HAFB 07

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

AUG 30 2007

MEMORANDUM FOR NEW MEXICO ENVIRONMENT DEPARTMENT
Attn: Mr. Bearzi
Hazardous Waste Bureau
2905 Rodeo Park Drive East
Santa Fe, NM 87505-6303

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

Subject: NOTICE OF DEFICIENCY (NOD)
Request For No Further Action, OT-44 (AOC-P), January 2007
Holloman Air Force Base, EPA ID# NM6572124422

1. The items listed below are attached to complete the NOD response to the NOD for the Request for No Further Action, OT-44 (AOC-P0, January 2007 Holloman Air Force Base, EPA ID # 6572124422.

a. A copy of the NMED NOD letter dated June 26, 2007.
b. An itemized response to each NOD comment,
c. Changed Figures from the report.
d. Changed Tables from the report.

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

3. If you have any questions, please contact Mr. George Fish at 505-572-5395.

A. DAVID BUDAK
Deputy Base Civil Engineer

Attachments:
(see next page)

7001 2510 0005 4337 4662

Global Power for America

Attachments:
1. A copy of the NOD letter dated June 26, 2006
2. An itemized response to each NOD comment
3. Changed Figures from the report
4. Changed Tables from the report

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

cc (w/o Atchs):
Mr. Cornelius Amindyas
Hazardous Waste Bureau
5500 San Antonio Drive NE
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cc (w/o Atchs):
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USEPA, Region 6 (6PD-F)
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State of New Mexico
ENVIRONMENT DEPARTMENT
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BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CINDY PADILLA
DEPUTY SECRETARY

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

June 26, 2007

Debbie Hartell, Chief
Environmental Flight
49th CES/CEV
550 Tabosa Avenue
Holloman AFB, NM 88330-8458

RE: NOTICE OF DEFICIENCY
REQUEST FOR NO FURTHER ACTION, OT-44 (AOC-P), JANUARY 2007
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-07-004

Dear Ms. Hartell:

The New Mexico Environment Department (NMED) has reviewed Holloman Air Force Base's (the Permittee) document entitled *Request for No Further Action, OT-44 (AOC-P),* dated January 2007 (Request). The Permittee must address the following comments before NMED can make a final determination regarding the request.

1. In Section 3.3.2.1, the Permittee states that "[g]roundwater RI Stage I analytical results are presented in Table 3.4." Except for the TRPH value of 17 parts per million (ppm) in MW2, the data discussed in this paragraph are not presented in Table 3.4. The Permittee must revise and resubmit the table to include all Phase II Stage I groundwater analytical results.

2. In Section 3.3.7 (Final Closure Report Addendum), the Permittee states that "the excavation activities were conducted in an area where vadose zone soils contained TRPH concentrations above the former TPH action level of 1,000 mg/kg based on previous soil sampling activities." The Permittee must revise and resubmit this section to address the fact that the excavation did not include some areas where concentrations of oil and grease in soil collected at or below the water table were well above NMED's residential and

industrial soil screening levels. Specifically, the oil and grease concentrations at sampling locations 50B1 (1,192 ppm at 5 feet and 4,265 ppm at 7.5 feet) and OT44-DP2 (19,100 ppm at 5 feet and 12,600 ppm at 6 feet).

3. In Section 3.3.8, the Permittee states that "[i]n the NMED 2001 LTM report comment response letter, dated February 24, 2003, NMED had no comment on the proposed cessation of LTM activities at OT-44 (AOC P). Consequently, LTM activities at OT 44 ceased." This is incorrect. On page 3 of NMED's comment response letter, its states that "NMED concurs with the recommendation to discontinue long-term monitoring at OT-44 due to no VOCs detected during the last sampling event."

4. Table 3.6 (Soil Analytical Results, Additional Soil Characterization Activities) presents the TRPH data in µg/kg units while Figure 3.2 presents the data in mg/kg units. The Permittee must correct and resubmit the table to be consistent with the figure and the laboratory reports.

NMED concurs with the Permittee's conclusions and recommendations for OT-44 (AOC P). The recommendation is a no further action under NMED criterion 5. However, the Permittee must respond to the comments provided in this letter prior to initiating a Class 3 modification to its permit.

