



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

ENTERED

24 Sep 15

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RECEIVED

New Mexico Environment Department
Attn: Mr. John Kieling, Chief
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SEP 28
NMED
Hazardous Waste Bureau

Dear Mr. Kieling,

Holloman AFB is pleased to submit for your review the Final Corrective Action Complete Proposals SWMU 197 (OT014), AOC-B (SS065), AOC-E (SS067), and AOC-I (SS069).

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 me (575) 572-3931 or by email at deanna.rothhaupt@holloman.af.mil.

Sincerely,

DEANNA ROTHHAUPT, GS-12, DAFC

Attachment:

Final Corrective Action Complete Proposals SWMU 197 (OT014), AOC-B (SS065), AOC-E (SS067), and AOC-I (SS069)

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CORRECTIVE ACTION COMPLETE PROPOSALS

**Without Controls Status for SS-65, SS-67, SS-69
(AOC – B, E, and I) and OT-14 (SWMU 197)**

Holloman Air Force Base, New Mexico

Prepared for
Air Force Civil Engineer Center
2261 Hughes Ave, Suite 155
Joint Base San Antonio Lackland, Texas 78236-9853



Contract No.: FA8903-13-C-0008

URS
URS Group, Inc.
Denver, Colorado

24 September 2015

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List of Acronyms

µg/L	micrograms per liter
AAF	Army Air Field
AFB	Air Force Base
AOC	Area of Concern
BEAR	Basic Expeditionary Airfield Resources
CAC	Corrective Action Complete
CFR	Code of Federal Regulation
ERP	Environmental Restoration Program
HSWA	Hazardous and Solid Waste Amendments of 1984
IRP	Installation Restoration Program
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RSL	regional screening level
SSL	soil screening level
SVOC	semivolatile organic compounds
SWMU	Solid Waste Management Unit
TAL	target analyte list
TDS	total dissolved solid
TPH	total petroleum hydrocarbons
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

CORRECTIVE ACTION COMPLETE PROPOSALS

A. Introduction

The United States Air Force (USAF) and Holloman Air Force Base (AFB) (Permittee) is requesting Corrective Action Complete (CAC) Without Controls status for SS-65, SS-67, SS-69 (area of concern [AOC] – B, E, and I) and OT-14 (Solid Waste Management Unit [SWMU] 197) from the New Mexico Environment Department (NMED) in accordance with the New Mexico Hazardous Waste Act (Section 74-4-1 *et seq.*, New Mexico Statutes Annotated 1978, as amended, 1992) and the New Mexico Hazardous Waste Management Regulations 20.4.1 New Mexico Administrative Code. These four AOCs/SWMUs are listed in the Permittee's Resource Conservation and Recovery Act (RCRA) Part B Permit pursuant to 40 Code of Federal Regulations (CFR) 270.42(c) of the Hazardous and Solid Waste Amendments of 1984 (HSWA).

If approved, the Permittee requests NMED to initiate a modification of Holloman AFB's RCRA permit to adjust the content of the two corrective action tables (Appendix 4-A of Holloman AFB's RCRA Permit). The tables list the status of AOCs/SWMUs at the Base, and their content is as follows:

- **Table A** – List of AOCs/SWMUs Requiring Corrective Action (corrective action may be necessary to characterize and/or remediate past releases of hazardous wastes or hazardous constituents)
- **Table B** – List of AOCs/SWMUs Not Currently Requiring Corrective Action (corrective action has been completed, and further corrective action is not currently required; no controls are required)

The proposed modification would grant CAC without Controls status for the three AOCs and one SWMU. The following AOCs/SWMUs would move from Appendix 4 Table A to Table B:

- SS-65 (AOC-B) – Building 807 Test Cell Surface Spill Area
- SS-67 (AOC-E) – Buildings 903-909 Sand Blast Residues
- SS-69 (AOC-I) – Fighter Wing Flight Line Spill
- OT-14 – Former Entomology Shop, SWMU 197

The four SWMUs/AOCs addressed by this document are listed in the following table:

Section D Sub-section	SWMU / AOC	USAF Site Name	Description/Name
1	AOC-B	SS-65/TU-71	Building 807 Test Cell Surface Spill Area
2	AOC-E	SS-67	Buildings 903-909 Sand Blast Residues
3	AOC-I	SS-69	Fighter Wing Flight Line Spill
4	SWMU 197	OT-14	Former Entomology Shop

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B. Facility Description

Holloman AFB is located in south central New Mexico, in the north-central part of Otero County, approximately 75 miles north-northeast of El Paso, Texas. Holloman AFB has a population of approximately 3,500 and occupies approximately 59,830 acres in the northeast quarter of Section 1, Township 17 South, and Range 8 East. The U.S. Army's White Sands Missile Range testing facilities and White Sands National Monument occupy additional land extending north and west from the base. Private and publicly-owned lands border the remainder of Holloman AFB. The major highway servicing Holloman AFB is Highway 70, which runs southwest from the town of Alamogordo and separates Holloman AFB from publicly-owned lands to the south. Alamogordo, which has a population of approximately 35,000, is located approximately 7 miles northeast of the base.

