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

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APR 22 2015

10 April 2015

DeAnna Rothhaupt
Chief, Holloman AFB Environmental
550 Tabosa Avenue
Holloman AFB NM 88330-8458

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New Mexico Environment Department
Attn: Mr. John Kieling, Chief
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe NM 87505-6303

Dear Mr. Kieling

Holloman Air Force Base is pleased to submit the *Technical Memorandum T-38 Summary Report (2004 – 2014) Holloman AFB, New Mexico* for your review.

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

Sincerely

DEANNA ROTHHAUPT, GS-12, DAFC

Attachment:
Technical Memorandum T-38 Summary Report (2004 – 2014) Holloman AFB, New Mexico

cc:

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Mr. David Strasser	Mr. Will Moats	Mr. Chuck Hendrickson
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5500 San Antonio Dr. NE	5500 San Antonio Dr. NE	1445 Ross Ave, Ste 1200
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TECHNICAL MEMORANDUM
T-38 SUMMARY REPORT
(2004 - 2014)
HOLLOMAN AFB, NEW MEXICO

Prepared For:

49 CES/CEAN
Holloman Air Force Base
New Mexico

Under Contract To:

U.S. Army Corps of Engineers
Albuquerque, New Mexico

Contract No. W912PP-11-C-0015

March 2015

Prepared by:

NATIONVIEW

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NationView Project Number: 11-0006

TECHNICAL MEMORANDUM
T-38 SUMMARY REPORT
(2004 - 2014)
HOLLOMAN AFB, NEW MEXICO

Prepared by:

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This Summary Report documents all of the petroleum contaminated soil (PCS) remedial actions which were performed at the T-38 Test Cell Fuel Spill Site (SS-59) from 2004 through 2014. SS-59 is listed as Solid Waste Management Unit (SWMU) 229 in Appendix 4-A of the Holloman Air Force Base (HAFB) Resource Conservation and Recovery Act (RCRA) *Hazardous Waste Facility Permit No. NM6572124422* issued by the New Mexico Environment Department (NMED) on February 24, 2004. Additionally, solid waste management units (SWMUs) 19 (Building 638 Oil/Water Separator), SWMU 20 (Building 638 Oil/Water Separator), and SWMU 229 are collectively known as the T-38 Site.

Due to incremental funding, T-38 Test Cell Site (SS-59/SWMU229) excavation activities were conducted in a series of annual removal and backfilling events performed from July 2004 through the end of 2013. Although additional excavation activities will continue in the future, the content within this Summary Report is limited to the years of 2004-2014. The following sections present sampling protocols, excavation dimensions along with confirmation soil sampling locations (sidewall and bottom) collected over the course of this time period. In addition to excavation and soil sampling activities, free product recovery efforts performed between 2012 and the end of 2014 are also presented within the following sections.

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1 ENVIRONMENTAL SETTING

1.1 T-38 Test Cell Site (SWMU 229) Geology

The T-38 Test Cell site geology is based upon the 35 soil borings (229-SB1 through 229-SB35) and the 12 monitoring well borings drilled onsite during the RCRA Facility Investigation (RFI) (Woodward-Clyde, 1993). Recovered soil samples were visually classified in the field using the Unified Soil Classification System. Geotechnical test results were used to confirm classifications and assist in geological interpretations.

The T-38 Test Cell shallow stratigraphy consists of intercalated layers of alluvial sediments. The upper layer is typically a light brown, fine grained silty sand or silty clay with a fine-grained sand. Thickness of this alluvial layer ranges from 4 to 16 feet (ft) below ground surface (bgs). Underlying this layer is a light reddish brown silty sand or silty clay with fine-grained sand. Most of the borings, which ranged from 5 to 28.3 ft bgs, were terminated in this layer. Most of the soils encountered contained some amount of gypsum, either in fine grains or coarser crystals. Soils encountered during the RFI at the T-38 Site are part of the bolson deposits which are found throughout the Tularosa Basin. Soil boring logs from the RFI are included in Appendix A of the *RFI Investigation Report for SWMUs 229 and 230* (Woodward-Clyde, 1993).

1.2 T-38 Test Cell Site (SWMU 229) Hydrogeology

The T-38 Test Cell site hydrogeology is based upon the 12 monitoring wells which were installed onsite during the RFI (Woodward-Clyde, 1993). Well construction details, water level data (including free product measurement), and a summary of free product measurements within soil borings are presented in Table 6-7, Table 6-8, and Table 6-9 of the RFI Report, respectively (Woodward-Clyde, 1993).