The Permittee must respond to this notice of deficiency within thirty (30) calendar days of receipt of this letter. If you have any questions regarding this matter or if you would like to discuss the comments prior to your response, please contact Darlene Goering of my staff at (505) 222-9504.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Tellez, EPA Region 6 (6PD-F)
File: HAFB 2007 and Reading
HWB-HAFB-07-004

RESPONSE TO NMED COMMENTS
OT-44 (AOC-P)
NO FURTHER ACTION REQUEST

Responses to Comments from Mr. James P. Bearzi, Chief, New Mexico Environment Department Hazardous Waste Bureau

Comment 1 *In Section 3.3.2.1, the Permittee states that "[g]roundwater RI Stage I analytical results are presented in Table 3.4." Except for the TRPH value of 17 parts per million (ppm) in MW2, the data discussed in this paragraph are not presented in Table 3.4. The Permittee must revise and resubmit the table to include all Phase II Stage I groundwater analytical results.*

Response 1 **Table 3.4 has been updated to include the omitted Phase II Stage I groundwater analytical results presented in Section 3.3.2.1. The revised table is provided in Attachment A.**

Comment 2 *In Section 3.3.7 (Final Closure Report Addendum), the Permittee states that "the excavation activities were conducted in an area where vadose zone soils contained TRPH concentrations above the former TPH action level of 1,000 mg/kg based on previous soil sampling activities." The Permittee must revise and resubmit this section to address the fact that the excavation did not include some areas where concentrations of oil and grease in soil collected at or below the water table were well above NMED's residential and industrial soil screening levels. Specifically, the oil and grease concentrations at sampling locations 50B1 (1,192 ppm at 5 feet and 4,265 ppm at 7.5 feet) and OT44-DP2 (19,100 ppm at 5 feet and 12,600 ppm at 6 feet).*

Response 2 **Text stating soils containing TPH at concentrations above NMED residential and industrial soil screening levels at depths corresponding to and below the soil/groundwater interface is now included in Section 3.3.7. The revised Section 3.3.7 is provided in Attachment A.**

Comment 3 *In Section 3.3.8, the Permittee states that '[i]n the NMED 2001 LTM report comment response letter, dated February 24, 2003, NMED had no comment on the proposed cessation of LTM activities at OT-44 (AOC P). Consequently, LTM activities at OT-44 ceased." This is incorrect. On page 3 of NMED's comment response letter, its states that "NMED*

concurs with the recommendation to discontinue long-term monitoring at OT-44 due to no VOCs detected during the last sampling event."

Response 3 **Correction made. The revised Section 3.3.8 is provided in Attachment A.**

Comment 4 *Table 3.6 (Soil Analytical Results, Additional Soil Characterization Activities) presents the TRPH data in µg/kg units while Figure 3.2 presents the data in mg/kg units. The Permittee must correct and resubmit the table to be consistent with the figure and the laboratory reports.*

Response 4 **Correction made. The revised Table 3.6 is provided in this RTC as Attachment A.**

ATTACHMENT A

OT-44 (AOC P) NO FURTHER ACTION REQUEST REVISIONS BASED ON NMED COMMENTS

Table 3.4
Groundwater Analytical Results
Phase II Remedial Investigation
OT-44 (AOC P)
Holloman AFB

	NMGWQ[1] Standards	EPA MCL	Monitoring Well									
			STAGE I				STAGE II					
			MW-1	MW-2	MW-3	MW-4	MW-1	MW-2	MW-3	MW-4	MW-6	MW-6-D[2]
Volatiles (µg/L)												
1,1,1-Trichloroethane	60	200	28.6*	125.0	--	--	(--)	(--)	NA	NA	(--)	(--)
Trichloroethene	100	5	49.1*	11.9	2.7	2.4	*(16)*	*(9)*	NA	NA	(--)	(--)
1,1-Dichloroethane	25	NA	7*	NA	NA	NA	(--)	(--)	NA	NA	(--)	(--)
1,1-Dichloroethylene	5	7	2*	NA	NA	NA	(--)	(--)	NA	NA	(--)	(--)
1,2-trans-Dichloroethylene	NA	100	5*	NA	NA	NA	(--)	(--)	NA	NA	(--)	(--)
Acid/Base/Neutral Extractables (µg/L)												
2,4-Dinitrotoluene	NA	NA	--	--	--	--	NA	NA	NA	NA	(58)	(56)
TRPH (mg/L)	1.72[3]	NA	--	**17**	--	--	(--)	**(9)**	NA	NA	**(2)**	**(2)**

[1] NMAC 20.6.2.3103
[2] Duplicate of MW-6
[3] Diesel #2 TPH screening level (NMED, 2005)
NMGWQ = New Mexico Groundwater Quality
EPA = United States Environmental Protection Agency
MCL = Maximum Contaminant Level
TRPH = total recoverable petroleum hydrocarbon
µg/L = micrograms per liter
mg/L = milligrams per liter
-- = not detected
( ) = stage II data
* = Corps of Engineers lab data
NA = not analyzed / not applicable
Results in **BOLD** and *italics* exceed NMGWQ Standards for human health and EPA Primary Drinking Water MCLs
Results in **BOLD** exceed NMGWQ Standards for human health
Results in *italics* exceed EPA MCLs
Source: Walk Haydel, 1989b.

