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

ENTERED

JUL 16 2012

A. David Budak
Deputy Base Civil Engineer
550 Tabosa Avenue
Holloman AFB NM 88330-5840

New Mexico Environment Department
Attn: Mr. John Kieling
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe NM 87105-6303

Dear New Mexico Environment Department

Holloman Air Force Base is pleased to submit the Draft Fact Sheet/Statement of Basis (SOB) for Approval of Corrective Action Complete for LF-10 (SWMU 109) and OT-16 (SWMUs 118, 132 and AOC-A).

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.

If you have any questions, please contact Mr. Brent Hunt of our Asset Management Flight at (575) 572-5395.

Sincerely

20120719
A. DAVID BUDAK, GS-14, DAFC

Attachment:
Draft Fact Sheet/SOB for Approval of Corrective Action Complete for LF-10 (SWMU 109) and OT-16 (SWMUs 118, 132 and AOC-A)

cc:

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

(w/o Atch)
Mr. Will Moats
Hazardous Waste Bureau
5500 San Antonio Dr. NE
Albuquerque, NM 87109

(w/CD)
Mr. Chuck Hendrickson
USEPA, Region 6 (6PD-F)
1445 Ross Ave., Ste 1200
Dallas, TX 75202-2733

TETRA TECH

13 June 2012 T93002

Mr. James B. Hunt
49 CES/CEVR
550 Tabosa Avenue
Holloman Air Force Base, New Mexico 88330

Subject: Submittal of the Draft Fact Sheet/Statement of Basis for Approval of Corrective Action Complete for four Solid Waste Management Units and Areas of Concern, RCRA Permit No. NM6572124422, Holloman Air Force Base, Alamogordo, New Mexico, June 2012. Milestone Task: 1.6, 1.8, 2.14, 2.16

Reference: Contract No. FA4890-06-D-0009, Task DBR2 5002

Dear Mr. Hunt:

Please find attached three hard copies and three electronic copies of the Draft Fact Sheet/Statement of Basis for Approval of Corrective Action Complete for four Solid Waste Management Units and Areas of Concern, RCRA Permit No. NM6572124422, Holloman Air Force Base, Alamogordo, New Mexico, June 2012 for the referenced task order. The following sites, with SWMU/AOC designations, are the subject of this proposed permit modification:

SWMU 109 –	(ERP Designation LF-10)	Old Main Base Landfill
SWMU 118 –	(ERP Designation OT-16)	Former pesticide plastic holding tank
SWMU 132 –	(ERP Designation OT-16)	Former disposal pit
AOC A –	(ERP Designation OT-16)	Former transformer pad

If you have any questions or concerns regarding this report, please feel free to contact me at (865) 220-4753 (purshotam.juriasingani@tetratech.com). We appreciate the opportunity to be of service to AFCEE and HAFB.

Respectfully Submitted,
TETRA TECH, INC.

Purshotam K. Juriasingani, PE, CEM
Project Manager

Enclosures: As stated

Distribution:
AFCEE/ arthur.hatfield@us.af.mil (one electronic copy)
AFCEE/CMSE/ layi.oyelowo@us.af.mil (letter only via email)

AFCEE/ abel.antuna.ctr@us.af.mil (letter only via email)
AFCEE/EXE Documents Mailbox/ afcee.exe.1@us.af.mil (letter only via email)
Tt-TEN/Contracts/ barbara.petersen@tetratech.com (letter only via email)

IP: WAWF
File

DRAFT

FACT SHEET/STATEMENT OF BASIS FOR APPROVAL OF CORRECTIVE ACTION COMPLETE FOR LF-10 (SWMU 109) AND OT-16 (SWMUS 118 AND 132, AND AOC-A)

RCRA PERMIT NO. NM6572124422

HOLLOMAN AIR FORCE BASE NEW MEXICO

Air Force Center for Engineering and the Environment
Brooks City-Base, Texas

June 2012

This Page Intentionally Left Blank

DRAFT

FACT SHEET/STATEMENT OF BASIS FOR APPROVAL OF CORRECTIVE ACTION COMPLETE FOR LF-10 (SWMU 109) AND OT-16 (SWMUS 118 AND 132, AND AOC-A)

RCRA PERMIT NO. NM6572124422

HOLLOMAN AIR FORCE BASE NEW MEXICO

Prepared for

Air Force Center for Engineering and the Environment
3300 Sidney Brooks
Brooks City-Base, Texas 78235-5344

Prepared by

Tetra Tech, Inc.
800 Oak Ridge Turnpike, Suite A-600
Oak Ridge, Tennessee 37830

Prime Contract No. FA4890-06-D-0009

June 2012

This Page Intentionally Left Blank

40 CFR 270.11
Document Certification

Fact Sheet/Statement of Basis for Approval of Corrective Action Complete for LF-10 (SWMU 109) and OT-16 (SWMUs 118 and 132, and AOC-A) RCRA Permit No. NM6572124422 Holloman Air Force Base New Mexico

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.

A. David Budak
Deputy Base Civil Engineer

This Page Intentionally Left Blank

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

LIST OF APPENDICES

LIST OF ACRONYMS, SYMBOLS, AND ABBREVIATIONS

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
AFB	Air Force Base
AOC	area of concern
bgs	below ground surface
Bhate	Bhate Environmental Associates, Inc.
BN/AE	base, neutral, and acid extractable
BRA	baseline risk assessment
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CAC	Corrective Action Complete
COPC	chemical of potential concern
CRDL	contract required detection limit
DRO	diesel-range organic
EPA	United States Environmental Protection Agency
ERP	Environmental Restoration Program
GRO	gasoline-range organic
HGL	HydroGeoLogic, Inc.
HSWA	Hazardous and Solid Waste Amendments
IDL	Instrument Detection Limit
IRP	Installation Restoration Program
LTM	long term monitoring
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MOBSS	Mobility Support Squadron
MTBE	methyl tertiary butyl ether
NAPL	non-aqueous phase liquid
NFA	no further action
NMED	New Mexico Environment Department
NMGWQ	New Mexico Groundwater Quality
NMRBDM	New Mexico Risk Based Decision Making
NOD	notice of deficiency

LIST OF ACRONYMS, SYMBOLS, AND ABBREVIATIONS (continued)

PCB	polychlorinated biphenyl
Radian	Radian Corporation, Inc.
RBSL	risk-based screening level
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SSL	Soil Screening Level
SWMU	solid waste management unit
TAL	target analyte list
TCE	trichloroethene
TDS	total dissolved solid
TOC	total organic carbon
TOX	total organic halide
TPH	total petroleum hydrocarbon
TRPH	total recoverable petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
yd^3	cubic yard(s)

FACT SHEET/STATEMENT OF BASIS FOR APPROVAL OF CORRECTIVE ACTION COMPLETE FOR LF-10 (SWMU 109) and OT-16 (SWMUs 118 AND 132, AND AOC-A) RCRA PERMIT NO. NM6572124422 HOLLOMAN AIR FORCE BASE NEW MEXICO

INTRODUCTION

Under authority of the New Mexico Hazardous Waste Act (Section 74-4-1 et seq., NMSA 1978, as amended, 1992) and the New Mexico Hazardous Waste Management Regulations [20.4.1 New Mexico Administrative Code (NMAC)], the New Mexico Environment Department (NMED) can approve or deny hazardous waste permits, closure plans, permit modifications, and amendments. A Class 3 permit modification request will be submitted to NMED by the U.S. Air Force for Holloman Air Force Base (AFB) Hazardous Waste Facility Resource Conservation and Recovery Act (RCRA) Permit No. NM6572124422 (Permit) pursuant to 20.4.1.900 NMAC (incorporating 40 CFR §270.42 (c)). If approved, the permit modification request would grant Corrective Action Complete (CAC) status for three Solid Waste Management Units (SWMUs) and one Area of Concern (AOC), and modify Part 4 of the Permit to move these SWMUs and AOCs from Appendix 4-A Table A (SWMUs Requiring Corrective Action) to Appendix 4-A Table B (Table B (SWMUs/AOCs Not Requiring Corrective Action). Proposed changes to Tables A and B of Appendix 4-A are shown in tables provided in Appendix A.

Investigation and remediation of SWMUs and AOCs at Holloman AFB is conducted under both the Air Force Environmental Restoration Program (ERP) and RCRA Corrective Action Program. The following sites, with SWMU/AOC designations and corresponding ERP Site designations, are the subject of this proposed permit modification:

SWMU/AOC No.	SWMU/AOC Title	ERP Site No.
SWMU 109	Old Main Base Landfill	LF-10
SWMU 118	Former pesticide plastic holding tank	OT-16
SWMU 132	Former disposal pit	OT-16
AOC A	Former transformer pad	OT-16

The Permittee's primary contact for this action is Mr. David Scruggs, 49 CES/CEV, 550 Tabosa Avenue, Holloman AFB, New Mexico, 88330.

A. FACILITY DESCRIPTION

Holloman AFB is situated in south-central New Mexico, in the northwest-central part of Otero County. The Base occupies about 50,000 acres in the northeast quarter of section Township 17 South, Range 8 East. Additional land extending northward is occupied by the White Sands Missile Range testing facilities. A facility location map is included as Figure A1. The locations of the subject sites are shown on Figure A2.

The Base is located about 75 miles northeast of El Paso, Texas, and about 7 miles west of Alamogordo, New Mexico. Alamogordo is the county seat of Otero County, and the only town of appreciable size within 30 to 50 miles of the Base. The population of Alamogordo was 23,535 in 1975, and has since grown to about 31,000. The economy of Alamogordo depends largely upon Holloman AFB and other military installations in the area. Approximately 5,500 people live at Holloman AFB.

Currently, Holloman AFB hosts the Air Combat Command 49th Fighter Wing, the mission of which includes pilot training, mobility support, and combat support operations. The primary Air Force Materiel Command component located at Holloman AFB is the 46th Test Group, which is responsible for evaluation of propulsion and navigational systems for aircraft, space vehicles, and missiles. A variety of tenant organizations are assigned to Holloman AFB, including the German Air Force Tornado Squadron, the 4th Space Surveillance Squadron, and Detachment 4 of the 55th Weather Squadron.

B. HISTORY OF ENVIRONMENTAL COMPLIANCE

Investigation and remediation of SWMUs and AOCs at Holloman AFB is conducted under both the Air Force ERP and the RCRA Corrective Action Program. The ERP, formerly called the Installation Restoration Program (IRP), was initiated in 1983 and the RCRA Facility Assessment (RFA) was conducted in 1987. A Hazardous and Solid Waste Amendments (HSWA) permit was issued to Holloman AFB in 1991 and became effective on September 25, 1991. In January 1996, NMED received authorization from the United States Environmental Protection Agency (EPA) for corrective action under the HSWA and became the administrative authority for this action. The HSWA potion of the RCRA permit identified sites at the Base requiring a Remedial Investigation (RI)/RCRA Facility Investigation (RFI). RFI activities were conducted in two phases. The Phase I RFI was conducted between 1987 and 1992; Phase II of the RFI was conducted between 1992 and 1995. A total of 236 potential SWMUs and 29 AOCs were investigated. Additionally, five remote sites such as radar sites, well fields, and reservoirs were investigated under the RFI. A total of 265 sites were identified and investigated during this process. At the completion of the RFI and RFA processes and through the use of decision documents, 119 SWMUs and AOCs remained on the RCRA permit.

