DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 49TH FIGHTER WING (ACC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO

OCT 1 9 2007

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NMED Hazardous
Waste Bureau

MEMORANDUM FOR NEW MEXICO ENVIRONMENT DEPARTMENT
Attn: Mr. James Bearzi
Hazardous Waste Bureau
2905 Rodeo Park Drive East
Santa Fe NM 87105-6303

FROM: 49 CES/CD
550 Tabosa Ave
Holloman AFB NM 88330-8458

Subject: Final Action Report: 30 May 07 Discovery of Suspected Biological Warfare Bomblets, Solid Waste Management Unit (SWMU) 104, LF-29

1. This letter provides the final action report on subject discovery. On 30 May 07, Holloman AFB was notified by the Air Combat Command contractor, HydroGeologic, Inc., that suspected biological warfare bomblet had been identified on the ground surface at SWMU 104. Holloman contacted the Army Technical Escort Unit (TEU) to lead the emergency response to this incident. The TEU, the Army's chemical/biological and explosive ordnance disposal unit which provides unique immediate response capability to the Department of Defense, set out to positively identify the suspected biological warfare bomblets and render them safe. The emergency response began 5 Jun 07 and ended 7 Jun 07. No live munitions were found.

2. The bomblet casings were found in four isolated piles on the ground surface (see photos at Atch 1). All of the munitions, 171 biological sub-munition bomblets and 9 unknown pipe-like bombs, were collected by TEU and placed in a solution of bleach on 5 Jun 07. After soaking in bleach for over 72 hours, all but three of the bomblet casings (which were kept on base as a training aid) were taken by TEU. Drums containing bleach, decontamination water used during the response and personal protective equipment were labeled and stored at the less than 90-Day Hazardous Waste Storage Facility. These drums were transferred to the permitted storage facility on 21 Sep 07 to await disposal at an approved off-base facility.

3. A total of 20 soil samples were collected from each of the four piles of bomblet casings and analyzed at Aberdeen Proving Ground. Additionally, three samples were taken from a known clean area to provide background information. The analytical results for Bacillus Anthracis indicated no contamination above background levels (See spreadsheet at Atch 2).

4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate,

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and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. If you have any questions, please feel free to contact Ms. Deborah Hartell at (575) 572-3931.

A. DAVID BUDAK
Deputy Base Civil Engineer

Attachments:
1. Photographs taken of the bomblet casings
2. Spreadsheet showing summary of soil sample analyses

cc: (w/Atchs)
Mr. Davis Strasser
Hazardous Waste Bureau
5500 San Antonio Dr. NE
Albuquerque, NM 87109

Mr. Will Moats
Hazardous Waste Bureau
5500 San Antonio Dr. NE
Albuquerque, NM 87109

Mr. Bob Sturdivant
USEPA, region 6 (6PD-F)
1445 Ross Ave., Ste 12
Dallas, TX 75202-2733

Empty Bomblet Casings Found at LF-29 SWMU 104 Jun 2007 Emergency Response Atch 1, pg 1 of 2
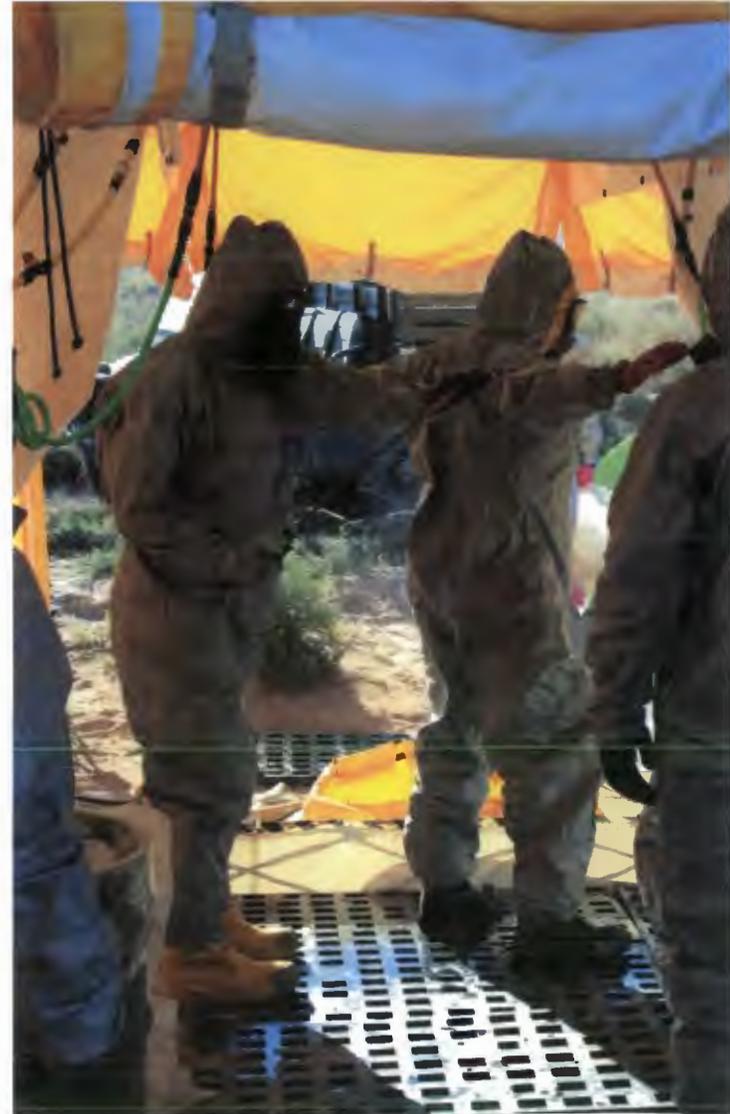
Decontamination procedures—SWMU 104, LF-29

