

6/6/96

ENTRANCED

Draft Report - KAFB skeet range incident

As a result of a letter from Mr. Walter Darr, Chief of Environmental Compliance at Kirtland Air Force Base (KAFB), dated 28 May, 1996 (see attached), regarding the base skeet range and the removal of lead shot which was used as road bedding, Frank Sanchez and Jim Seubert arranged to meet with KAFB and investigate. Mr. Muckelroy also contacted Mr. Piatt of the Surface Water Quality Bureau (SWQB) to see if he may want to send someone from his bureau. On Monday June 3, 1996 we met with Mr. Darr, Ms. Marsha Carra and Major Martin, Acting Director to evaluate the self-reported incident. During the course of our initial discussion we determined that the range, although owned by the Morale, Welfare and Recreation (MWR) Section which is a DOD entity, it is actually operated by a privately owned group or club the Sandia Skeet Range. The range has been in operation on base since at least 1980 but Mr. Darr will find out for sure. Mr. Darr indicated that they were surprised at this incident and were proceeding to gather information about the incident. As a result, many questions have yet to be answered and Mr. Darr is proceeding as quickly as he can. He requested that perhaps we, in our initial response to them, ask some of the same questions which may help their inquiries move along more quickly. We were told that sometime in 1993, a permit for Soil Disturbance at the range was issued so that work on removing the lead shot could be done. As a result, 84 thousand pounds of lead shot were sifted out and evidently reclaimed, although Mr. Darr has no more information re: the final disposition of this lead shot. He will continue to investigate.

We then inspected the range and surrounding area. Numerous photos were taken and accompany this draft. The range itself is still active. As we moved about on the range we noticed the usual skeet type of debris laying about which included spent shotgun shells, whole and broken clay targets, shotgun shell wads and lead shot. The ant hills were of particular interest. The ants are actually dredging lead shot from their holes! These leaded ant hills were visible throughout the range, at the far northeast reaches of the range, in the bottom of the arroyo that runs along the eastern side of the range and on the other side of the east bordering arroyo. We walked the entire length of the portion of the arroyo that borders the range on the east side and then proceeded to follow the roadway where apparently the debris from the range had been laid down as road bedding. The approximate length of the road involved is 2.5 miles in length (as registered by our vehicles odometer) and extends from the range along a paved roadway on through what Mr. Darr said is the main Tijeras Arroyo floodplain and ending in the KAFB C and D landfill. It is unknown at this time, when the range debris was actually laid down on the roadway. Again, Mr. Darr is investigating. After the physical inspection, a close out with Mr. Darr, Major Martin and Ms. Carra completed the inspection.

KAFB1770



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Some of the unanswered questions are as follows:

When was this debris actually laid down on the roadway?

What is the actual depth to groundwater in the area of concern?

How many times has this practice of scraping the range and disposing of the debris occurred in the past? Were records kept from past cleanups?

What was the final disposition of the 84 thousand pounds of lead shot removed from the range in 1993? Who removed it and where did it go?

At what depth were the roadway samples actually taken?

Have you located a MSDS on the chemical composition of the clay target used on the range (ie. the fluorescent orange coating)?

Has the range purchased other types of targets whose chemical composition may be different?

How many years has the range actually been in operation?

What is the leachability of the lead shot sampled in the roadway?

What are the actual lead levels in the portions of the roadway not yet sampled?

Is there a potential groundwater problem?

Is there a potential surface water problem?

Is there a potential problem from runoff into the Tijeras Arroyo floodplain?