A map of the potentiometric surface was constructed using data from July 21, 1993 (Figure 6-5, Woodward-Clyde, 1993). The water table was depressed where light non-aqueous phase liquids (LNAPL) was of sufficient thickness to displace water from the capillary fringe. Groundwater which was not impacted by the presence of LNAPL appeared to flow in a west-southwest direction. The horizontal component of the hydraulic gradient in this area was calculated at 0.0067 feet per foot (ft/ft). Rising head slug tests were performed at seven monitoring wells to obtain data necessary to estimate the hydraulic conductivity (Table 6-11, Woodward-Clyde, 1993). Calculated values of the hydraulic conductivity ranged between 0.79×10^{-4} centimeters per second (cm/sec) (0.23 feet/day) to 2.9×10^{-4} cm/sec (0.83 feet/day). The average linear groundwater flow velocities were estimated to range between 2 and 9 ft/year (Table 6-11, Woodward-Clyde, 1993).

2 EXCAVATION SAMPLING PROCEDURES

To determine the effectiveness of PCS removal, confirmation soil samples were collected from excavation sidewalls and bottom. During the initial T-38 PCS excavation event in 2004, sidewall samples were collected from each sidewall every 50 linear feet in accordance with the *Work Plan for Voluntary Corrective Measures T-38 Test Cell Fuel Spill Site, Holloman Air Force Base, New Mexico* (Bhate, 2003). Based on direction from the NMED at the time, confirmation soil samples were not collected from the bottom of the excavation. Typically the excavation was terminated 1-2 feet below the water table. In 2005, the T-38 Work Plan was revised and all subsequent sidewall samples were collected one per every 100 linear feet in accordance with the *Revised Work Plan for Voluntary Corrective Measures T-38 Test Cell Fuel Spill Site, Holloman Air Force Base,*

New Mexico (Bhate, 2005). Based on the NMED Notice of Approval letter dated March 22, 2005, the collection of excavation bottom confirmation samples was introduced to the T-38 excavation sampling program. On May 11, 2005, Bhate submitted a variance to the United States Army Corps of Engineers (USACE) Omaha District to collect one soil sample at the bottom of the excavation (below the water table) for every 160 linear feet of excavation. This equates to the center point of four adjacent 80-ft square grids or one bottom sample for every 25,600 square feet (sq ft) of excavated soil.

Confirmation soil samples were submitted for offsite laboratory analysis. Confirmation samples were analyzed by off-site laboratories for the following:

- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B
- Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270C
- Total Petroleum Hydrocarbons (TPH) Diesel Range Organics, Gasoline Range Organics, and Oil Range Organics (DRO, GRO, and ORO) by USEPA Method 8015 Modified

A summary of annual PCS excavation areas and confirmation soil analyses performed between 2004 and 2013 are presented in Sections 2.1 through 2.10.

The excavation boundaries for each year are depicted in Figure 1. Figure 1 also presents locations of excavation sidewall and bottom confirmation soil samples. Summary tables presenting detected confirmation soil data are presented in Tables 1 through 14.

2.1 2004 Excavation

The areal extent of the North and South pit excavations was approximately 49,550 sq ft to an average depth of 22 ft bgs. Figure 1 shows the boundaries of the two 2004 excavation areas. The total volume of soil removed from this excavation event was 50,372 cubic yards (CY) (overburden and PCS combined). Based on haul-truck logs, 33,182 CY of clean overburden was stockpiled and 17,190 CY of PCS was transported to the HAFB T-38 Landfarm for treatment in 2004. A summary of the T-38 Landfarm monitoring sampling data which is collected in accordance with the T-38 Hydrocarbon Landfarm Discharge Permit DP-1479, has been submitted to the NMED Ground Water Quality Bureau on a quarterly basis since November 2004. The T-38 Landfarm quarterly sampling requirements include analysis of T-38 Landfarm placement and removal samples as well as groundwater samples collected from the T-38 Landfarm monitoring well network.