In 1999, Holloman AFB submitted a request to remove 104 SWMUs and AOCs from the RCRA permit. In February 2000, NMED determined that 69 of the 104 SWMUs and AOCs were considered appropriate for removal. A detailed document describing conditions at these sites and the basis for removal was submitted to NMED in October 2000. In February 2001, NMED granted a Class III Permit Modification to remove 69 sites from the Base RCRA Permit. On February 24, 2004, the Holloman AFB HSWA permit was renewed. On November 29, 2005, an

additional seven sites—six SWMUs and one AOC—were approved for CAC [formerly No Further Action (NFA)] status and re-located from Appendix 4-A Table A to Appendix 4-A Table B.

Section H below briefly describes the location, history, evaluation of relevant information, and the basis for determination for each SWMU and AOC proposed for CAC in this document. More detailed descriptions of the particulars for each SWMU and AOC can be found in the accompanying references constituting the Administrative Record.

This Statement of Basis describes the three SWMUs and one AOC for which NMED concurred that CAC was appropriate. In summary, if NMED approves the Permittee's request for a permit modification, these four SWMUs/AOC will be removed from Appendix 4-A Table A (SWMUs Requiring Corrective Action) to Appendix 4-A Table B (SWMUs/AOCs Not Requiring Corrective Action).

C. ADMINISTRATIVE RECORD

The Administrative Record for this proposed action consists of the Holloman AFB Permit Modification Request, this Fact Sheet/Statement of Basis, the Public Notice, the Draft Permit consisting of revised Tables 4-A and 4-B, and the referenced supporting documentation for each site. References for this Statement of Basis are listed in each site-specific section in Section H, below. The complete Administrative Record may be reviewed at the following location during the public comment period:

NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone: (505) 476-6000
Monday-Friday: 8:00 am – 5:00 pm

A copy of this Fact Sheet/Statement of Basis, the Public Notice, and the Draft Permit consisting of revised Tables 4-A and 4-B may be reviewed at the following location during the public comment period:

Alamogordo Public Library
920 Oregon Avenue
Alamogordo, New Mexico 88330
Telephone: (575) 439-4140
Summer Hours: Monday-Thursday, 10:00 am – 8:00 pm, Friday 10:00 am – 5:00 pm, Saturday 11:00 am – 5:00 pm, Sunday 1:00 pm – 5:00 pm.
http://ci.alamogordo.nm.us/coa/communityservices/library.htm

D. PUBLIC PARTICIPATION

Holloman AFB will issue a public notice (date to be determined) and announce the beginning of a 60-day comment period on the Permit modification request. Persons who wish to comment on this action or request a public hearing will have an opportunity to submit written and/or electronic mail

(e-mail) comment(s) during this 60-day period. Only comments and/or requests received on or before the close of the 60-day comment period will be considered. Additionally, a public meeting will be held (date to be determined) in Alamogordo in accordance with NMAC 20.4.1.901 as part of the 60-day public comment period on the permit modification request required by the regulations at 40 CFR §270.42(c)(5). A representative of HAFB (Mr. James B. Hunt), NMED (Mr. David Strasser, NMED Hazardous Waste Bureau), and Tetra Tech will attended the public meeting in Alamogordo. A record will be made of all attendees and comments made during the public meeting.

E. NEXT STEPS

NMED will notify Holloman AFB and each person on the public comment mailing list of the final decision. The final decision will become effective 30 days after service of the decision, unless a later date is specified or review is requested in accordance with NMAC 20.4.1.901.

F. CONTACT PERSON FOR ADDITIONAL INFORMATION

For additional information, contact the following individual:

John E. Kieling, Chief
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
E-mail: john.kieling@state.nm.us
Telephone: (505) 476-6035
Fax: (505) 476-6030

G. CAC CRITERIA

The sites addressed herein have been under investigation since the early 1990s. Based on the information collected, NMED has concurred that the sites qualify for CAC (Formerly NFA). CAC requests were based on one of the five NMED CAC criteria presented below:

CAC Criterion 1: The SWMU/AOC cannot be located, does not exist, or is a duplicate SWMU/AOC.

CAC Criterion 2: The SWMU/AOC has never been used for the management (i.e., generation, treatment, storage, and/or disposal) of RCRA solid waste or hazardous waste and/or constituents, or other hazardous substances controlled under the Comprehensive Environmental Response, Compensation, and Liability Act.

CAC Criterion 3: No release to the environment has occurred or is likely to occur in the future from the SWMU/AOC.

CAC Criterion 4: A release from the SWMU/AOC to the environment has occurred, but the SWMU/AOC was characterized and/or remediated under another

authority (such as the NMED Petroleum Storage Tank, Solid Waste, or Groundwater Quality Bureaus).

CAC Criterion 5: The SWMU/AOC has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

The CAC criteria for the subject sites are identified in the table below:

SWMU/AOC No.	SWMU Title	ERP Site No.	CAC Criterion No.
SWMU 109	Old Main Base Landfill	LF-10	3
SWMU 118	Former pesticide plastic holding tank	OT-16	5
SWMU 132	Former disposal pit	OT-16	5
AOC A	Former transformer pad	OT-16	5

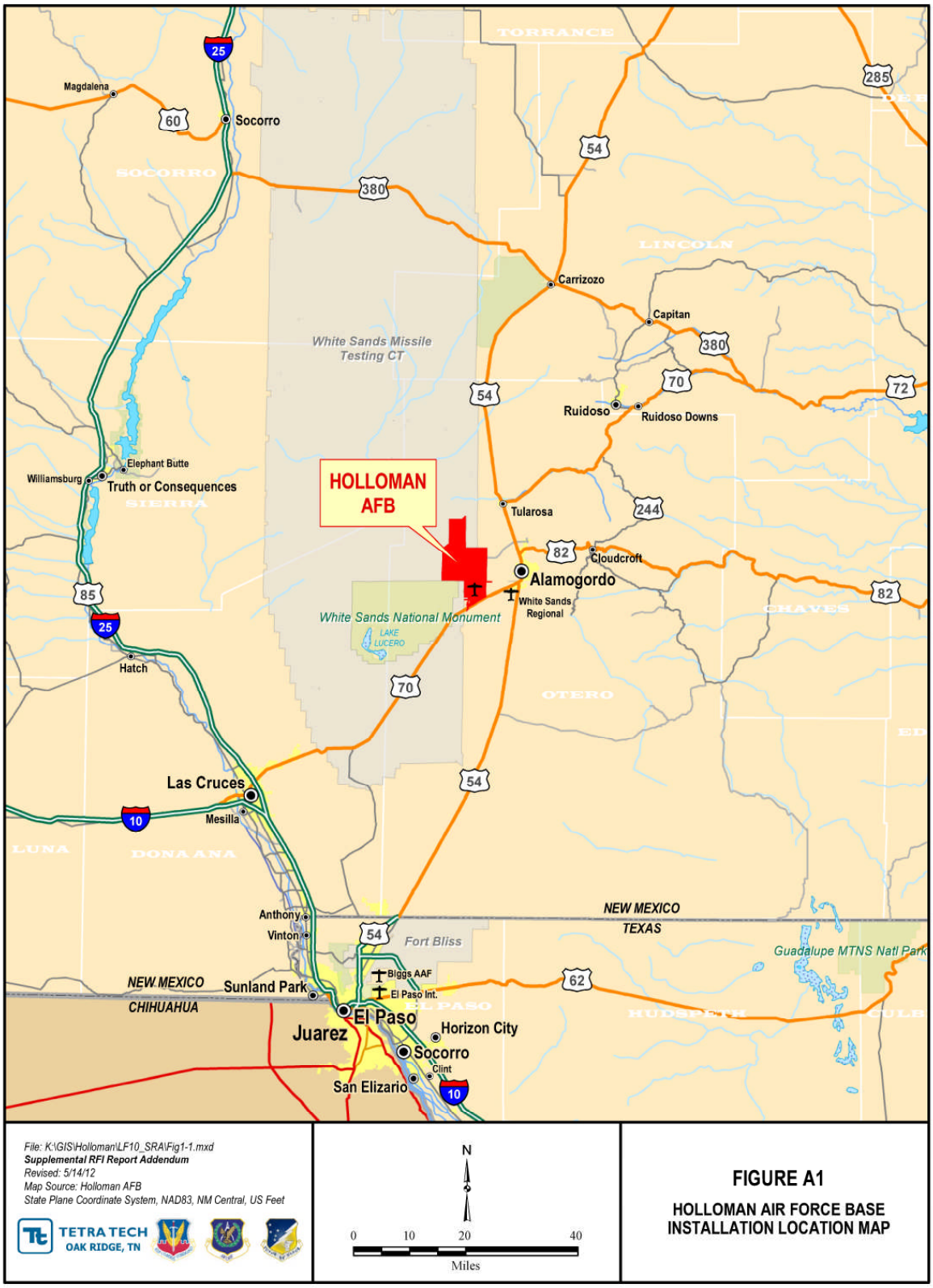
SWMU = solid waste management unit
AOC = area of concern