Holloman AFB was first established in 1942 as Alamogordo Army Air Field (AAF). From 1942 through 1945, Alamogordo AAF served as the training grounds for over 20 different flight groups, flying primarily B-17s, B-24s, and B-29s. After World War II, most operations had ceased at the Base. In 1947, Air Material Command announced the air field would be its primary site for the testing and development of un-manned aircraft, guided missiles, and other research programs. On January 13, 1948, the Alamogordo installation was renamed Holloman AFB, in honor of the late Col. George V. Holloman; a pioneer in guided missile research. In 1968, the 49th Tactical Fighter Wing arrived at Holloman AFB and has remained since. Today, Holloman AFB also serves as a training location for the German Air Force's Tactical Training Center Operations command installation.

C. History of Investigation

Investigation and remediation of SWMUs and AOCs at Holloman AFB is conducted under both the Air Force Environmental Restoration Program (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 HSWA permit was issued to Holloman AFB by the United States Environmental Protection Agency (USEPA) in 1991 and became effective on September 25, 1991. It was reissued by the NMED on February 24, 2004. In January 1996, NMED received authorization from the USEPA for corrective action under the HSWA and became the administrative authority for this action. The HSWA portion 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, and Phase II of the RFI was conducted between 1992 and 1995. A total of 236 potential SWMUs and 29 AOCs were investigated.

Section C of this document briefly describes the location and history of each AOC and/or SWMU. Detailed descriptions of the investigative results for each SWMU appear in the original investigative reports and/or administrative records. References for these sources are provided in **Section D**.

CORRECTIVE ACTION COMPLETE PROPOSALS

D. SWMU/AOC Descriptions

The following subsections describe the location, history, and land use conditions for each AOC/SWMU. A summary of relevant information from previous investigations and a basis for CAC determination for the sites are also presented in this section. A site map showing the location of the SWMU/AOCs is presented as **Figure I-1** in **Attachment I**.

1. SS-65/TU-71 (AOC-B), BUILDING 807 TEST CELL SURFACE SPILL AREA

Location – SS-65/TU-71

SS-65, Building 807 Test Cell Surface Spill Area is also identified as AOC-B. The 1988 RFA Report (A.T. Kearney, Inc., 1988) identified the location of this site as the “area next to Building 807 Test Cell.” A site map is presented as **Figure I-2** in **Attachment I**.

History / Current and Anticipated Future Land Use – SS-65/TU-71

During the review of site-related documents, a site walk and the preparation of the RFA Confirmatory Sampling Work Plan Multiple Sites Holloman AFB, New Mexico (Bhate, 2012), it was determined that sites SS-65 and TU-71 were co-located. Therefore, the investigations were combined so that investigation of site SS-65 would serve to characterize both sites.

SS-65 had not been investigated in the past beyond the visual site inspection which was conducted during the 1988 RFA. Beyond anecdotal information, there is no evidence of any kind of a spill occurring at the site. The area surrounding this site has been disturbed during the construction of the adjacent F-117 bed down facilities.

Building 807 was built in 1977 but does not appear to be in use currently. Because of its small size, it is believed to have been a bathroom facility for test personnel to use during the period that this particular engine test area was active. According to personnel from the Holloman AFB 49th CES/CEAN, this test cell area consisted of two trim pads and one engine test stand, and spills of jet fuel were known to occur especially after the engine was shut down following a test. The site was used to test engines from F-15 and F-4 fighter aircraft during the 1970s and 1980s. During the phase-in of the F-117s in the 1990s, this test cell area was abandoned and replaced with testing facilities suitable for the F-117 which are located approximately 300 yards southeast of the site. This test cell area is currently not operational because these aircraft are not part of air operations at Holloman AFB.

Additionally, the Holloman AFB ERP Site Status Summaries Report (HAFB, 2005) described ERP Site TU-71 as a suspected leaking underground storage tank (UST) located immediately north of Building 807. There is no available information regarding the presence of a UST at this site. The information reviewed during the records search for SS-65, which included construction drawings and records from the Holloman AFB Real Property office confirmed that a UST never existed in the vicinity of Building 807. The site visit (July 12, 2006) did not reveal any indications of an UST in this area (e.g., UST fill and/or vent pipes were not observed). (NationView, 2013).

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Evaluation of Relevant Information – SS-65/TU-71 (AOC-B)

As detailed in the RFA Confirmation Sampling Report Sites SS-65/TU-71, SS-67, and SS-69 (Nation View, 2013), the analytical results from the soil and groundwater samples collected at site SS-65 during this investigation did not contain any volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbon (TPH), or polychlorinated biphenyls in excess of current action levels. Although arsenic was detected slightly above the soil screening level (SSL) (3.9 milligrams per kilogram [mg/kg]) in one sample (SS65-DP04-5) at 4.6 mg/kg all other target analyte list (TAL) metals were detected at concentrations below their respective action levels. Therefore, this singular exceedance of arsenic represents the natural variability of soil geochemistry and is not related to surficial spill of petroleum hydrocarbons.

With the exception of iron, manganese, and thallium all detected TAL metals were below their respective groundwater action levels. Although iron and manganese were detected above their respective USEPA Secondary maximum contaminant levels (MCLs), the National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause aesthetic effects (USEPA, 2009) Thallium was detected in one groundwater sample (SS65-DP02) at 3.5 J micrograms per liter ($\mu\text{g/L}$) which slightly exceeded the USEPA MCL (2 $\mu\text{g/L}$) but at a concentration that was below the Holloman AFB Basewide UTL (15 $\mu\text{g/L}$) (NationView/Bhate JV III, 2011) which indicates that this exceedance most likely represents the natural variability of groundwater geochemistry at Holloman AFB.