A total of 28 sidewall confirmation soil samples (including one duplicate) were collected from the perimeters of the North and South pit excavations to determine clean excavation boundaries (Figure 1). Sidewall Confirmation soil samples were not collected along the east, west, or south sidewalls of the South Pit excavation due to the continued presence of PCS. The soil samples were analyzed for VOCs, SVOCs, and TPH (GRO, DRO, and ORO). However, the

soil samples (SS59-SW01 through -SW05) collected from the southern wall of the North pit and the northern wall of the South pit were analyzed for TPH (GRO, DRO and ORO) only. Analytical results (detections only) for 2004 sidewall samples are summarized in Table 1. Additionally, bottom samples were not collected in 2004 excavation event as they were not required in the initial T-38 Voluntary Corrective Measures (VCM) Work Plan (Bhate, 2003). However, bottom samples were collected from the floor of the North pit in 2005 prior to backfilling the excavated area.

2.2 2005 Excavation

The *Revised Work Plan for Voluntary Corrective Measures T-38 Test Cell Fuel Spill Site, Holloman, Air Force Base, NM* (Bhate, 2005) was approved by the NMED on March 11, 2005. This Revised Work Plan introduced a grid system to assist with soil excavation and sample collection activities. The grid, based on 80 ft centers, was developed to better track the T-38 excavation through the segregation, stockpile, and landfarm processes. Furthermore, the soil screening, soil sampling, and laboratory analysis would now be tied to the grid system in order to demonstrate that sufficient sampling was performed for clean stockpiled soil and soil treated at the T-38 landfarm.

Each grid block (80 ft by 80 ft) was assigned a number (Grid 0 through 120) which allowed for accurate tracking (via haul-truck logs) of soil removed from the excavation as overburden or PCS. Additionally the Grid number would be used in the sample nomenclature for all soil samples (overburden or bottom) collected from each grid. By tracking the fate of soil from each grid, on-site personnel were now able to more accurately document the ongoing remediation at the site. Figure 1 shows the grid network along with boundaries of the 2004 excavation areas.

The 2005 excavation remedial action at T-38 was primarily conducted around the footprint of the 2004 South pit excavation boundary and around the southeastern corner of the North pit. Due to an underground utility corridor that runs through this part of the site, the 2005 T-38 excavation was bisected and the PCS adjacent to the utility corridor was not removed. The approximate total area of the T-38 excavation completed in 2005 was 140,000 sq ft to an average depth of 17 ft bgs. The total volume of soil removed from this excavation event was 88,056 CY (overburden and PCS combined). Based on haul-truck logs, 61,112 CY of clean overburden was stockpiled and 26,944 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2005.

A total of five sidewall confirmation soil samples were collected from the northern perimeter of the 2005 T-38 excavation to determine a clean excavation boundary (Figure 1). Sidewall Confirmation soil samples were not collected along the east, west, or south sidewalls due to the continued presence of PCS. Confirmation bottom samples were collected at seven locations from the excavation floor in 2005. Confirmation bottom samples were generally collected at the center point of four adjacent 80-ft square grids or one sample for every 25,600 sq ft, in accordance with the May 2005 variance. All confirmation soil samples were

analyzed by an offsite laboratory for VOCs, SVOCs, and TPH (GRO, DRO, and ORO). Analytical results (detections only) for 2005 sidewall and bottom confirmation samples are summarized in Tables 2 and 3, respectively.

2.3 2006 Excavation

2006 T-38 excavation operations continued along the southern perimeter of the 2005 excavation boundary (Figure 1). Due to an underground utility corridor which runs through this part of the site, the 2006 T-38 excavation was bisected and the PCS adjacent to the utility corridor was not removed. A surface area of approximately 125,000 sq ft was excavated to an average depth of 17.5 ft bgs in 2006. The total volume of soil removed during the 2006 excavation event was 81,240 CY (overburden and PCS combined). Based on haul-truck logs, 52,743 CY of clean overburden was stockpiled and 28,497 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2006.

Confirmation soil samples were not collected along any of the 2006 excavation sidewalls due to the continued presence of PCS in all directions. However, confirmation soil samples were collected at three locations from the bottom of the 2006 excavation (Figure 1). Each confirmation soil sample was analyzed by an offsite laboratory for VOCs, SVOCs, and TPH (GRO, DRO, and ORO); however one bottom sample (SS59-BOTTOM GRID 92) was not analyzed for TPH-ORO. The analytical results (detections only) for 2006 bottom confirmation samples are summarized in Table 4.