JES 6/6/96



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

28 May 1996

377 ABW/EMC  
2000 Wyoming Blvd SE  
Albuquerque NM 87117-5659

Mr. Benito J. Garcia  
Chief, Hazardous and Radioactive Materials Bureau  
New Mexico Environment Department  
P.O. Box 26110  
2044A Galisteo  
Santa Fe NM 87502



RE: Lead Shot From Skeet Range Used As Road Bedding

Dear Mr. Garcia

On May 15, 1996, we (Environmental Compliance Branch) received notice the base Sandia Skeet Range area was being cleaned of lead shot, clay pigeons, and dirt by Civil Engineering (CE) and then transporting the material to be used as road bedding. Upon being contacted we researched our records to determine if the proper permits were obtained and if the proper notification was conducted. After finding no paper work, we notified CE to stop removing the suspected contaminated soil.

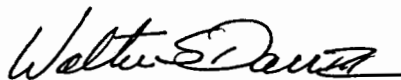
On May 16, 1996, we requested sampling/analysis for lead (SW846 7420) on the skeet range and the area where the suspected contaminated soil was relocated. The area of concern is the road leading to the landfill on Base, which is in the Tijeras arroyo.

On May 20 1996 we received the results of the analysis (see attachment 1). Also, (see attachment 2) the map indicates the sampling sites.

On May 21, 1996, we had conversation with our CE personnel and they disclosed to us that this practice had been occurring, as far back as they can recall, since 1980. Verbal notice of this event was given to Mr. Coby Muckelroy, by myself, after review of the sampling analysis and talking to our CE personnel.

If you have any questions, please contact Ms Marsha Carra at (505) 846-7846 or myself at (505) 846-5037.

Sincerely



WALTER S. DARR III  
Chief, Environmental Compliance  
Environmental Management  
Division

Attachments:

1. Sampling Analysis
2. Map Skeet Range/Landfill Road



ASSAIGAI  
ANALYTICAL  
LABORATORIES

# Chain of Custody Record

Lab Job no.: 5146 Date: 16 May 96

Page 1 of 1

7300 JEFFERSON, N.E.  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 345-8664

3332 WEDGEWOOD  
EL PASO, TEXAS 79925  
(915) 893-8000

1910 N. BIG SPRING  
MIDLAND, TEXAS 79705  
(915) 870-1118

MELQUIADES ALANIS  
8411 LOCAL UNO  
CIUDAD JUAREZ, CHIHUAHUA MEXICO 32320

Client: KAFB

Project Manager / Contact: MARSHA CANVA

Address: \_\_\_\_\_

Telephone No.: 846-7847

City / State / Zip: \_\_\_\_\_

Fax No.: \_\_\_\_\_

Project Name / Number: SKERT RANGE

Samplers: (Signature) [Signature]

Contract / Purchase Order / Quote: \_\_\_\_\_

TIERRA

ALL ANALYTES	Field Sample Number / Location	Date	Time	Sample Type	Type / Size of Container	Temperature	Preservation	Analysis	Notes
01A	9605161120	5/16/96	1120	SOIL	4 OZ. G.	4°C	N/A	X	STAT. 1 - CABLE ROW
02A	9605161125		1125					X	CNTY LINE STAT 3 + CABLE
03A	9605161130		1130					X	CLOSEST TO STAT. 3
04A	9605161135		1135					X	MID V E. OF STAT. 3
05A	9605161140		1140					X	DRAINAGE EMBANKMENT
06A	9605161145		1145					X	W. OF DRAINAGE CULVERT
07A	9605161150		1150					X	WEST OF RANGE SIGN
08A	9605161200		1200					X	#8 EAST ROAD EXIT
09A	9605161205	↓	1205	↓	↓	↓	↓	X	#9 EAST ROAD EXIT
11A	9605161210	5/16/96	1210	SOIL	4 OZ. G.	4°C	N/A	X	#10 EAST ROAD EXIT

Relinquished by: [Signature]  
Signature: SCOTT PRATT  
Printed: SCOTT PRATT  
Company: AAL

Date: 16 MAY 96  
Time: 14:00

Received by: [Signature]  
Signature: [Signature]  
Printed: [Signature]  
Company: [Signature]

Relinquished by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed: \_\_\_\_\_  
Company: \_\_\_\_\_