Based on concentrations of total dissolved solid (TDS) in the groundwater samples collected from the site, the aquifer was classified as a Class IIIB aquifer (NationView, 2013) with NMED concurrence (**Attachment II**). The Class IIIB aquifer is designated as unfit for human consumption (USEPA, 1986). As a result of this aquifer classification the human ingestion of groundwater at this site is an invalid pathway.

It was determined by this investigation that no further corrective action is required at site SS-65. Therefore, a Class 3 modification to the Holloman RCRA permit pursuant to 40 CFR 270.42(c) is warranted for CAC of SS-65/TU-71 (AOC-B).

Basis of Determination – SS-65/TU-71 (AOC-B)

SS-65/TU-71 (AOC-B) is proposed for CAC Without Controls based upon Criterion #5 listed in Appendix 4-B of the Holloman AFB Hazardous Waste Permit (NMED, 2004) which states:

“The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.”

This criterion was accomplished by conducting field activities that meet the requirements outlined in the NMED correspondence dated June 11, 2007 and November 7, 2007 (**Appendix A of NationView, 2013**). The approval letter from NMED dated June 15, 2015 for the Holloman AFB RCRA Facility Assessment Confirmatory Sample Report for sites SS-65/TU-71 (AOC-B), SS-67 (AOC-E), and SS-69 (AOC-I) dated July 2013 is provided in **Attachment II**.

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2. SS-67 (AOC-E), BUILDINGS 903-909 SAND BLAST RESIDUES

Location – SS-67 (AOC-E)

The 1988 RFA Report (A.T. Kearney, Inc., 1988) identified this site as a pile of sandblast residue located 100 feet east of Building 903 (south of Building 905). Buildings 903 and 905 are located in the south end of the 49th Materiel Maintenance Group complex at Holloman AFB, also known as the BEAR (Basic Expeditionary Airfield Resources) Base. A site map is presented as **Figure I-2 in Attachment I**.

History / Current and Anticipated Future Land Use – SS-67 (AOC-E)

At the time of the 1988 RFA, metal surface preparation and painting operations took place at Buildings 903 and 905 as part of a corrosion control operation that served Holloman AFB. The corrosion shop began operation in 1978. Sand blasting of metal parts (aluminum and steel) took place in Building 905 and was performed as a surface preparation step prior to painting which was done in Building 903. Residue which is a mixture of materials including the silica shot, metal, and old paint was staged outside of Buildings 903 and 905. Mounds of material can be seen staged along the south side of Buildings 903 and 905 in the 1996 aerial photograph of the area. However, personnel from that period that are familiar with the sand blasting operation could not be located to confirm that these mounds or piles were in fact residue from the sand blasting operation and were present during the site visit made as part of the RFA in 1988. Aerial photos of this area for the years 1987, 1988, and 1989 could not be located to confirm the presence of these piles during these earlier years.

The SS-67 RFA site visit was conducted on July 12, 2006. The residue from the sandblasting is currently drummed and labeled as hazardous waste. The exterior of both buildings were examined and it was noted that the sand piles that appeared in the 1996 aerial photograph were removed and replaced with ornamental cobblestone. In addition, a 6 foot x 6 foot area of sandblast residue (black colored grit) was observed 5 feet east of the telephone pole located along the south side of Building 905. This black grit material is similar to the description of the sandblast residue described in the 1988 RFA.

Sandblasting residue containing paint chips and heavy metals may have been placed directly on the ground adjacent to the buildings. Aerial photographs, institutional knowledge, and the presence of a small remaining area of staining (near the telephone pole) indicate that stockpiling of this material may have occurred. Piles of sandblast debris no longer exist at the site. The exact volume of material that was generated and perhaps placed in piles on the ground is unknown.

Surface cleaning (Building 905) and painting operations (Building 903) for corrosion control continue today in these buildings, although process improvements have been made with regard to the sand blasting operation and residue management. For instance, the abrasive material currently in use is plastic beads instead of silica. The beads are separated from the abraded sediments allowing reuse of the beads and collection of the sediments for proper disposal as hazardous waste (NationView, 2013).

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Evaluation of Relevant Information – SS-67 (AOC-E)

As detailed in the RFA Confirmation Sampling Report Sites SS-65/TU-71, SS-67, and SS-69 (Nation View, 2013), the analytical results from the soil and groundwater samples collected at site SS-67 during this investigation did not contain any VOCs, SVOCs, or TPH, in excess of current SSLs, the New Mexico Water Quality Control Commission standards, or USEPA MCLs. However, six surface soil samples which contained sandblast residue (located along the south side of Building 905) had detections of four TAL metals (antimony, arsenic, cobalt, and lead) above their current NMED residential SSLs. As a result of these exceedances, approximately 51 cubic yards (32.44 tons) of soil containing sandblast residue was excavated and transported to the Rio Rancho Waste Management Landfill in April 2013. The confirmation soil samples collected from the perimeter and bottom of the excavation provide documentation of the complete removal of sandblast residue/soil containing TAL metals in excess of applicable NMED SSLs.

