		Detection	Results for Location			Results for Location			Results for Location		
Method/Analyte	Units	Limits	A	B	C	A	B	C	A	B	C
TPH Diesel-Range (Mod 8015)											
Diesel-Range Petroleum Hydrocarbons	mg/l	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Volatiles (EPA 8260)											
Benzene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes (total)	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	ug/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

(1) **Location Not Sampled, No Flow**

Location A - Receives surface water drainage from immediate area of initial impact crater
Location B - Receives surface water drainage from area of initial impact crater and other areas effected by low level hydrocarbon contamination, tributary to Canada Sierra Creek
Location C - Canada Sierra Creek at intersection with State Route 110, approximately ¼ mile east of the confluence of Canada Sierra Creek and El Rito Creek