Table 3.6
Soil Analytical Results
Additional Soil Characterization Activities
OT-44 (AOC P)
Holloman AFB

Parameter	NMED Soil Screening Levels[1]			OT-44-DP1		OT44-DP2		OT44-DP3	
	Residential	Industrial/ Commercial	Construction	2-3	4-5	5-6	6-8	2-4	4-5
GRO (mg/kg)	NA	NA	NA	--	--	490	413	42	3 J
DRO (mg/kg)	520[2]	1,120[2]	NA	--	--	**11,000**	**11,000**	**8,200**	32
TRPH (mg/kg	520[2]	1,120[2]	NA	--	--	**19,100**	**12,600**	**12,600**	74
Benzene (µg/kg)	10,300	25,800	174,000	--	--	--	--	--	--
Toluene (µg/kg)	252,000	252,000	252,000	--	--	--	--	--	--
Ethylbenzene (µg/kg)	128,000	128,000	128,000	--	--	1,360	790	--	--
Xylene (µg/kg)	82,000	82,000	82,000	--	--	810	550 J	--	--

[1] Obtained from Table A-1 (NMED, 2006)
[2] NMED Diesel #2 TPH SSL (NMED, 2005)
-- = not detected
J = estimated value less than sample quantitation limit
GRO = gasoline-range total petroleum hydrocarbons
DRO = diesel-range total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
Values in **BOLD** indicate TRPH concentrations exceeding base-specific TPH action level of 1,000 mg/kg
Source: Groundwater Technology, 1996.

3.3.7 Final Closure Report Addendum

Approximately 60 tons (44.4 yd^3) of TPH-impacted soils were excavated from OT-44 and disposed off site in March 1997 (Foster Wheeler, 1997). Excavation activities were conducted in an area where vadose zone soils contained TRPH concentrations above the former TPH action level of 1,000 mg/kg based on previous soil sampling activities. The excavated area correlates with the leak from the product pipeline sampling from the 25,000 gallon diesel UST. TPH-impacted soils were excavated to the top of the water table, estimated to be approximately 5 feet bgs. Verification soil samples were collected from the excavation sidewalls during advancement of the excavation and submitted for TRPH analysis. Excavation activities above the water table ceased when TRPH analysis results were below the former TPH action level of 1,000 mg/kg. However, TPH concentrations exceeding NMED residential and industrial soils were left in place at and below the soil/groundwater interface generally northwest and west of the excavation. Specifically, TPH concentrations above criteria were left in place with borings 50B1 (1,192 mg/kg at 5 feet bgs and 4,265 mg/kg at 7.5 feet bgs), OT44-DP2 (19,000 mg/kg at 5 feet bgs and 12,600 mg/kg at 6 feet bgs), 50W-1 (3,700 mg/kg at 7.5 feet bgs and 1,143 mg/kg at 10 feet bgs), and MW2 (B2) (7,946 mg/kg at 5 feet bgs). Analytical results are summarized on Table 3.7. For reference, diesel #2 residential and industrial SSLs have also been included on Table 3.7. None of the verification soil samples contained TRPH at concentrations exceeding the diesel #2 SSLs; however, the TRPH concentration in sample OT44-01-03 equaled the diesel #2 residential SSL. The location of the verification soil samples used in determining the extent of excavation activities and their associated TRPH analytical results are depicted on Figure 3.2.

3.3.8 Long Term Groundwater Monitoring

Biennial long term monitoring (LTM) of VOC concentrations in groundwater beneath OT-44 was initiated in 1995 and conducted through 2001. Based on the analytical results obtained during the four LTM events, Holloman AFB recommended a cessation of LTM activities in the 2001 LTM report (Foster Wheeler, 2002). In the NMED 2001 LTM report comment response letter, dated February 24, 2003, NMED concurred with the recommendation to discontinue LTM activities at OT-44 (AOC P) due to the lack of VOCs detected during the 2001 sampling event. Consequently, LTM activities at OT-44 ceased. A copy of the NMED 2001 LTM report comment response letter is included in Appendix C.

VOCs detected in the OT-44 groundwater included benzene, sec-butylbenzene, carbon disulfide, chloroform, methylene chloride, toluene, and TCE. The majority of the VOCs detected were in MW2 during the 1997 LTM event. With the exception of carbon disulfide and TCE, all of the VOCs were detected solely during the 1997 LTM event. Carbon disulfide was detected in MW2 in 1995, 1997 and 1999 while TCE was detected in MW2 only during the 1999 LTM event. TCE was detected below the MCL at 1 μg/L. OT-44 LTM analytical results are presented in Table 3.8.

The 1997 LTM event was conducted in September 1997 after TPH excavation activities (i.e., March 1997) had been completed. The presence of the VOCs in groundwater samples

retrieved from the downgradient wells was most likely attributable to the agitation of the groundwater system that occurred during excavation activities. None of the historically detected VOCs were detected during the 2001 LTM event, leading to cessation of LTM.