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed: \_\_\_\_\_  
Company: \_\_\_\_\_

Method of Shipment: \_\_\_\_\_  
Shipment No.: \_\_\_\_\_  
Special Instructions: \_\_\_\_\_

Comments: ORGAN: 377 ABW/EM  
WASTE STREAM - N/A

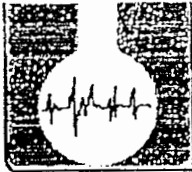
After analysis, samples are to be:

- Disposed of (additional fee)
- Stored (30 days max)
- Stored over 30 days (additional fee)
- Returned to customer

505 345 7259 F.02

HIGH ANALYTICAL LAB

MAY-20-1996 11:10



**ASSAIGAI  
ANALYTICAL  
LABORATORIES**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259  
 3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820

Report Generated:  
 May 20, 1996 10:17

**CERTIFICATE OF ANALYSIS  
 RESULTS BY SAMPLE**

SENT PHILLIPS LABORATORY/EMD WORKORDER # : 9605146  
 TO: 3651 LOWERY AVE. SE WORK ID : SKEET RANGE  
 ALBUQUERQUE, NM 87117-5777 CLIENT CODE : PHI08  
 DATE RECEIVED : 05/16/96  
 ATTN: MARSHA CARRA/WALTER DARR

Page: 1

Lab ID: 9605146-01A  
 Sample ID: 9605151120

Collected: 05/16/96 11:20:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050	05/17/96	N/A				
LEAD (FAA)/SW846 7420 Lead, Pb	52000	mg/Kg	5.0	500	05/17/96	SF452

Lab ID: 9605146-02A  
 Sample ID: 9605161125

Collected: 05/16/96 11:25:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050	05/17/96	N/A				
LEAD (FAA)/SW846 7420 Lead, Pb	53500	mg/Kg	5.0	500	05/17/96	SF452

Lab ID: 9605146-03A  
 Sample ID: 9605161130

Collected: 05/16/96 11:30:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050	05/17/96	N/A				
LEAD (FAA)/SW846 7420 Lead, Pb	274	mg/Kg	5.0	5.0	05/17/96	SF452

Lab ID: 9605146-04A  
 Sample ID: 9605161135

Collected: 05/16/96 11:35:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050	05/17/96	N/A				
LEAD (FAA)/SW846 7420 Lead, Pb	25900	mg/Kg	5.0	500	05/17/96	SF452



Lab ID: 9605146-05A  
Sample ID: 9605161140

Collected: 05/16/96 11:40:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 56900	N/A mg/Kg	5.0	500	05/17/96	SF452

Lab ID: 9605146-06A  
Sample ID: 9605161145

Collected: 05/16/96 11:45:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 59600	N/A mg/Kg	5.0	500	05/17/96	SF452

Lab ID: 9605146-07A  
Sample ID: 9605161150

Collected: 05/16/96 11:50:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 38.0	N/A mg/Kg	5.0	1.0	05/17/96	SF452

Lab ID: 9605146-08A  
Sample ID: 9605161200

Collected: 05/16/96 12:00:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 289	N/A mg/Kg	5.0	5.0	05/17/96	SF452

Lab ID: 9605146-09A  
Sample ID: 9605161205

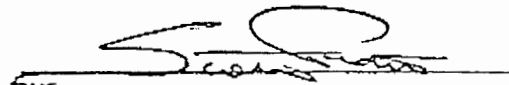
Collected: 05/16/96 12:05:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 247	N/A mg/Kg	5.0	3.0	05/17/96	SF452

Lab ID: 9605146-10A  
Sample ID: 9605161210

Collected: 05/16/96 12:10:00  
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
(FAA) DIG SOIL/SW846 3050 LEAD (FAA)/SW846 7420 Lead, Pb	05/17/96 375	N/A mg/Kg	5.0	3.0	05/17/96	SF452

  
James A. Seely  
Operations Manager



**WORKORDER COMMENTS**

DATE : 05/20/96  
WORKORDER:

**DEFINITIONS/DATA QUALIFIERS**

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

- ND = Analyte "not detected" in analysis at the sample specific detection limit.
- D\_F = Sample "dilution factor"
- NT = Analyte "not tested" per client request.
- B = Analyte was also detected in laboratory method QC blank.
- E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.
- LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D\_F) to obtain the sample specific Detection Limit.