This Page Intentionally Left Blank

FIGURES

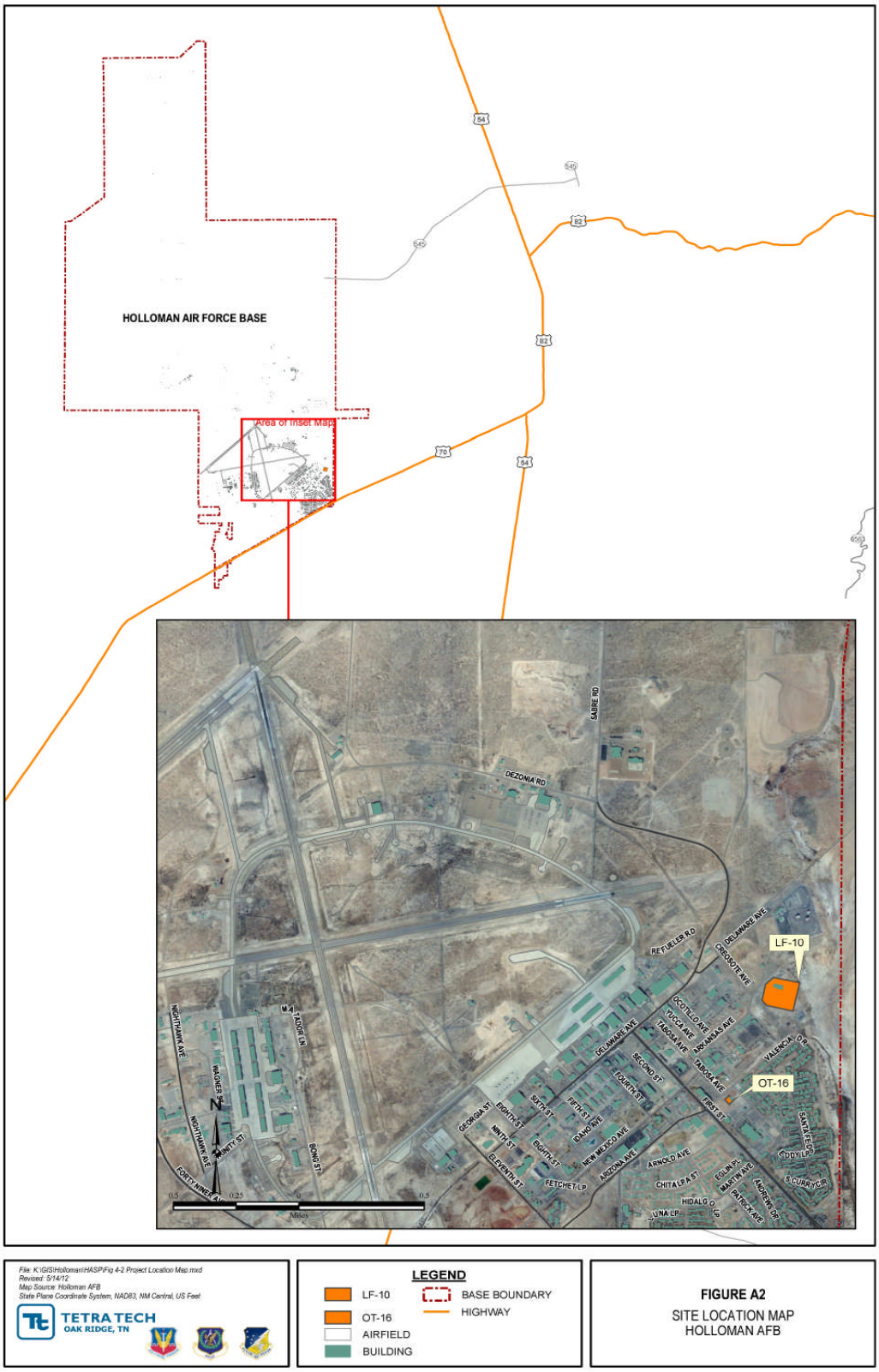
This Page Intentionally Left Blank

Figure A1 Facility Location Map, Holloman AFB



This Page Intentionally Left Blank

Figure A2 Closure Sites Location Map, Holloman AFB



This Page Intentionally Left Blank

H. DESCRIPTION OF SWMUS AND AOCS PROPOSED FOR CAC

H.1 LF-10 (SWMU 109), OLD MAIN BASE LANDFILL

H.1.1 Location/Unit Description

LF-10, the Old Main Base Landfill, is located in the southeastern portion of HAFB, southeast of the airfield, and bounded to the west by Creosote Avenue and to the north by Arkansas Avenue. The location of LF-10 with respect to the surrounding facility is shown on Figure A2. A site layout of LF-10 is provided as Figure H1.1.

LF-10, as shown on Figure 1-3, consists of approximately 20 acres and currently encompasses the area adjacent to the present day Civil Engineering Squadron (CES) 316 complex (Building 121). Other structures currently located within the CES complex include Building 120, which is located in the northwestern portion of the site; a covered patio, which is located east of Building 121; and several temporary storage sheds located north of Building 121. LF-10 also consists of a concrete-paved vehicle parking lot, which surrounds Building 121 on three sides. A gravel-paved equipment and supply storage lot is located adjacent to the concrete-paved parking lot. A chain-link fence surrounds the CES complex and supporting lots. Several large lighting protection poles are located within the fenced-in complex. Access to the CES complex and supporting lots is restricted to authorized personnel.

Outside the fenced-in area, LF-10 is primarily undeveloped. The surface is composed of packed-soil with sporadic fragments of former sanitary disposal items (e.g., ceramic plates, silverware, piping, wiring, bottle fragments, tires, etc.). The area is sparsely vegetated, with shrubs occurring almost exclusively along the southern edge of the Building 121 chain-link fence where a drainage swale is present. Several wooden utility poles cross the western and southern portion of the site. The Main Base Electrical Substation (OT-11) is located in the far southeastern portion of the site. OT-11 was closed in 1999 following an NFA determination. In addition, the southern portion of the former landfill is used as a material recycling stockpile area by the Base. Stockpiles of asphalt, soil, concrete rubble, and gravel were observed during the field investigations. The surface of the stockpile area is primarily composed of a mixture of packed soil, gravel, and concrete.

H.1.2 History/Current and Anticipated Future Land Use

LF-10 was utilized from 1942 to 1958. During that time, the landfill received domestic solid waste from the base and possibly drums containing waste oils and solvents (WH&A, 1990). A Base incinerator was located in the area and the ash from its operation was also buried in the landfill. Landfilling was conducted using trench and fill methods. The landfill was closed in 1958 in accordance with U.S. Department of Defense (DoD) protocols in place at that time.

The current and anticipated future land use is industrial.

H.1.3 Evaluation of Relevant Information

LF-10 consists of approximately 20 acres that was utilized from 1942 to 1958 to dispose of domestic solid waste from the base and ash from a base incinerator. The landfill was closed in 1958 in accordance with DoD protocols in place at that time. Landfilling was conducted using trench and fill methods.

LF-10 has been the subject of numerous investigations designed to define the boundaries of the former landfill, characterize the environmental media at LF-10 (i.e., soil, air, and groundwater), and characterize the waste material within LF-10. Included in these investigations have been the advancement of 53 soil borings, excavation of 19 exploratory trenches, 139 passive soil gas samples, compliance groundwater monitoring spanning 9 years, air monitoring within Building 121, a non-invasive geophysical survey, and at least 34 subsurface soil sample locations across the site. A chronological summary of the investigations is presented in Table H1.1.

Soil borings, exploratory trenching, and a geophysical survey have determined that a significant portion of LF-10 is underlain with linear trenches containing municipal debris (glass bottles, wood, paper, nylon rope, vinyl, scrap metal, concrete, gravel, rubber, porcelain, bricks, tires, flooring tile, asphalt, wiring, electronics, fabrics, dishes, ash, camera film, battery remains, shoes, and other miscellaneous trash), which was periodically burned prior to disposal. No containers that would have potentially stored hazardous waste were discovered during site investigations.

Soil sampling activities have been conducted at LF-10 during three investigations. Samples collected during these three sampling events were selectively analyzed for metals, cyanide, BN/AE, pesticides, PCBs, SVOCs, VOCs, TPH-DRO, and TPH-GRO. Numerous analytes have been detected in samples collected at LF-10 (Tetra Tech, 2011); however, only arsenic and manganese have been detected at concentrations that exceeded the NMED SSLs or EPA RSLs. Locations of the soil samples and exceedances are shown on Figure H1.2.

Both arsenic and manganese are commonly found, naturally occurring metals. Given the lack of other constituent exceedances at the locations where arsenic exceeded NMED Residential SSLs and the nominal exceedances of arsenic (3.7 to 5.0 mg/kg detections versus the NMED SSL of 3.59 mg/kg) it is likely that the exceedances of arsenic are attributable to natural background concentrations (3.7 mg/kg). Manganese is often found in nature in combination with iron. When comparing the manganese concentrations with iron concentrations, good correlation between manganese and iron is exhibited (Tetra Tech, 2011), with the exception of manganese at sample location 8A25-524, which is the location where manganese exceeded the NMED Construction SSL. At this location, manganese may be attributable to an anthropogenic source. During the 1988 RI, landfill debris was identified at this location. The major anthropogenic source of manganese that may have contributed to concentrations at LF-10 include the disposal of materials containing manganese in either the original form or in ash deposited from the Base incinerator.

Groundwater occurs beneath LF-10 as a shallow unconfined aquifer within the underlying silt, silty sand, and clay sediments. Depth to water at the site in 2003 (excluding monitoring well MW-5, several hundred ft to the northeast) ranged from approximately 6.7 ft bgs to 10.9 feet bgs.

Field slug tests were performed during the RI to estimate aquifer hydraulic conductivity at the site. Using an average hydraulic conductivity of 0.886 ft per day (ft/day) (as determined by the slug tests), a hydraulic gradient of 0.003 feet per foot (ft/ft) (from the 2003 LTM event), and an estimated porosity of 30 percent, the linear groundwater flow velocity across the site is estimated to be 0.009 ft/day, or 3.3 feet per year (ft/yr).

Groundwater beneath LF-10 was sampled during the 1988 RI and for five biennial sampling events (1995 through 2003). Historically, groundwater samples at LF-10 have been analyzed for metals, cyanide, pesticides, PCBs, SVOCs, VOCs, and TRPH. During the 1988 RI, antimony, arsenic, beryllium, cadmium, chromium, iron, lead, manganese, mercury, 2,4-dinitrotoluene, naphthalene, aldrin, and heptachlor exceeded the EPA MCL and/or the NMWQCC Standards. All of the constituents that exceeded the established groundwater standards occurred in wells located downgradient/cross-gradient and upgradient of the landfill area. Based on 1995 through 2003 compliance LTM results, the LF-10 target analyte list was reduced, with NMED approval, to arsenic, barium, manganese, and selenium. Since the initial rounds of groundwater sampling conducted in 1988 and 1995, only arsenic was observed in the 1997, 1999, 2001, and 2003 samples above the current EPA MCL and NMWQCC Standard. Again, arsenic exceeded in wells upgradient and downgradient/cross-gradient of the landfill area. According to the Final 2003 LTM Report prepared by Bhate, TDS concentrations at LF-10 are above 10,000 mg/L (Bhate, 2003). Because arsenic does not appear to be a waste component at LF-10 and because other contaminants are absent in groundwater, elevated arsenic concentrations are considered likely related to high TDS concentrations and not to a release from LF-10. A TDS concentration above 10,000 mg/L is the point where groundwater is no longer considered a potential domestic or agricultural water supply. Following the 2003 LTM Report, NMED agreed to suspend LTM at the site. The LTM data area summarized in Table H1.2.

Air monitoring within Building 121 has determined that methane is not present at unacceptable levels. The highest recorded concentration for methane within Building 121 was 0.3 percent, which is lower than 25 percent of the LEL (1.1 percent). Methane gas is not present at concentrations that pose an explosive hazard.

H.1.4 Basis for Determination

Buried waste material is present in trenches that are covered by soil at LF-10. In addition, analytical results from soil and groundwater sampling have indicated that various chemicals constituents are present in environmental media at LF-10. Because the site is a former landfill, closure will include land use controls (LUCs) to prevent future residential use. Analytical data show that chemical impacts to soil outside of the trenches are very limited. Only manganese in soil sample 8A25-524 appears to be a site-related contaminant that has impacted soil outside of the trenches. Due to the limited detection of manganese above the construction worker SSL and the limited potential for manganese transport through soil or to groundwater (Tetra Tech, 2011), manganese is not expected to leach into groundwater. In addition, due to documented high TDS concentrations in site groundwater, it is not suitable for domestic use. Vapor monitoring conducting in Building 121 located adjacent to, or on top of, landfill trenches did not detect the presence of toxic or hazardous conditions due to vapor intrusion to the building.

Long term groundwater monitoring has shown the presence of arsenic in groundwater. However, arsenic was detected in only four soil samples at concentrations (3.7 to 5 mg/kg) consistent with

HAFB background (3.7 mg/kg), arsenic is also found in wells upgradient of the site, concentrations in groundwater have been relatively consistent [10.1 to 25.9 µg/L for wells within or near landfill boundary verses EPA MCL of 5 µg/L and NMWQCC drinking water criteria of 0.448 µg/L (1995-2003 data)], the groundwater velocity is low (estimated at 3.3 ft/yr), and the groundwater is not useable for domestic purposes due to high TDS content.

NMED concurred with the Supplemental RFI conclusion (Tetra Tech, 2011) that SWMU 109 (LF-10) is suitable for CAC With Controls based on NMED Criterion 3; no release to the environment has occurred or is likely to occur in the future from the SWMU/AOC.