With the exception of arsenic, iron, manganese, and thallium, all detected TAL metals were below their respective groundwater action levels. Arsenic was detected in one groundwater sample (SS67-DP04) above the USEPA MCL (10 µg/L) at a concentration of 27.3 µg/L. However this detection is below the basewide background UTL for arsenic (28.53 µg/L) (NationView/Bhate JV III, 2011) and reflects the natural geochemical variability of the aquifer. Although iron and manganese were detected above their respective USEPA Secondary MCLs, the National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause aesthetic effects (USEPA, 2009). Thallium was detected in one groundwater sample (SS65-DP02) at 4.2 J µg/L which slightly exceeded the EPA MCL (2 µg/L) but at a concentration that was below the Holloman AFB Basewide UTL (15 µg/L) (NationView/Bhate JV III, 2011) which indicates that this exceedance most likely represents the natural variability of groundwater geochemistry at Holloman AFB.

Based on concentrations of TDS in the groundwater samples collected from the site, the aquifer was classified as a Class IIIB aquifer (NationView, 2013) with NMED concurrence (Attachment II). The Class IIIB aquifer is designated as unfit for human consumption (USEPA, 1986). As a result of this aquifer classification the human ingestion of groundwater at this site is an invalid pathway.

It was determined by this investigation that following the soil removal action that contamination was not detected at this site. Therefore, a Class 3 modification to the Holloman RCRA permit pursuant to 40 CFR 270.42(c) is warranted for CAC of SS-67 (AOC-E).

Basis of Determination – SS-67 (AOC-E)

SS-67 (AOC-E) is proposed for CAC Without Controls (per email dated June 19, 2015 from David Strasser with the State of New Mexico to Laura Peters GS-12, DAF Environmental Restoration Manager AFCEC/CZO) given the current and foreseeable land use within BEAR Base (a fenced and access-restricted area) based upon Criterion #5 listed in Appendix 4-B of the Holloman AFB Hazardous Waste Permit (NMED, 2004) which states:

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“The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.”

This criterion was accomplished by conducting field activities to meet the requirements outlined in the NMED correspondence dated June 11, 2007 (**Appendix A**, NationView, 2013). The approval letter from NMED dated June 15, 2015 for the Holloman AFB RCRA Facility Assessment Confirmatory Sample Report for sites SS-65/TU-71 (AOC-B), SS-67 (AOC-E), and SS-69 (AOC-I) dated July 2013 is provided in **Attachment II**.

3. SS-69 (AOC-I), FIGHTER WING FLIGHT LINE SPILL

Location – SS-69 (AOC-I)

The 1988 RFA Report (AT. Kearney, Inc., 1988) identifies the site as the location of a surface spill of approximately of 275 gallons of trichloroethylene and 200 gallons of carbon tetrachloride that occurred generally in the area of the 49th Tactical Air Command Flight Line. The Holloman AFB ERP Site Status Summaries Report (HAFB, 2005) stated the spill occurred approximately 200 feet southwest of Building 868 and that the exact location of the spill is unknown. The source of this information could not be verified. Both documents identify the same general area (Building 868) as the location of the spill. A site map is presented as **Figure I-2** in **Attachment I**.

History / Current and Anticipated Future Land Use – SS-69 (AOC-I)

Building 868 has been in existence for approximately 25 years and has served as a maintenance hangar for both F-117s and F-15s. There have been upgrades over the years, primarily during the early 1990s which is when the transition to the F-117s from the F-15s occurred. The SS-69 RFA site visit was conducted on August 1, 2006. The flight line was examined with particular attention given to the suspected location of the spills (i.e., 200 feet southwest of the original Building 868 structure). The entire area is covered with reinforced concrete since it serves as a taxi-way for heavy aircraft. There was no evidence of spills such as staining on the concrete.

Presently, the use of solvents by the USAF is limited to parts cleaning (if at all) and for the most part the use of halogenated (i.e. trichloroethylene) and non-halogenated (i.e. acetone, toluene) solvents have been replaced with alternative chemicals as part of their pollution prevention programs.

Evaluation of Relevant Information – SS-69 (AOC-I)

As detailed in the RFA Confirmation Sampling Report Sites SS-65/TU-71, SS-67, and SS-69 (Nation View, 2013), The analytical results from the soil and groundwater samples collected at site SS-69 during this investigation did not contain any VOCs, SVOCs, or TPH, in excess of current action levels. Additionally, all TAL metals were detected in the soil samples below their applicable SSLs and regional screening levels (RSLs).

With the exception of arsenic and manganese all detected TAL metals were below their respective groundwater action levels. Although manganese was detected above its USEPA

CORRECTIVE ACTION COMPLETE PROPOSALS

Secondary MCL in the three SS-69 groundwater samples, the National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause aesthetic effects (USEPA, 2009). Arsenic was detected in two groundwater samples (SS69-DP02 and SS69-DP03) at 15.1 µg/L and 11.3 µg/L, which exceeded the USEPA MCL (10 µg/L) but at concentrations that are below the Holloman AFB Basewide UTL (28.53 µg/L) (NationView/Bhate JV III, 2011) which indicates that this exceedance most likely represents the natural variability of groundwater geochemistry at Holloman AFB.

It was determined by this investigation that no further corrective action is required at site SS-69. Therefore, a Class 3 modification to the Holloman RCRA permit pursuant to 40 CFR 270.42(c) is warranted for CAC of SS-69 (AOC-I).