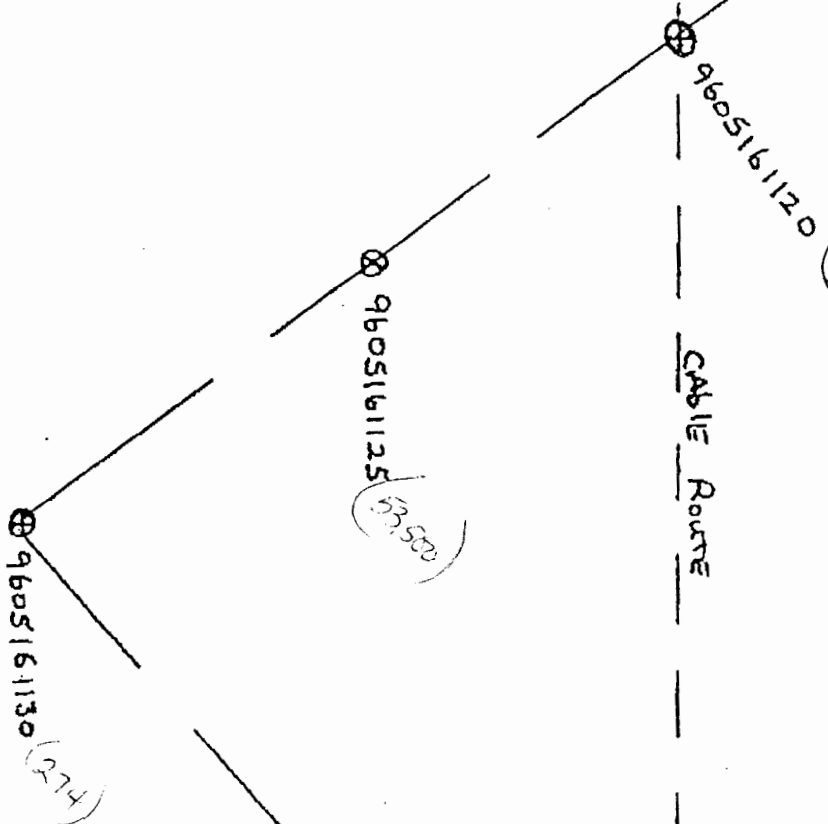
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**REPORT COMMENTS**

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ATGHZ

- STAK. #1
- STAK. #2
- STAK. #3
- STAK. #4
- STAK. #5



Mg/Kg  
52,000

(23,500)

(274)

9605161150 (34)

RANGE SIGN

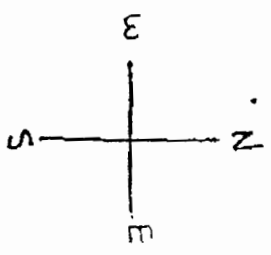
9605161145 59,600

9605161135 (25,900)

9605161140 (55,700)

DRAINAGE  
CULVERT

DRAINAGE ARROYO



PENNSYLVANIA AVE

DIRT ROAD

SKET #1

SKET #2

SKET #3

SKET #4

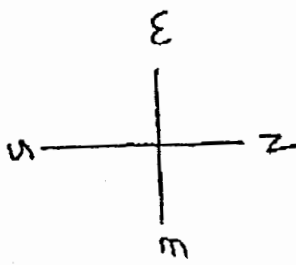
SKET #5

9605161200 (259)

9605161205 (247)

9605161210 (375)

SKET FIL DEBMS FOR ROADWAY



DRAINAGE ARROYO