H.1.5 References

Bhate Environmental Associates, Inc. (Bhate), 2003. *Final 2003 Long-Term Groundwater Monitoring Report, Holloman AFB, New Mexico*. September.

HydroGeoLogic, Inc. (HGL), 2007. *Supplemental RCRA Facility Investigation, LF-10 (SWMUs 101 and 109) And LF-29 (SWMU 104), Holloman Air Force Base, Alamogordo, New Mexico.* July.

New Mexico Environment Department (NMED), 2012. Approval, *Supplemental RCRA Facility Investigation Report Addendum for LF-10, Old Main Base Landfill (SWMU 109) and Building 121 Landfill (SWMU 101), Holloman Air Force Base, New Mexico, EPA ID# NM6572124422,* March 5.

Tetra Tech, Inc. (Tetra Tech), 2011. *Supplemental RCRA Facility Investigation Report Addendum for LF-10, Old Main Base Landfill (SWMU 109) and Building 121 Landfill (SWMU 101), Holloman Air Force Base, New Mexico*, November.

TABLES

This Page Intentionally Left Blank

Table H1.1
Site Investigations Summary
LF-10 (SWMU 109)
Holloman AFB, New Mexico

Date	Event	Activity	Results	Other
1982	Pre-construction soil borings	16 soil borings placed in the area of LF-10 for construction of Mobile Satellite Communication Unit, Building 121	LF-10 was placed under DoD IRP	
1982	Phase I investigation	Records search and site review	Results indicated additional investigation not needed; Phase II not conducted	
1987	Subsurface investigation	Soil borings installed around Building 121 to investigate settling and concrete distress issues	Debris and trash observed in five of eight borings; concluded that RI was needed	
1988-1989	RI field work	Installed 14 soil borings to 30 ft depth, soils analyzed for VOCs, SVOCs, BN/AE, TRPH, pesticides, PCBs, metals, and cyanide; collected soil cores for geotech analyses; installed 7 monitoring wells, groundwater analyzed for VOCs, SVOCs, BN/AE, TRPH, pesticides, metals, and cyanide	VOCs, BN/AE, TRPH, PCBs, and metals were detected in soil, with some metal above background; As exceeded the residential SSL at one location (9 to 10.5 ft depth) and Mn exceeded the construction worker SSL at one location (12.5 to 14 ft depth). BN/AE, TRPH, pesticides, metals, and cyanide were detected in groundwater, with some metals above background; 9 metals, naphthalene, 2,4-DNT, aldrin, and heptachlor exceeded either, or both, the EPA MCLs and NMWQCC standards.	A baseline risk assessment concluded that there was no significant risk to human health or environmental receptors from contamination at LF-10. The groundwater data suggested that an off-site, upgradient area (e.g., SD-08) might be responsible for groundwater impacts at LF-10

Table H1.1 (continued)
Site Investigations Summary
LF-10 (SWMU 109)
Holloman AFB, New Mexico

Date	Event	Activity	Results	Other
1990	ROD submitted	1988 RI and Risk Assessment findings summarized	No additional investigative work recommended	NMED concurred with ROD with the understanding that contamination NW of LF-10 would be investigated, and LTM groundwater monitoring was required.
1995-2003	Compliance Groundwater Monitoring	Five site monitoring wells (one upgradient, three downgradient) were sampled biennially and analyzed for dissolved RCRA metals, VOCs, organochlorine pesticides, and field parameters.	Seven metals and three VOCs were detected in various samples during the five sampling events. Arsenic, chromium, and lead exceeded their respective background values in at least one sample. Arsenic was detected at concentrations that exceeded the EPA MCL (10 µg/L) and the NMWQCC Standard (0.448 µg/L) in 15 of the 20 groundwater samples collected during the 5 sampling events. Lead exceeded the EPA MCL (15 µg/L) at MW-3, MW-4, and MW-6 during the August 1995 sampling event. Lead did not exceed any established screening value in the four subsequent sampling events.	The Final 2003 LTM Report (Bhate, 2004) demonstrated that total dissolved solids (TDS) concentrations at LF-10 are above 10,000 mg/L, rendering site groundwater unfit as a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
2004	SOB	Data used to support recommendation for site closure under NMED Criterion 3	NMED conducted a site walk of LF-10 and concluded that LTM could be suspended but NFA for LF-10 would only be considered after additional characterization of the landfill waste (HGL, 2007).	

Table H1.1 (continued)
Site Investigations Summary
LF-10 (SWMU 109)
Holloman AFB, New Mexico

Date	Event	Activity	Results	Other
2007	Supplemental RFI	Non-invasive geophysical survey to better define landfill boundary; passive soil gas survey across landfill area; 15 soil borings with samples analylzed for VOCs, SVOCs, TPH (GRO and DRO), BN/AE, pesticides, RCRA Metals	Three VOCs, TPH-DRO, fluoranthene, and five metals were detected in various soil samples; lead detected above background at one location; no detections exceeded either the NMED SSLs or EPA RSLs.	Methane monitoring of Building 121 was recommended; NFA with controls based on NMED Criteria 3 was recommended.
2011	Supplemental RFI	19 exploratory trenches were excavated to further characterize landfill materials and monitor for methane; 18 soil samples were collected in the trenches where waste was observed and analyzed for VOCs, SVOCs, and metals; Building 121 was monitored for methane.	Landfill waste was found in numerous trenches; based on historical borings and trenching, the landfill encompasses an area of approximately 20 acres and lies around 3 sides of Building 121; only arsenic and manganese exceed NMED SSLs or EPA RSLs at a few locations, but low arsenic concentrations appear to be background; the 2008-2010 LTM sampling shows only arsenic exceeds in groundwater at both up- and downgradient locations; methane or other toxic gases were not detected in Building 121 at levels of concern.	Recommendation was made for CAC With Controls under NMED Criterion 3 with LUCs to prevent exposure to landfill materials

This Page Intentionally Left Blank

Table H1.2
Long Term Groundwater Monitoring Analytical Results
LF-10 (SWMU 109)
Holloman AFB, New Mexico

Analyte	Background[1]	EPA MCL[2]	NMWQCC Standard[3]	MW-2 (Upgradient)					MW-3					MW-4				
				Aug-95	Sep-97	Sep-99	Sep-01	Apr-03	Aug-95	Sep-97	Sep-99	Sep-01	Apr-03	Aug-95	Sep-97	Sep-99	Sep-01	Apr-03
Volatile Organic Compounds (µg/L)																		
	n/a	n/a	21,800	ND	ND	<5	--	--	ND	ND	<5	--	--	--	--	1 J	--	--
1,2-Dichloroethane	n/a	5	1.49	ND	ND	<3	--	--	ND	ND	<3	--	--	--	--	<3	--	--
Methylene	n/a	n/a	n/a	6.6UB	ND	<3	--	--	ND	ND	<3	--	--	--	--	<3	--	--
Metals (µg/L)																		
Arsenic	10	10	0.448	ND	ND	***15.5 B (J)***	***10.1***	***21.1***	10	ND	***18.5 B (J)***	***11.9***	***21.2***	***13***	***17 J***	***14.9 B (J)***	***11.7***	***19.3***
Barium	38	2000	7,300	ND	ND	11.4 B (J)	9.5 B	8.09 J	ND	ND	13.5 B (J)	12.1	9.6 J	--	20	30.9 B (J)	28.4	9.88 J
Cadmium	5	5	18.3	ND	ND	0.5B	--	--	ND	ND	0.5B	NA	--	--	--	1.2 B	--	--
Chromium	12	100	110	ND	ND	10.6 (J)	<20	--	ND	ND	<0.6	<20	--	--	--	1.2 B (J)	<20	--
Lead	9	15	n/a	ND	ND	<1.5	<10 (UJ)	--	***98***	ND	<1.5	<10 (UJ)	--	***150***	--	<1.5	<10 (UJ)	--
Manganese	50	n/a	876	ND	ND	2.2 B (J)	<10 (UJ)	<10	ND	ND	3.3 B (J)	1.1 B (J)	<10	--	80	*114 J*	*80.2 (J)*	*71.3*
Selenium	50	50	183	ND	ND	14.6 B (J)	7.9 B	6.41 UJ	ND	ND	14.2 B (J)	8.5 B	<19	--	--	12.7 B (J)	8.4 B	<13.9
Silver	10	n/a	183	ND	ND	<0.5	--	--	ND	ND	6.2 B (J)	--	--	--	--	1.4 B (J)	--	--
Organochlorine Pesticides (µg/L)																		
All	n/a	n/a	n/a	ND	ND	--	--	--	ND	ND	--	--	--	--	--	--	--	--

Notes:

Italicized results represent values which exceed background values.

Bold results represent values which exceed EPA MCLs

Highlighted results represent values which exceed NMWQCC Standards

[1] Background values are from the NMED Partial Approval of the Basewide Background Study Report, January 2009 letter to Holloman AFB, August 12, 2011.

[2] EPA MCLs - United States Environmental Protection Agency Maximum Contaminant Levels. From January 2011 Edition of the Drinking Water Standards and Health Advisories.

[3] NMWQCC Standard - New Mexico Water Quality Control Commission. These values are Tap Water Screening Values from Table A-1, NMED Soil Screening Levels, Technical Background Document for Development of Soil Screening Levels, Revision 5.0, July 2009.

µg/L - micrograms per liter

n/a - not available

-- not analyzed

ND - not detected

(UJ) - Estimated value detected less than the Contract-Required Detection Limit but greater than the reporting limits

(J) - Estimated as a non-detect at the detection limit

(B) - Analyte present in associated laboratory blank

Table H1.2 (continued)
Long Term Groundwater Monitoring Analytical Results
LF-10 (SWMU 109)
Holloman AFB, New Mexico

Analyte	Background[1]	EPA MCL[2]	NMWQCC Standard[3]	MW-6				
				Aug-95	Sep-97	Sep-99	Sep-01	Apr-03
Volatile Organic Compounds (µg/L)								
	n/a	n/a	21,800	--	--	<5	--	--
1,2-Dichloroethane	n/a	5	1.49	--	--	1 J	--	--
Methylene	n/a	n/a	n/a	--	--	<3	--	--
Metals (µg/L)								
Arsenic	10	10	0.448	10	***17 J***	***20.6 B (J)***	***11.9***	***25.9***
Barium	38	2000	7,300	--	--	12.2 B (J)	11.4	8.29 J
Cadmium	5	5	18.3	--	--	<0.3	--	--
Chromium	12	100	110	--	--	<0.6	<20	--
Lead	9	15	n/a	***42***	--	<1.5	<10 (UJ)	--
Manganese	50	n/a	876	--	*110*	*50.5 (J)*	18.2 (J)	*66.7*
Selenium	50	50	183	--	--	10.6 B (J)	3.9 B	<11.2
Silver	10	n/a	183	--	--	<0.5	--	--
Organochlorine Pesticides (µg/L)								
All	n/a	n/a	n/a	--	--	--	--	--

Notes:

Italicized results represent values which exceed background values.

Bold results represent values which exceed EPA MCLs

Highlighted results represent values which exceed NMWQCC Standards

[1] Background values are from the NMED Partial Approval of the Basewide Background Study Report, January 2009 letter to Holloman AFB, August 12, 2011.

[2] EPA MCL - United States Environmental Protection Agency Maximum Contaminant Level. From January 2011 Edition of the Drinking Water Standards and Health Advisories.