Basis of Determination – SS-69 (AOC-I)

SS-69 (AOC-I) is proposed for CAC without Controls based upon Criterion #5 listed in Appendix 4-B of the Holloman AFB Hazardous Waste Permit (NMED, 2004) which states:

“The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.”

This criterion was accomplished by conducting field activities meet the requirements outlined in the NMED correspondence dated June 11, 2007 and November 7, 2007 (**Appendix**, NationView, 2013). The approval letter from NMED dated June 15, 2015 for the Holloman AFB RCRA Facility Assessment Confirmatory Sample Report for sites SS-65/TU-71 (AOC-B), SS-67 (AOC-E), and SS-69 (AOC-I) dated July 2013 is provided in **Attachment II**.

4. OT-14 (SWMU 197), FORMER ENTOMOLOGY SHOP

Location – OT-14 (SWMU 197)

OT-14 occupies approximately two-tenths of an acre in the northwestern corner of the Civil Engineering yard on the Main Base. OT-14 is adjacent to Building 66 and is surrounded by paved areas. The topography of the site is relatively flat. The former Entomology Shop, OT-14 was located in Building 66. A site map is presented as **Figure I-3** in **Attachment I**.

History / Current and Anticipated Future Land Use – SWMU 179

Historically pesticides and equipment (spraying units) for application across the Base were mixed, stored, and maintained on site. Mixing and maintenance activities were performed in an area outside of Building 66.

Site OT-14 was first identified as a potential source for release to the environment during the 1983 IRP records search (CH2M-Hill, 1983) and was originally believed to be present at Building 67. The 1988 RFA field inspection could not locate the site, but did misidentify the site as SWMU 198 (IRP Site Number 14) (A.T. Kearney, 1988). A literature search along with interviews with Base personnel conducted in February 1991 provided the location of the site as adjacent to Building 66 located in the Civil Engineering yard.

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From 1968 to 1977, pesticide spraying and washing equipment was rinsed out in an open area adjacent to the building (Radian, 1992). Interviews with past employees indicated that mixing and rinsing of spraying equipment was performed outdoors, adjacent to Building 66. Phase I RI and Phase II RFI investigations have been previously conducted on site. Currently, the area is occasionally used to stage emergency spill response equipment. The area is flat and covered with an engineered asphalt cap. A cap consisting of geotextile fabric layer, a geomembrane layer, a geonet drainage layer, and an aggregate base layer topped with asphalt was constructed and installed by Foster Wheeler Environmental Corporation in 1996 (FWENC, 1997). Concrete filled stanchions were placed around the perimeter of the asphalt cap to restrict site access. Currently there are no plans to alter or remove the OT-14 engineered asphalt cap.

Evaluation of Relevant Information – SWMU 179

Based on the results of this ACM investigation it appears that the asphalt cap, which has remained intact since it was installed, coupled with warm temperatures and shallow groundwater has created an environment favorable to the degradation of pesticides. Observable concentrations of pesticides in onsite soil have degraded significantly over the past 20 years. The current soil and groundwater concentrations present at site OT-14 along with engineering controls in place are protective of current and future commercial/industrial workers and future construction workers (Bhate, 2012).

Therefore, a Class 3 modification to the Holloman RCRA permit pursuant to 40 CFR 270.42(c) is warranted for CAC of OT-14 (SWMU 179).

Basis of Determination – SWMU 179

OT-14 (SWMU 179) is proposed for CAC Without Controls based upon Criterion #5 listed in Appendix 4-B of the Holloman AFB Hazardous Waste Permit (NMED, 2004) which states:

“The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.”

This criterion was accomplished by conducting field activities during the ACM investigation at site OT-14 to delineate the current extent of any remaining contamination and collect the proper data to support site closure based on guidance from the NMED. The approval letter from NMED dated April 28, 2014 for the Holloman AFB Accelerated Corrective Measures Completion Report for Site OT-14 (the former Entomology Shop, SWMU 197) dated June 2012 and received July 16, 2012 is provided in **Attachment III**.

CORRECTIVE ACTION COMPLETE PROPOSALS

E. References

- A.T. Kearney. 1987. Preliminary Review/VSI Report RCRA Facility Assessment. Cannon AFB, Clovis, New Mexico. July.
- A.T. Kearney, Inc. 1988. RCRA Facility Assessment Preliminary Review/Visual Site Inspection Report. Holloman AFB, New Mexico. September.
- Bhate Environmental Associates, Inc. (Bhate). 2012. Final Accelerated Corrective Measures Completion Report Site OT-14. Holloman Air Force Base, New Mexico.
- Bhate Environmental Associates, Inc. (Bhate). 2013. 2012 Biennial Groundwater Monitoring Report and Annual Landfill Inspection Report, Landfills LF-03, LF-04, LF-05, LF-25, and Former Sewage Lagoons. Cannon Air Force Base, New Mexico. April.
- CH2M Hill. 1983. Installation Restoration Program Records Search for Holloman Air Force Base, New Mexico, August.
- Foster Wheeler Environmental Corporation (FWENC). 1997. Project Closeout Report Installation Restoration Sites SD-08, and OT-14 Remedial Action, Holloman Air Force Base, New Mexico. July.
- Holloman AFB, December 2015. Holloman Air Force Base Environmental Restoration Program Site Status Summaries, Holloman AFB, New Mexico.
- Nation View. 2013. RCRA Facility Assessment Confirmation Sampling Report Sites SS-65/TU-71, SS-67, and SS-69.
- NationView Bhate JV III. July 2011. Basewide Background Study Report, Holloman Air Force Base, New Mexico.
- New Mexico Environment Department (NMED). 2004. Letter from NMED to Cannon AFB re No Further Action Petition, January.
- Radian Corporation. 1992. Draft Final Remedial Investigation (RI) Report, Investigation, Study and Recommendation for 29 Waste Sites, Holloman Air Force Base, NM, June.
- U.S. Environmental Protection Agency (USEPA). 1986. Final Draft Guidelines for Groundwater Classification under the EPA Groundwater Protection Strategy.
- USEPA. May 2009a. National Priority Drinking Water Regulations. EPA 816-F-09-004.