Jun 07 Emergency Response—Suspected
Biological Weapons   Atch 1, pg 2 of 2

Conclusion

Preliminary results show no conclusive data that would suggest there is contamination of the area. The averages of the samples from each location show, similar CFU/gm of soil as the background samples. One group has a slightly elevated number of bacillus species present. But this increase is less than 1 order of magnitude. Bacillus spp. naturally populate arid regions. Data suggests that of the naturally occurring Bacillus spp. the percentage of B. anthracis is not enough to pose a danger to health of individuals entering the area.

Infective doses of Anthrax require on average 50,000 to 100,000 spores to be inhaled.
Average Spore/colony forming units was in a range of 1.7 to 9.7 per gram of soil.

PCR was performed as well as M1M analysis of selected colonies (growth from the soil samples). Targets for PCR included BA #1 and BA #2. ZERO (0) samples showed and positive results from these analyses. Additional M1M analyses showed all negative from the same selected colonies.

Each colony counted showed **characteristics** of Bacillus species.
these were

a. β-hemolysis - characterized as hemolysis clearly extending the colony margin
Diverse hemolytic activity was demonstrated by colonies on the blood agar plates

b. ground glass colony

c. whipped egg white appearance when teased with loop

Potential types of Bacillus spp.
B. globigii
B. anthracis
B. cereus var. mycoides
B. thuringiensis

SAMPLE	Wt (gm)		1:1	1:10	1:100		Avg		CFU/gm
A1	14.54		TNTC	4	0		20.00		1.4
A2	13.3		32	8	0		37.33		2.8
A3	12.5		14	3	2		14.67		1.2
A4	9.25		26	4	1		22.00		2.4
A5	9.5		50	11	4		53.33		5.6
							Average		2.7
B1	8.1		7	0	0		2.33		0.3
B2	10		7	1	0		5.67		0.6
B3	10.5		7	4	1		15.67		1.5
B4	9.8		15	2	0		11.67		1.2
B5	11.15		TNTC	42	2		210.00		18.8
							Average		4.5
C1	12.3		64	12	2		61.33		5.0

C2	11.3		25	4	0		21.67		1.9
C3	11.9		37	1	0		15.67		1.3
C4	12.8		11	2	0		10.33		0.8
C5	10.5		4	0	0		1.33		0.1
							Average		1.8
D1	13.3		21	3	1		17.00		1.3
D2	9		TNTC	37	7		185.00		20.6
D3	7.2		47	9	2		45.67		6.3
D4	13.8		6	0	0		2.00		0.1
D5	9.7		160	42	5		193.33		19.9
							Average		9.7
BACK 1	11.3		21	7	1		30.33		2.7
BACK 2	9.8		18	2	0		12.67		1.3
BACK 3	7.3		12	1	0		7.33		1.0
AVG BACK							Average		1.7
* TNTC = too numerous to count (unknown bactria had overgrown the media and correct bacteria count									
			was not possible)						