[3] NMWQCC Standard - New Mexico Water Quality Control Commission. These values are Tap Water Screening Values from Table A-1: NMED Soil Screening Levels, Technical Background Document for Development of Soil Screening Levels, Revision 5.0, July 2009.

µg/L - micrograms per liter

n/a - not available

-- not analyzed

ND - not detected

(UJ) - Estimated value detected less than the Contract-Required Detection Limit, but greater than the reporting limits.

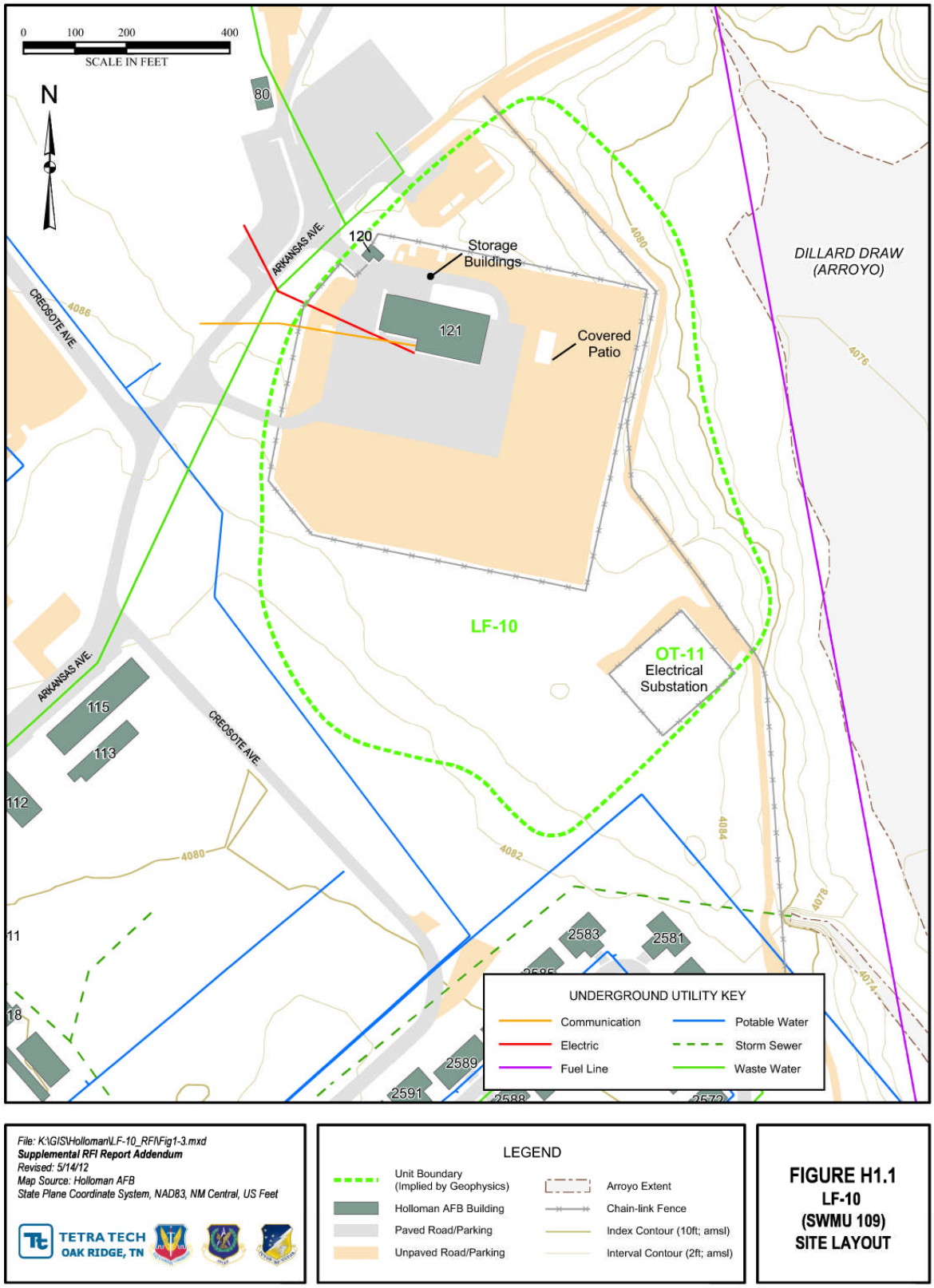
(J) - Estimated as a non-detect at the detection limit.

(B) - Analyte present in associated laboratory blank.

FIGURES

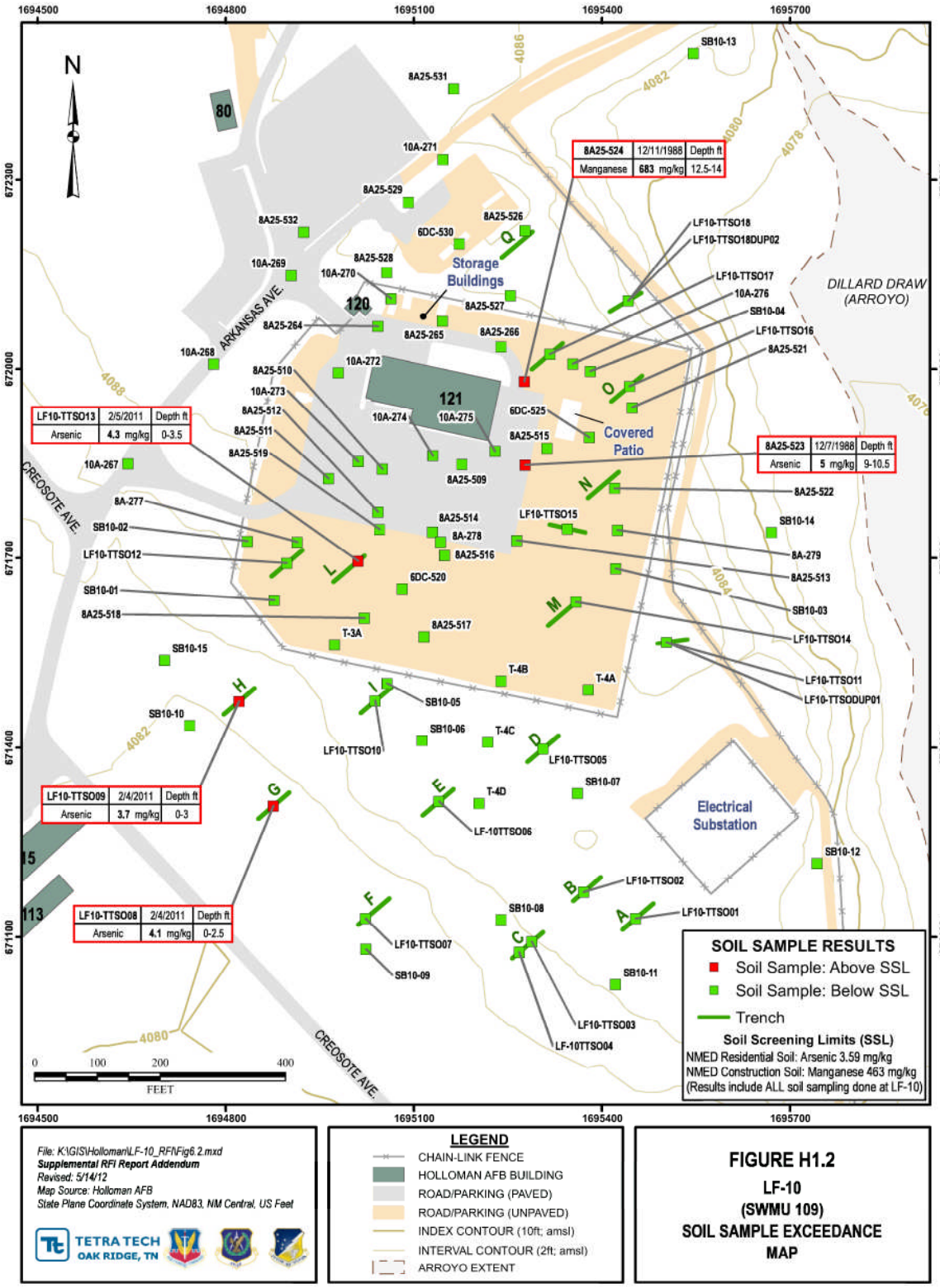
This Page Intentionally Left Blank

Figure H1.1 LF-10 (SWMU 109) Site Layout, Holloman AFB



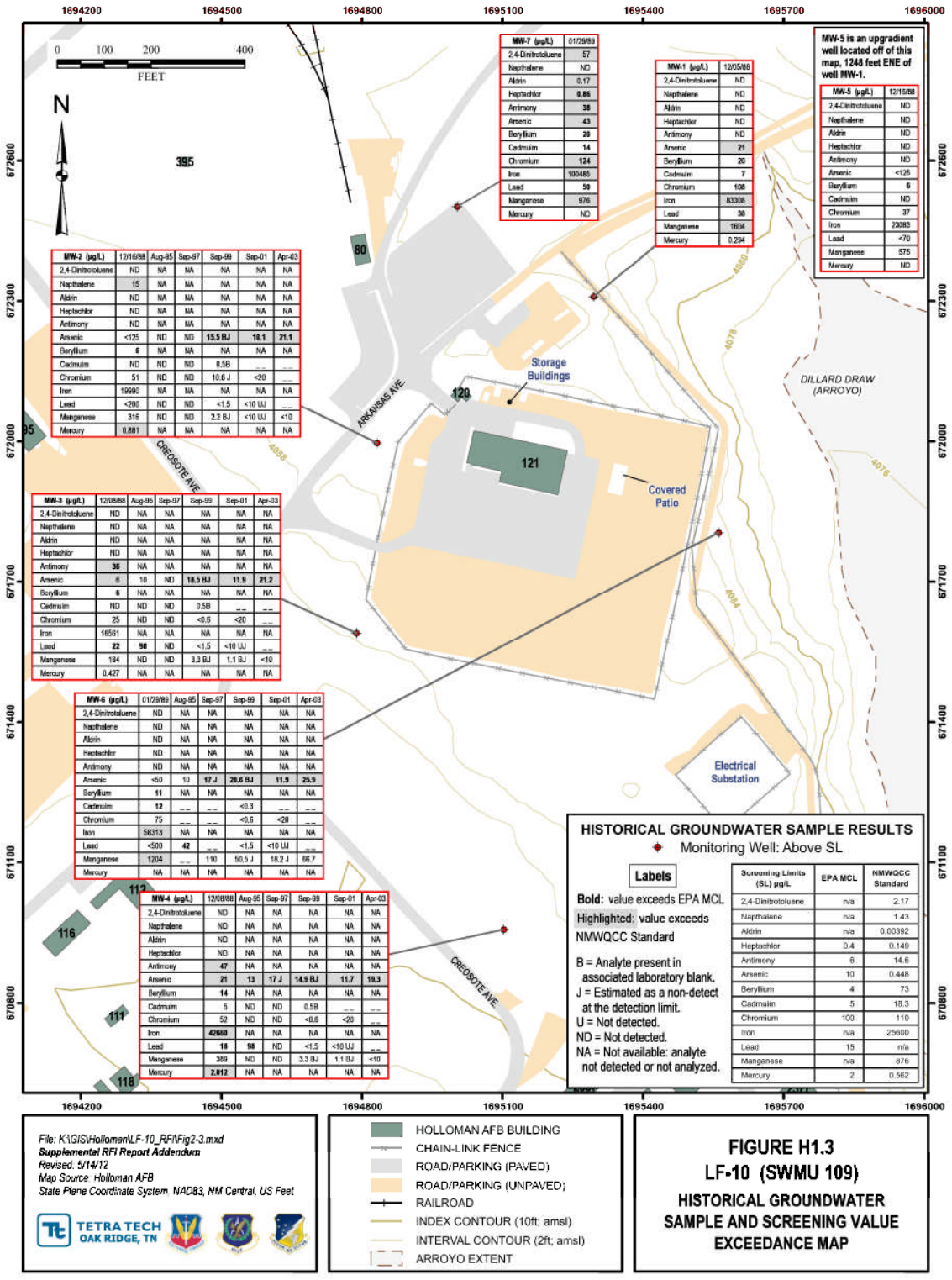
This Page Intentionally Left Blank

Figure H1.2 LF-10 (SWMU 109) Soil Sample Exceedance Map



This Page Intentionally Left Blank

Figure H1.3 LF-10 (SWMU 109) Historical Groundwater Sample and Screening Value Exceedance Map