CORRECTIVE ACTION COMPLETE PROPOSALS

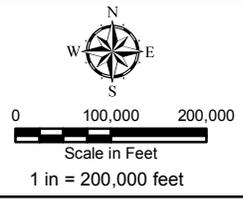
Attachment I Maps and Figures

- Figure I-1 Site Location Map
- Figure I-2 Site Map, SS-65/TU-71, SS-67, SS-69
- Figure I-3 Site Map, OT-14



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Designed	SF
Drawn	LED
Checked	DAE
Peer Review	DAE
Project Manager	BGP
Project Number	23446541

Figure 1-1
Site Location Map

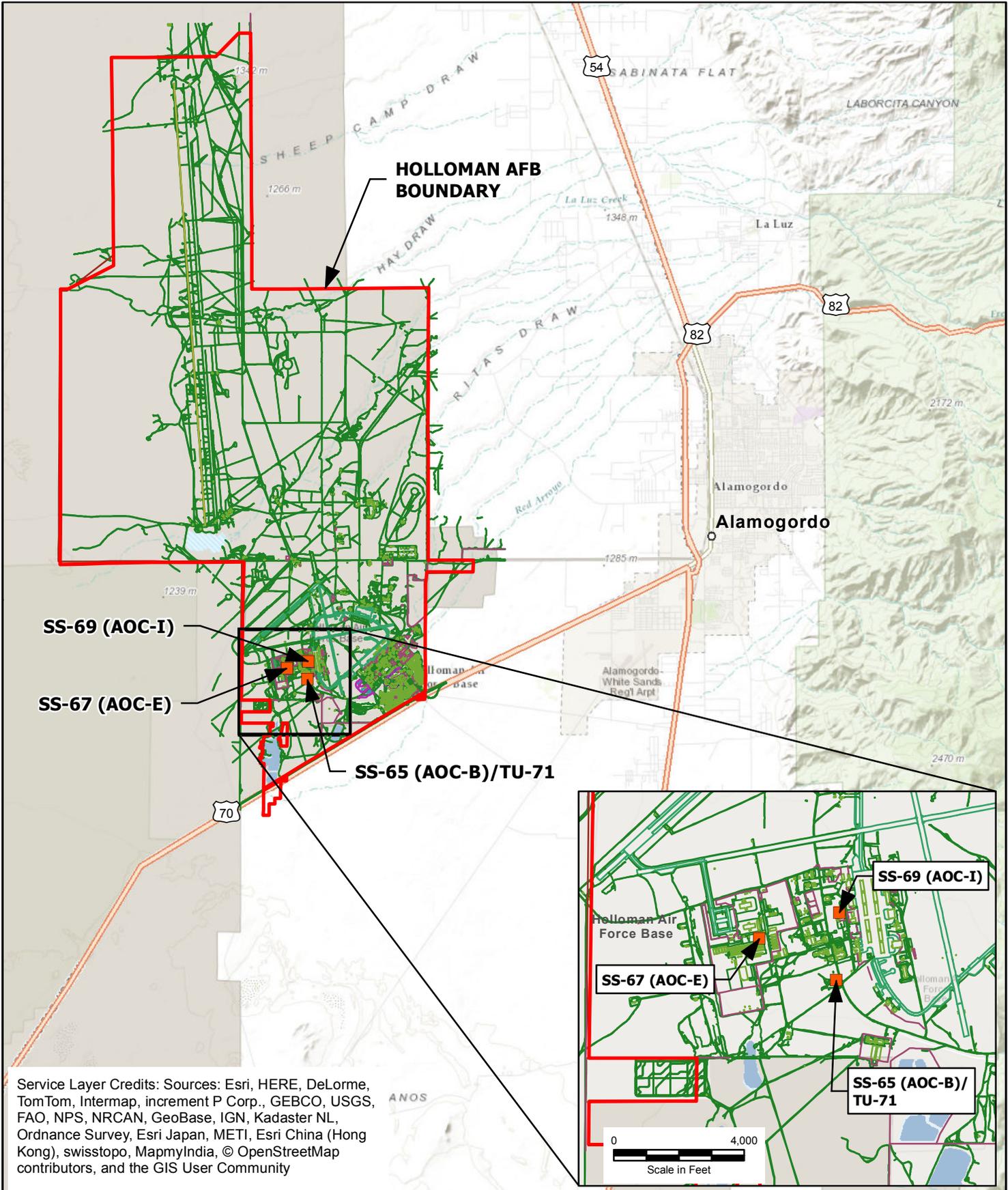
Holloman Air Force Base

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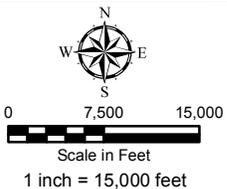
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September 10, 2015