This Page Intentionally Left Blank

Figure H1.4 LF-10 (SWMU109) NMED Approval Letter, March 5, 2012

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

**2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030**
www.nmenv.state.nm.us

DAVE MARTIN
Secretary

Butch Tongate
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 5, 2012

A. David Budak
Deputy Base Civil Engineer
49 CES/CEVR
550 Tabosa Avenue
Holloman AFB, NM 88330-8458

**RE: APPROVAL
SUPPLEMENTAL RCRA FACILITY INVESTIGATION REPORT
ADDENDUM FOR LF-10 OLD MAIN BASE LANDFILL (SWMU 109)
AND BUILDING 121 LANDFILL (SWMU 101), HOLLOMAN AFB,
NOVEMBER 2011
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-11-014**

Dear Mr. Budak:

The New Mexico Environment Department (NMED) has reviewed the *Supplemental RCRA Facility Investigation Report Addendum for LF-10 Old Main Base Landfill (SWMU 109) and Building 121 Landfill (SWMU 101), Holloman AFB, New Mexico, November 2011* which was received on December 1, 2011. The subject RCRA Facility Investigation Report Addendum is hereby approved.

NMED therefore issues a Certificate of Completion for Corrective Action Complete (CAC) With Controls for LF-10 (SWMU 109 and 101). In this case, the presence of landfill wastes will restrict future land use. HAFB shall maintain the integrity and effectiveness of the cover, including making repairs to the cap as necessary to correct effects of settling, subsidence or erosion. HAFB shall not disturb the integrity of the cover without the prior approval of NMED

HAFB may initiate a Class 3 permit modification request for Corrective Action Complete for LF-10. The Class 3 Permit modification request includes requirements for public notice and for providing opportunity for public comments that are mandatory. NMED's determination that

Mr. Budak
March 5, 2012
Page 2

corrective action is complete is subject to NMED's reservation of rights for new information or unknown conditions. As part of the Permit modification request process, new information may become available during the public comment period that a previously issued Certificate of Completion for a given site is not protective of human health or the environment. NMED reserves all rights against HAFB, and may withdraw a previously issued Certificate of Completion for any site where new information indicates that further corrective action is needed to protect human health and the environment.

If you have any questions regarding this matter, please contact Brian Salem at (505) 222-9576.

Sincerely,

John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: W. Moats, NMED HWB
B. Salem, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Scruggs, HAFB
L. King, EPA, Region 6 (6PD-F)
File: HAFB 2012 and Reading
HAFB-11-014

H.2 OT-16 (SWMUS 118 AND 132 AND AOC-A)

H.2.1 Location/Unit Description

The Entomology Shop Area [OT-16 (SWMUs 118 and 132, and AOC-A)] was located at former Building 21 in the southeastern portion of the Main Base Area and covered at area approximately 0.5 acres in size. A site map is provided on Figure H2.1. OT-16 encompasses former Building 21, a former truck wash rack (SWMU 79), a former pesticide plastic holding tank (SWMU 118), a former disposal pit (SWMU 132), and a former transformer pad (AOC-A). All concrete structures and features were demolished and removed in the mid-1990s. The site currently consists of a gravel and concrete-paved vehicle parking area and a large concrete pad used by the Honor Guard for training. Four monitoring wells (MW16-01 through MW16-04) are currently present on-site.

H.2.2 History/Current and Anticipated Future Land Use

Prior to its conversion into an entomology shop in 1977, Building 21 was a power plant that contained six diesel generators and several transformers for power generation. After its conversion, Building 21 was utilized as the Base herbicide and pesticide storage facility. The weighing and mixing of the chemicals prior to application was conducted within the shop. From 1977 to 1980, rinse water from washing pesticide mixing equipment was discharged to a septic tank drain field located on the northwest side of the building (CH2M Hill, 1983). After 1980, rinse water and unused pesticides were collected in a 12-gal plastic aboveground holding tank (SWMU 118). Activities within the Entomology Shop ceased in 1992.

The current and anticipated future land use is industrial.

H.2.3 Evaluation of Relevant Information

OT-16 was identified as a potential contaminant source during an Installation Restoration Program (IRP) records search conducted in 1983. A Phase I RI was conducted in 1992 by the Radian Corporation (Radian) (Radian, 1992). Based on the baseline risk assessment for OT-16, the RI concluded that no action was necessary, but recommended additional site characterization.

A Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) conducted in 1994 included additional sampling and recommended a conditional (NFAdetermination based on the remediation of total petroleum hydrocarbons (TPH)-contaminated soils that were discovered during the Phase II RFI. In 1996, approximately 107 tons of TPH-contaminated soil and 111 tons of polychlorinated biphenyls (PCB)-contaminated soil were excavated and removed from the site. Biennial LTM of the site monitoring wells began in 1997. In 2005, an LTM Report requested NFA under Criterion 5. This request was denied by NMED, which requested eight more quarters of groundwater data prior to approving the NFA request.

As requested by NMED, eight quarterly groundwater sampling events were conducted between 2008 and 2010 (Tetra Tech, 2010). During the eight sampling events at OT-16, only dieldrin and gamma-BHC were detected in groundwater. Detections of dieldrin occurred only at monitoring

wells MW16-01 and MW16-02. Detections of dieldrin were less frequent than during the previous sampling events (1997-2005).

Groundwater analytical results from the last eight LTM sampling events are summarized in Table H2.1. EPA MCLs and NMWQCC Standards are also included in the table for comparison purposes. Dieldrin was consistently detected at monitoring wells MW16-01 and MW16-2, but did not exceed either the EPA MCL or the NMWQCC Standard. Dieldrin was not detected during LTM sampling at monitoring wells MW16-03 and MW16-04 that represent downgradient locations. Gamma-BHC was detected only during the January 2010 sampling event in monitoring well MW16-02; the detected concentration was below both the EPA MCL and the NMWQCC Standard. Pesticides have not exceeded the applicable groundwater standards during any of the last eight LTM sampling events at OT-16.

Although the TDS values of groundwater at site OT-16 did not typically exceed the 10,000 mg/L threshold during the 2009 through 2010 sampling events, the site groundwater is not considered suitable as a potable water source for the following reasons:

- TDS values have exceeded 10,000 mg/L during earlier LTM sampling events.
- TDS values have ranged widely since LTM began in 2008 (2,340 to 14,000 mg/L) indicating a possible dilution source (i.e., storm water concentration, water line leak, sewer line leak).
- TDS concentrations at OT-16, which are mostly below 10,000 mg/L, are not typical of the groundwater in surrounding areas at HAFB. This isolated area of TDS values below 10,000 mg/L is another indication that groundwater is potentially being diluted by other water sources.

H.2.4 Basis for Determination

The groundwater data show that OT-16 is not acting as a source area for pesticides and no longer poses a threat to groundwater quality. Further characterization of groundwater contamination at OT-16 is not needed. NMED concurred with the LTM conclusion that SWMU 116 (LF-21) is suitable for CAC Without Controls (formerly NFA) based on NMED Criterion 5; the SWMU/AOC has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

H.2.5 References

Bhate, 2006. Final 2005 Long-Term Groundwater Monitoring Report, Holloman AFB, New Mexico. May.

New Mexico Environment Department (NMED), 2012. Approval, *April 2009 – January 2010 Long-Term Monitoring Report for OT-16 (SWMUs 118 and 132 and AOC A), DP-30/SD (SWMU 113B), and SS-39 (SWMUs 165, 167, 177, 179, and 181), Holloman Air Force Base, New Mexico*, EPA ID#NM6572124422, HWB-HAFB-10-002, May.

Radian Corporation, 1992. *Remedial Investigation Report, Investigation, Study, and Recommendation for 29 Waste Sites,* October.

Tetra Tech, Inc. (Tetra Tech), 2011. *Draft, April 2009 – January 2010 Long-Term Monitoring Report for OT-16 (SWMUs 118 and 132 and AOC A), DP-30/SD (SWMU 113B), and SS-39 (SWMUs 165, 167, 177, 179, and 181), Holloman Air Force Base, New Mexico*, April.

This Page Intentionally Left Blank

TABLES

This Page Intentionally Left Blank

Table H2.1
Long-Term Monitoring Groundwater Analytical Results
OT-16 (SWMUs 118 and 132, and AOC A)
Holloman AFB, New Mexico

Sample Name:			MW16-01																			
Date Collected:			04/01/2008		04/01/2008		07/11/2008		07/11/2008		10/07/2008		10/07/2008		01/06/2009		01/06/2009		04/09/2009		04/09/2009		07/06/2009	
Sampling Company:			Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
QC Type:			Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
General Chemistry (mg/L)																								
Solids, total dissolved[3]	n/a	n/a	3010		3120		3380		3420		3210		3490		3130		3370		3700		3630		2340	J
Pesticides (µg/L)																								
Alpha-BHC	0.106666667	n/a	0.0098	U	0.0097	U	0.01	U	0.0097	U	0.0097	U	0.0097	U	0.0098	U	0.0097	U	0.0096	U	0.0096	U	0.01	U
Dieldrin	0.042	n/a	0.016	J	0.015	J	0.013	J	0.014	J	0.014	J	0.013	J	0.0098	U	0.011	J	0.0096	U	0.0096	U	0.01	U
Gamma-BHC (lindane)	0.610909091	0.2	0.0098	U	0.0097	U	0.01	U	0.0097	U	0.0097	U	0.0097	U	0.0098	U	0.0097	U	0.0096	U	0.0096	U	0.01	U

Sample Name:			MW16-01								MW16-02											
Date Collected:			07/06/2009		10/06/2009		10/06/2009		01/05/2010		01/05/2010		04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009	
Sampling Company:			Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
QC Type:			Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
General Chemistry (mg/L)																						
Solids, total dissolved[3]	n/a	n/a	5400	J	3020		3100		2720		2570		5010		3880		4440		4840		5760	
Pesticides (µg/L)																						
Alpha-BHC	0.106666667	n/a	0.01	U	0.01	U	0.01	U	0.01	U	0.0097	U	0.0098	U	0.01	U	0.0097	U	0.0096	U	0.048	U
Dieldrin	0.042	n/a	0.01	U	0.02	J	0.015	J	0.01	U	0.0097	U	0.0098	U	0.011	J	0.011	J	0.0096	U	0.048	UJ
Gamma-BHC (lindane)	0.610909091	0.2	0.01	U	0.01	U	0.01	U	0.01	U	0.0097	U	0.0098	U	0.01	U	0.049	U	0.0096	U	0.048	U

Sample Name:			MW16-02				MW16-03															
Date Collected:			10/06/2009		01/05/2010		04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
Sampling Company:			Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
QC Type:			Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
General Chemistry (mg/L)																						
Solids, total dissolved[3]	n/a	n/a	5120		4170		3580		3490		3230	J	3440	J	3180		6170	J	4690		2380	
Pesticides (µg/L)																						
Alpha-BHC	0.106666667	n/a	0.01	U	0.01	U	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	U	0.0098	U
Dieldrin	0.042	n/a	0.01	U	0.01	U	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	UJ	0.0098	U
Gamma-BHC (lindane)	0.610909091	0.2	0.01	U	0.097	J	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	U	0.0098	U

Table H2.1 (continued)
Long-Term Monitoring Groundwater Analytical Results
OT-16 (SWMUs 118 and 132, and AOC A)
Holloman AFB, New Mexico

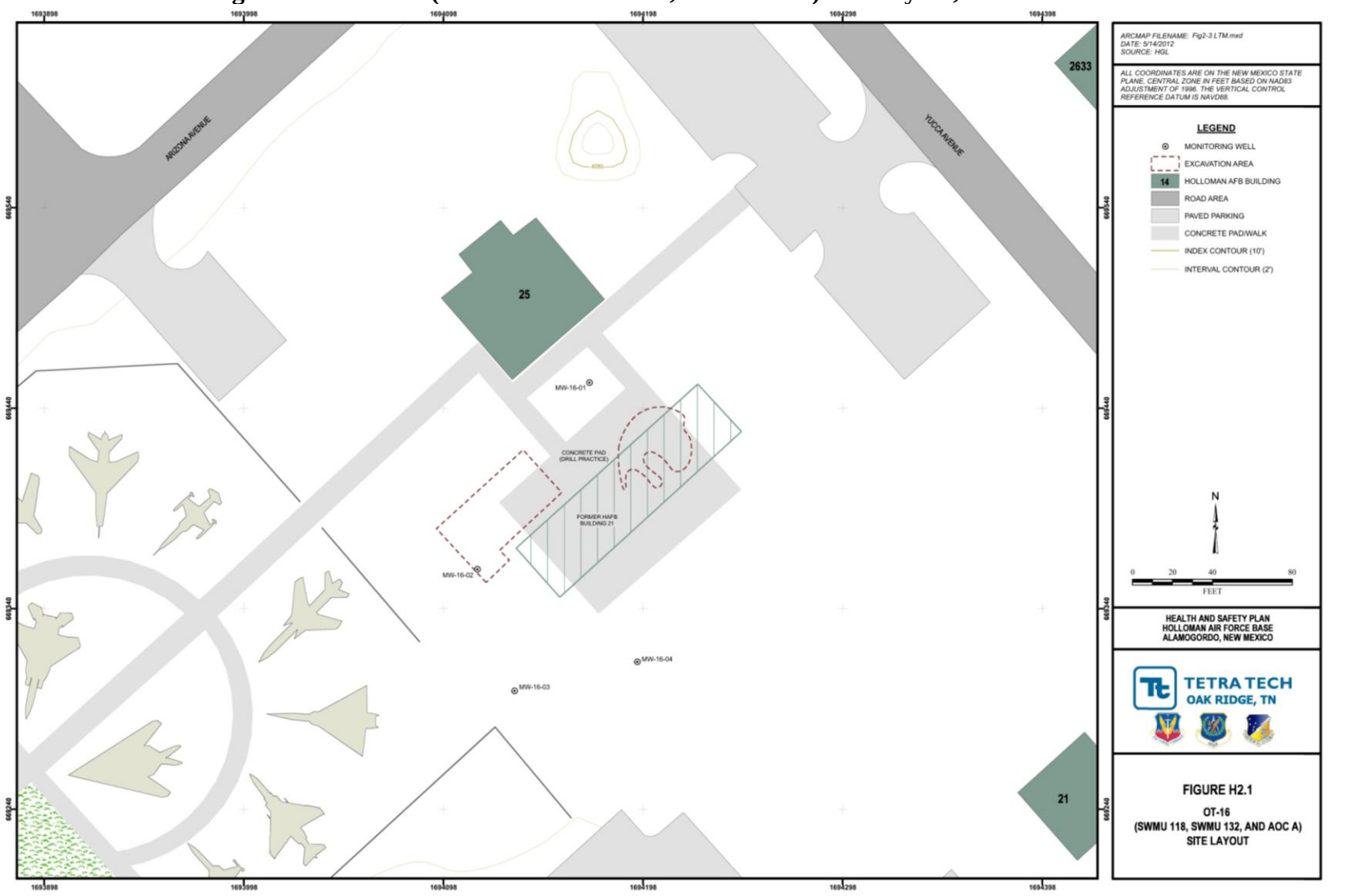
			Sample Name:	MW16-04															
			Date Collected:	04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
			Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
			QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
General Chemistry (mg/L)																			
Solids, total dissolved[3]	n/a	n/a		3330		4230		4230		14000		4200		6120	J	5590		4450	
Pesticides (µg/L)																			
Alpha-BHC	0.106666667	n/a		0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	U	0.0097	U
Dieldrin	0.042	n/a		0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	UJ	0.0097	U
Gamma-BHC (lindane)	0.610909091	0.2		0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	U	0.0097	U

Notes:
(1) NMAC 20.6.2.3103
(2) December 2009 U.S. EPA Maximum Contaminant Level (MCL)
(3) Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected; UJ - estimated non-detect

FIGURES

This Page Intentionally Left Blank

Figure H2.1 OT-16 (SWMUs 118 and 132, and AOC A) Site Layout, Holloman AFB



This Page Intentionally Left Blank

Figure H2.2 OT-16 (SWMUs 118 and 132, and AOC A)
NMED Approval Letter, May 24, 2012

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

DAVE MARTIN
Secretary

Butch Tongate
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 24, 2012

A. David Budak
Deputy Base Civil Engineer
49 CES/CEVR
550 Tabosa Avenue
Holloman AFB, NM 88330-8458

RE: APPROVAL
APRIL 2009- JANUARY 2010 LONG-TERM MONITORING REPORT FOR OT-16 (SWMUS 118 AND 132 AND AOC-A), DP-30/SD-33 (SWMU 113B), AND SS-39 (SWMUS 165, 167, 177, 179 AND 181) HOLLOMAN AFB, NEW MEXICO, JUNE 2010
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-10-002

Dear Mr. Budak:

The New Mexico Environment Department (NMED) has reviewed the *April 2009-January 2010 Long-Term Monitoring Report for OT-16 (SWMUs 118 and 132 and AOC-A), DP-30/SD-33 (SWMU 113B), and SS-39 (SWMUs 165, 167, 177, 179 and 181) Holloman AFB, New Mexico, June 2010* which was received on July 6, 2010. The subject Long-Term Monitoring Report is hereby approved.

NMED therefore issues a Certificate of Completion for Corrective Action Complete (CAC) Without Controls for OT-16 (SWMUs 118 and 132 and AOC-A).

HAFB may initiate a Class 3 permit modification request for Corrective Action Complete for OT-16. The Class 3 Permit modification request includes requirements for public notice and for providing opportunity for public comments that are mandatory. NMED's determination that corrective action is complete is subject to NMED's reservation of rights for new information or

unknown conditions. As part of the Permit modification request process, new information may become available during the public comment period that a previously issued Certificate of Completion for a given site is not protective of human health or the environment. NMED reserves all rights against HAFB, and may withdraw a previously issued Certificate of Completion for any site where new information indicates that further corrective action is needed to protect human health and the environment.

If you have any questions regarding this matter, please contact Brian Salem at (505) 222-9576.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: W. Moats, NMED HWB
B. Salem, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Scruggs, HAFB
L. King, EPA, Region 6 (6PD-F)
File: HAFB 2012 and Reading
HAFB-10-002

APPENDIX A

PROPOSED CHANGES TO TABLES A AND B OF APPENDIX 4-A OF RCRA PERMIT PART 4

This Page Intentionally Left Blank

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE A

The Following is the Prioritized list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action:

SERIAL NO.	SWMU/AOC	ERP SITE ID	UNIT NAME
1	4	SD-08	Building 131 Oil/Water Separator
2	8	N/A	Building 231 Oil/Water Separator
3	19	N/A	Building 638 Oil/Water Separator
4	20	N/A	Building 639 Oil/Water Separator
5	39	N/A	Building 1092 Oil/Water Separator
6	82	SD-08	Building 131 Washrack
7	101	LF-10	Building 121 Landfill
8	104	LF-29	Former Army Landfill
10	106	LF-01	Main Base Lanfill
13	111	RW-42	Radioactive Waste Disposal Area
14	113A	OT-20	Sludge Disposal Trenches near Lagoons
15	113B	DP-30/SD-33	Sludge Disposal Trenches Fire Train Area
16	114	OT-03	TEL Disposal Site
20	122	N/A	Building 702 Waste Oil Tank
21	123	N/A	Building 704 Waste Oil Tank
22	127	FT-31	Building 1092 Waste Oil Tank
25	135	FT-31	Building 1092 Oil/Water Sep Drainage Pit
26	136	N/A	Building 1119 Washrack Drainage Area
27	137	SS-38	Building 1166 Test Track Drain Field
28	139	N/A	Lake Holloman
29	140	N/A	Lake Stinky
30	141	SD-27	Pad 9 Drainage Pit
31	165	SS-39	Building 1176 Pond
32	166	SD-25	MOBSS Drainage Lagoon
33	170	FT-31	Fire Department Training Area 1
34	177	SS-39	Building 1176 Sumps
35	179	SS-39	Discharge Box
36	181	SS-39	Building 1176 Drainage Trough
37	183	N/A	Air Base Sewer System
38	197	OT-14	Former Entomology Shop
39	229	SS-59	T-38 Test Cell Fuel Spill Site
40	AOC-1	DP-64	Chemical Agent Site
41	AOC-1	N/A	Sewage Drainage Pit NE of Building 864
42	AOC-3	DP-63	Ammunition Yard Disposal Pit
43	AOC-4	N/A	West POL Fuel Spill Site
44	AOC1001	SS-61	Building 1001 Fuel Spill Site
45	AOC-FST837	N/A	Building 837 Fuel Septic Tank
47	AOC-B	N/A	Building 807 Test Cell Surface Spill Area

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE A

The Following is the Prioritized list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action:

SERIAL NO.	SWMU/AOC	ERP SITE ID	UNIT NAME
48	AOC-C	N/A	Building 835 Spills
49	AOC-E	N/A	Buildings 903-909 Sand Plast Residues
50	AOC-F	N/A	Asphalt Tank Spill Area
51	AOC-H	SS-18	Chromic Acid Spill Area
52	AOC-I	OT-37	Fighter Wing Flight Line Spill
53	AOC-J	SS-13	Herbicide Sodium Arsenite Spill Area
54	AOC-K	SS-12	Northeast Fuel Line Spill Site #1
55	AOC-L	N/A	Early Missile Test Site
56	AOC-M	N/A	Building 18
58	AOC-O	OT-45	Building 296 Old AGE Refueling Station
60	AOC-Q	SS-17	BX Gas Stations Fuel Line Leaks
61	AOC-R	SS-06	JP-4 Fuel Line Spill Site
62	AOC-RD	DP-62	Rita's Draw Disposal Site
63	AOC-S	N/A	Leaking Underground Storage Tank
64	AOC-T	SS-05	POL Storage Tank Spill Sites 1 and 2
65	AOC-U	N/A	Lost River Basin
66	AOC-V	SS-57	Officer's Club
67	PRI-2	OT-35	PRI Bldg 1264 Solvent Burn Area
68	PRI-05	OT-35	PRI Bldg 1264 Solvent Burn Area
69	PRI-A	OT-32	Primate Research Lab Sewer Line

TOTAL OF CORRECTIVE ACTION SITES = 58 [i.e., 31 SWMUSs + 24 AOCs].