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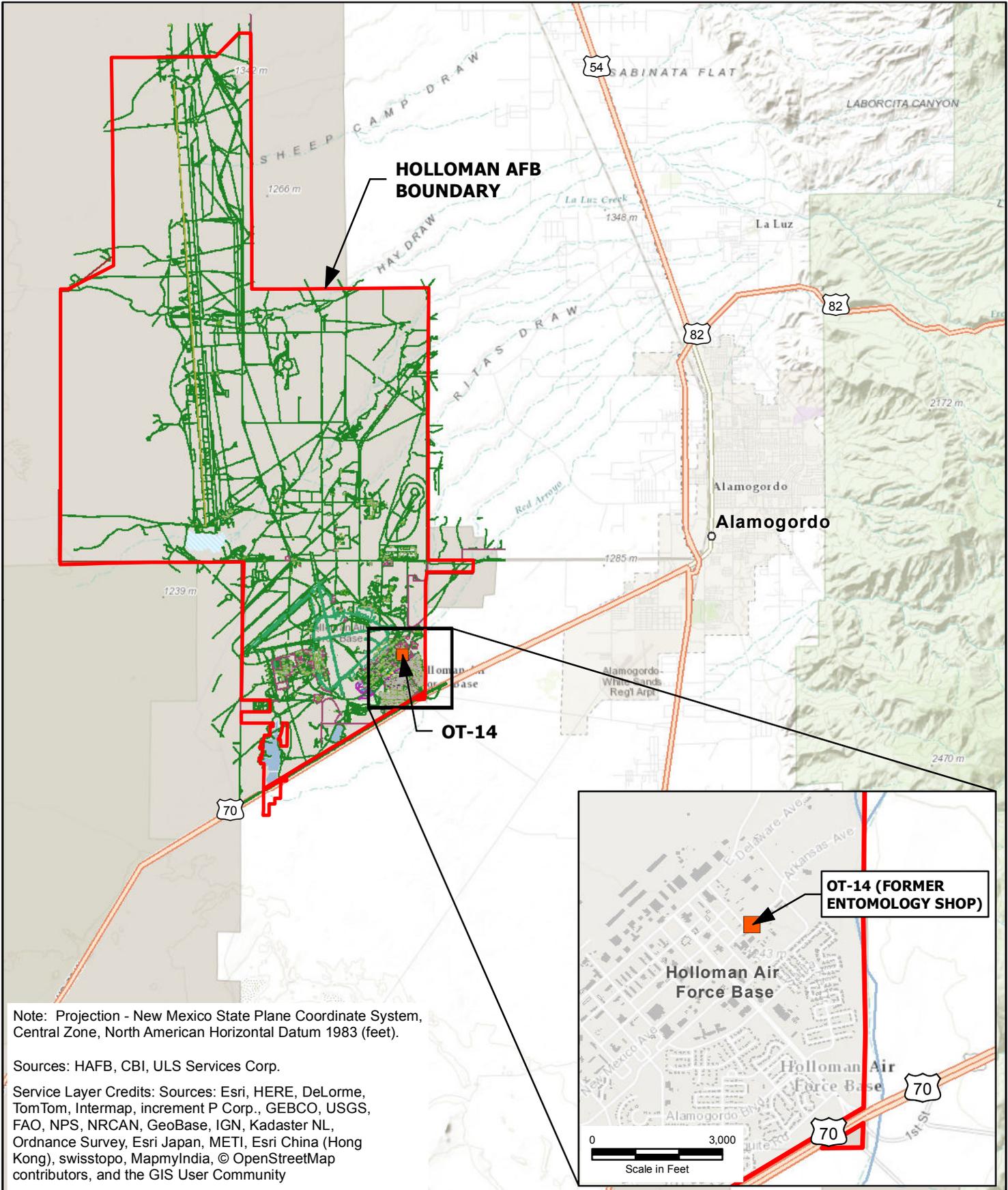


Designed	SF
Drawn	LED
Checked	DAE
Peer Review	DAE
Project Manager	BGP
Project Number	23446541

Figure 1-2
Site Map
SS-65/TU-71, SS-67, SS-69

Holloman Air Force Base
DRAFT USAF September 10, 2015

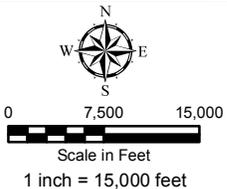
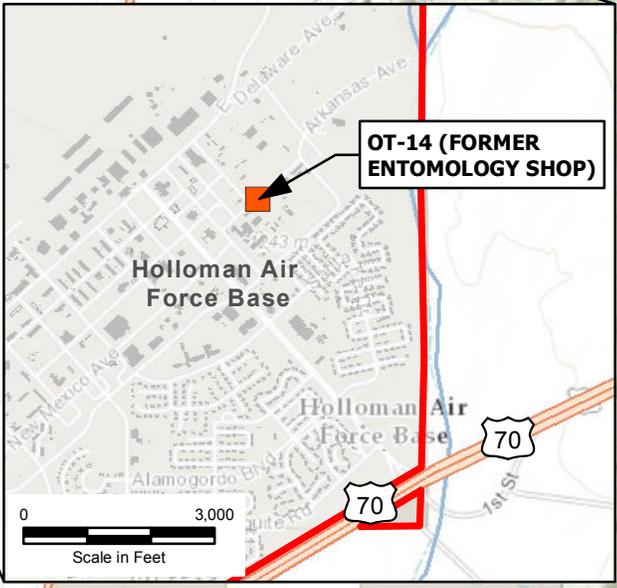
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Note: Projection - New Mexico State Plane Coordinate System, Central Zone, North American Horizontal Datum 1983 (feet).