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
1	Building 55 Oil/Water Separator	Site NFAd in February 2001
2	Building 121 Oil/Water Separator	Site NFAd in February 2001
3	Building 130 Oil/Water Separator	Site NFAd in February 2001
5	Building 137 Oil/Water Separator	Site NFAd in February 2001
6	Building 193 Oil/Water Separator	Site NFAd in February 2001
7	Building 198 Oil/Water Separator	Site NFAd in February 2001
9	Building 282 Oil/Water Separator	Site NFAd in February 2001
10	Building 283 Oil/Water Separator	Site NFAd in February 2001
11	Building 300 Oil/Water Separator	Site NFAd in February 2001
12	Building 304 Oil/Water Separator	Site NFAd in February 2001
13	Building 304A Oil/Water Separator	Site NFAd in February 2001
14	Building 306 Oil/Water Separator	Site NFAd in February 2001
15	Building 309 Oil/Water Separator	Site NFAd in February 2001
16	Building 315 Oil/Water Separator	Site NFAd in February 2001
17	Building 316 Oil/Water Separator	Site NFAd in February 2001
18	Building 500 Oil/Water Separator	Site NFAd in February 2001
21	Building 702 Oil/Water Separator	Site NFAd in February 2001
22	Building 704 Oil/Water Separator	Site NFAd in February 2001
23	Building 800 Oil/Water Separator	Site NFAd in February 2001
24	Building 801 Oil/Water Separator	Site NFAd in February 2001
25	Building 805 Oil/Water Separator	Site NFAd in February 2001
26	Building 809 Oil/Water Separator	Site NFAd in February 2001
27	Building 810 Oil/Water Separator	Site NFAd in February 2001
28	Building 822 Oil/Water Separator	Site NFAd in February 2001
29	Building 827 Oil/Water Separator	Site NFAd in February 2001
30	Building 830 Oil/Water Separator	Site NFAd in February 2001
31	Building 855 Oil/Water Separator	Site NFAd in February 2001
32	Building 868 Oil/Water Separator	Site NFAd in February 2001
33	Building 869 Oil/Water Separator	Site NFAd in February 2001
34	Building 902 Oil/Water Separator	Site NFAd in February 2001
35	Building 903 Oil/Water Separator	Site NFAd in February 2001
36	Building 1000 Oil/Water Separator	Site NFAd in February 2001
37	Building 1080 Oil/Water Separator	Site NFAd in February 2001
38	Building 1080A Oil/Water Separator	Site NFAd in February 2001
40	Building 1166 Oil/Water Separator	Site NFAd in February 2001
41	Building 1266 Oil/Water Separator	Site NFAd in February 2001
42	Building 1 Waste Accumulation Area	Site NFAd in February 2001

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
43	Building 55 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU, but no corrective action was not required.
44	Building 121 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU, but no corrective action was not required.
45	Building 195 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
46	Building 198 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
47	Building 280 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
48	Building 282 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
49	Building 300 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
50	Building 301 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
51	Building 308 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
52	Building 500 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
53	Building 638 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
54	Building 702 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
55	Building 702A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
56	Building 807 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
57	Building 809 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
58	Building 822 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
59	Building 837 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
60	Building 844 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
61	Building 851 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
62	Building 855 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
63	Building 867 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
64	Building 869 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
65	Building 901 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
66	Building 901 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
67	Building 909 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
68	Building 910 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
69	Building 807 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
70	Building 1119 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
71	Building 1778A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
72	Building 1178A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
73	Building 1266 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
74	Building 7005 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
76	DRMO Non-Hazardous Waste Drain	EPA listed the site in 1988 as a SWMU with no further corrective action required.
77	RATSCAT Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
78	Trim Pad 3 WAA	EPA listed the site in 1988 as a SWMU with no further corrective action required.
79	Building 21 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
80	Building 55 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
81	Building 121 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
83	Building 134 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
84	Building 137 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
85	Building 283 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
86	Building 304A Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
87	Building 306 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
88	Building 309 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
89	Building 703 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
90	Building 801 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
91	Building 816 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
92	Building 822 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
93	Building 827 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
94	Building 830 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
95	Building 902 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
96	Building 1080 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
97	Building 1119 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
98	Building 1166 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
99	Building 1266 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
100	Pad 9 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
102	Acid Trailer Burial Site	EPA listed the site in 1988 as a SWMU with no further corrective action required.
103	Causeway Rubble Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
105	Golf Course landfill	Class 3 Permit Mod request complete, March 2012
107	Main Base Substation PCB Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
108	MOBSS Landfill Disposal Trench	Class 3 Permit Mod request complete, March 2012
109	Old Main Base Landfill	Propose adding this site to CAC With Controls
110	POL Rubble Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
112	RATSCAT Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
115	Waste Area Landfill #1 PCB Disposal Area	Class 3 Permit Mod request complete, March 2012
116	Waste Area Landfill #2	Class 3 Permit Mod request complete, March 2012
117	Wire Spool Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
118	Former Pesticide Plastic Holding Tank	Propose adding this site to CAC Without Controls

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
119	Building 121 Waste Oil Tank	Site NFAd in February 2001
120	Building 309 Waste Oil Tank	Site NFAd in February 2001
121	Building 316 Waste Oil Tank	Site NFAd in February 2001
124	Building 752 Waste Oil Tank	Site NFAd in February 2001
125	Building 868 Waste Oil Tank	Site NFAd in February 2001
126	Building 1000 Waste Oil Tank	Site NFAd in February 2001
128	Building 1166 Waste Oil Tank	Site NFAd in February 2001
129	Building 1191 Waste Oil Tank	Site NFAd in February 2001
130	Taxiway 4 Tank 28 JP-4 Underground Waste Tank	Class 3 Permit Mod request complete, March 2012
131	Waste Oil Bowsers	Site NFAd in February 2001
132	Former Disposal Pit	Propose adding this site to CAC Without Controls
133	Building 703 Wash rack Discharge Pit	Site NFAd in February 2001
134	Buildings 902-924 Drainage Ditch	Site NFAd in February 2001
138	Building 1166 Oil/Water Sep Drainage Pit	Site NFAd in February 2001
142	Wastewater Influent Chamber	Site NFAd in February 2001
143	Bar Screen	Site NFAd in February 2001
144	Comminutor	Site NFAd in February 2001
145	Grit Chamber	Site NFAd in February 2001
146	Parshall Flume and Wet Well	Site NFAd in February 2001
147	Splitter Box	Site NFAd in February 2001
148	Sewage Lagoon A	Closed June 30, 2000
149	Sewage Lagoon B	Closed June 30, 2000
150	Sewage Lagoon C	Closed June 30, 2000
151	Sewage Lagoon D	Closed June 30, 2000
152	Sewage Lagoon E	Closed June 30, 2000
153	Sewage Lagoon F	Closed June 30, 2000
154	Sewage Lagoon G	Closed June 30, 2000
155	Sludge Drying Beds	Site NFAd in February 2001
156	Imhoff tanks (5)	Site NFAd in February 2001
157	ABLE 51 PCB Storage Area	Site NFAd in February 2001
158	PCB Storage Bunker	Site NFAd in February 2001
159	Building 500 Pb Storage Shelves	Site NFAd in February 2001
160	Building 500 NiCd Battery Storage Area	Site NFAd in February 2001
161	Building 844 Battery Storage Area	Site NFAd in February 2001
162	DRMO Scrap Metal Storage Area	EPA called this site a SWMU in 1988, but did not require corrective action [1].

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
163	DRMO Wood Pile	EPA called this site a SWMU in 1988, but did not require corrective action [1].
164	Building 1080 Pond	Site NFAd in February 2001
165	Building 1176 Pond	Site NFAd in February 2001
167	Test Shed Launch Area Collection Basin	EPA identified it in 1988 as a SWMU without requiring further corrective action
169	Burn Kettle	EPA identified it in 1988 as a SWMU without requiring further corrective action
171	Fire Department Training Area 2	Site NFAd in February 2001
173	Building 198 Sand Trap	EPA listed this as a SWMU in the 1988 RFA Report
174	Building 231 Hobby Shop Silver Recovery Unit	EPA listed this as a SWMU in the 1988 RFA Report
176	Building 844 Sand Trap	EPA listed this as a SWMU in the 1988 RFA Report
178	Building 1191 Fuel Runoff Pits	Site NFAd in February 2001
180	Building 301 Outdoor Drainage Flume	Site NFAd in February 2001
182	Building Floor Drains	Site NFAd in February 2001
184	Wastewater Re-circulation Line	Site NFAd in February 2001
185	Building 322 Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
186	Hospital Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
187	West Area Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
188	Building 161 Acid Neutralization Unit	EPA identified this site as a SWMU in 1988.
189	Building 282 Recycling Area	EPA identified this site as a SWMU in 1988.
190	Building 500 Battery Neutralization Unit	EPA identified this site as a SWMU in 1988.
191	Building 855 Concrete pad	EPA identified this site as a SWMU in 1988.
192	Coco Block House Disposal Well	EPA identified this site as a SWMU in 1988.
193	Trash Dumpster	EPA identified this site as a SWMU in 1988.

APPENDIX 4-A
SUMMARY OF SOLID WASTE MANAGEMENT UNITS
TABLE B

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
194-228	SWMUs which no Longer Exist or Could not be located	EPA identified this site as a SWMU in 1988.
212	Former north Area Wash Rack	Site NFAd in February 2001
230	Building 828 Fuel Spill Site	Site NFAd in February 2001
231	Incinerator/Landfill	Site NFAd in February 2001
194-228	SWMUs which no Longer Exist or Could not be located	EPA called this site a SWMU in 1988, but did not require corrective action [1].
PRI-1	Primate Research Institute (PRI) Building 1264: Waste Accumulation Area	EPA identified the site in 1988.
PRI-3	PRI Building 1264: Biological Incinerator	EPA identified the site in 1988.
PRI-4	PRI Building 1264: Quarantine Area Incinerator	EPA identified the site in 1988.
AOC-A	Former Transformer Pad	Propose adding this site to CAC Without Controls
AOC-BBMS	Bare Base Mobility Squadron Spill Area	EPA identified the site in 1988.
AOC-D	SD-26 Building 882 Spills	EPA identified the site in 1988.
AOC-G	Atlas Substation PCB Spill	EPA identified the site in 1988.
AOC-N	Building 137 Military Gas Tank Leak	Class 3 Permit Mod request complete, March 2012
AOC-P	Building 301 Fuel Tank Leak	Class 3 Permit Mod request complete, March 2012
AOC-PRI-A	Sewer Line from Primate Research Laboratory	EPA identified the site in 1988.
PRI-S	Primate Research Lab Borehole Disposal Site.	EPA identified the site in 1988.
AOC-RR	Buried RR Cars.	EPA identified the site in 1988.