Sources: HAFB, CBI, ULS Services Corp.

Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBSCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



Designed	SF
Drawn	LED
Checked	DAE
Peer Review	DAE
Project Manager	BGP
Project Number	23446541

Figure 1-3
Site Map
OT-14
Former Entomology Shop

Holloman Air Force Base

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USAF

September 10, 2015

CORRECTIVE ACTION COMPLETE PROPOSALS

Attachment II

NMED Approval Letter for RCRA Facility Assessment Confirmatory Sampling Report Sites SS-65/TU-71, SS-67, and SS-69



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

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



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 15, 2015

Ms. DeAnna Rothhaupt
Chief, Holloman AFB Environmental
49 CES/CEIE
550 Tabosa Avenue
Holloman AFB, NM 88330-8261

**RE: APPROVAL
RCRA FACILITY ASSESSMENT CONFIRMATORY SAMPLING REPORT,
SITES SS-65/TU-71, SS-67, AND SS-69, JULY 2013
HOLLOMAN AIR FORCE BASE, EPA ID # NM6572124422
HWB-HAFB-13-008**

Dear Ms. Rothhaupt:

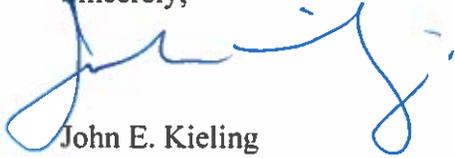
The New Mexico Environment Department (NMED) has reviewed the Holloman Air Force Base (Permittee) RCRA Facility Assessment Confirmatory Sampling Report for sites SS-65/TU-71 (AOC-B), SS-67 (AOC-E), and SS-69 (AOC-I) dated July 2013. The subject report is hereby approved.

The Permittee may request a Class 3 modification for Corrective Action Complete for these three sites in accordance with 40 C.F.R. §270.42(c). The Class 3 modification process includes requirements for public notice and for providing opportunity for public comment that are mandatory. NMED's preliminary determination that corrective action is complete is subject to NMED's reservation of rights for new information or unknown conditions. As part of the PMR process, new information may become available during the public comment period that a given site is not protective of human health or the environment. NMED reserves all rights to withdraw its preliminary decision that corrective action is complete, if new information indicates that further corrective action is needed to protect human health or the environment.

Ms. Rothhaupt
June 15, 2015
Page 2 of 2

If you have any questions regarding this matter, please contact Mr. David Strasser of my staff at (505) 222-9526.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Rizzuto, HAFB
C. Hendrickson, EPA-Region 6 (6PD-N)
L. King, EPA-Region 6 (6PD-N)

File: HAFB 2015 and Reading
HAFB-13-008

CORRECTIVE ACTION COMPLETE PROPOSALS

Attachment III

NMED Approval Letter for Final Accelerated Corrective Measures Completion Report, Site OT-14



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

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



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 28, 2014

Ms. DeAnna Rothhaupt
Chief, Holloman AFB Environmental
49 CES/CEIE
550 Tabosa Avenue
Holloman AFB, NM 88330-8261

**RE: APPROVAL
ACCELERATED CORRECTIVE MEASURES COMPLETION REPORT, SITE
OT-14, JUNE 2012
HOLLOMAN AIR FORCE BASE
EPA ID # NM6572124422
HWB-HAFB-12-012**

Dear Ms. Rothhaupt:

The New Mexico Environment Department (NMED) has reviewed Holloman Air Force Base's (the Permittee's) Accelerated Corrective Measures Completion Report for site OT-14 (the former Entomology Shop, Solid Waste Management Unit [SWMU] 197) dated June 2012 and received on July 16, 2012. The report is hereby approved.

The Permittee may submit a Class 3 permit modification request (PMR) to NMED to change the status of SWMU 197 from Corrective Action Required to Corrective Action Complete in accordance with 20.4.1.900 NMAC incorporating 40 C.F.R. §270.42(c) and the facility's RCRA Permit at Part 4, Appendix 4-B, Section III, *Determination of No Further Action*. The process for a Class 3 PMR includes requirements for public notice and for providing opportunity for public comment that are mandatory. NMED's preliminary determination that corrective action is complete is subject to NMED's reservation of rights to compel additional corrective action on the basis of new information, including information that may be provided to the NMED in public comment.

Ms. Rothhaupt
August 28, 2014
Page 2 of 2

If you have any questions regarding this matter, please contact Mr. David Strasser of my staff at (505) 222-9526.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Rizzuto, HAFB
C. Hendrickson, EPA-Region 6 (6PD-N)

File: HAFB 2014 and Reading
HAFB-12-012