2.4 2007 Excavation

Excavation operations in 2007 continued along the southwestern boundary of the 2006 excavation (Figure 1). A surface area of approximately 41,000 sq ft was excavated to an average depth of 19 ft bgs in 2007. The total volume of soil removed during 2007 excavation activities was 28,608 CY (overburden and PCS combined). Based on haul-truck logs, 9,786 CY of clean overburden was stockpiled and 18,822 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2007.

A total of five sidewall confirmation soil samples were collected from the northwestern perimeter of the 2007 T-38 excavation to determine a clean excavation boundary. Figure 1 shows the locations of T-38 sidewall confirmation samples collected in 2007. Sidewall confirmation soil samples were not collected along the remaining sidewalls due to the continued presence of PCS. Due to the smaller areal size of the 2007 T-38 excavation, bottom confirmation samples were not collected. Analytical results (detections only) for sidewall confirmation samples collected in 2007 are summarized in Table 5.

2.5 2008 Excavation

In 2008, due to flight line access constraints for the equipment operators, T-38 overburden and PCS excavation activities were halted. As a result, the only activity which took place in 2008 was the backfilling of soil treated at the T-38

Landfarm. Based on haul-truck logs, 5,040 CY of treated soil was transported from the HAFB T-38 Landfarm for use as T-38 excavation backfill material.

2.6 2009 Excavation

Prior to initiating excavation activities in 2009, the original T-38 grid layout was expanded to accommodate a larger footprint of remaining PCS than initially anticipated. Grid blocks remained of the same dimension (80 ft by 80 ft) with the 86 added grid blocks primarily along the south and west perimeter of the original grid layout. The T-38 expanded grid design is shown on Figure 1.

Excavation operations in 2009 continued along the southwestern boundary of the 2007 excavation (Figure 1). A surface area of approximately 85,000 sq ft was excavated to an average depth of 20 ft bgs in 2009. The total volume of soil removed during 2009 excavation activities was 88,854 CY (overburden and PCS combined). Based on haul-truck logs, 37,736 CY of clean overburden was stockpiled and 51,118 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2009.

A total of seven sidewall confirmation soil samples were collected from the western perimeter of the 2009 T-38 excavation to determine a clean excavation boundary (Figure 1). Sidewall confirmation soil samples were not collected along the remaining sidewalls due to the continued presence of PCS. The analytical results (detections only) for sidewall confirmation samples collected in 2009 are summarized in Table 6.

A total of eleven confirmation soil samples were collected from the bottom of the T-38 excavation in 2009 (Figure 1). Each confirmation soil sample was analyzed by an offsite laboratory for VOCs, SVOCs, and TPH (GRO, DRO, and ORO). Analytical results (detections only) for 2009 bottom confirmation samples are summarized in Table 7.

2.6.1 DPT Soil Sampling

In August of 2009 six soil borings were advanced using a direct-push technology (DPT) drill rig along the southern and eastern perimeter of the T-38 Site. Soil samples were collected from four of the six locations and analyzed for VOCs, SVOCs and TPH (GRO, DRO, and ORO). Analytical results (detections only) for 2009 DPT soil samples are summarized in Table 8.

2.7 2010 Excavation

Excavation operations in 2010 continued along the southwestern boundary of the 2009 excavation and were also conducted east of the 2005 excavation, within close proximity to the original high vacuum dual phase extraction (HVDPE) treatment system enclosure. Figure 1 shows the 2010 excavation boundaries along with the expanded grid layout. A surface area of approximately 60,000 sq ft was excavated to an average depth of 21 ft bgs in 2010. The total volume of soil removed during 2010 excavation activities was 47,034 CY (overburden and PCS combined). Based on haul-truck logs, 19,872 CY of clean overburden was

stockpiled and 27,162 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2010.

A total of fifteen sidewall confirmation soil samples were collected from the perimeter of the 2010 T-38 excavations to determine a clean excavation boundary (Figure 1). Sidewall confirmation soil samples were not collected along the remaining sidewalls due to the continued presence of PCS. Analytical results (detections only) for 2010 sidewall confirmation samples are summarized in Table 9.

A total of three confirmation soil samples were collected from the excavation bottom in 2010 (Figure 1). Each confirmation soil sample was analyzed by an offsite laboratory for VOCs, SVOCs, and TPH (GRO, DRO, and ORO). Analytical results (detections only) for 2010 bottom confirmation samples are summarized in Table 10.

2.8 2011 Excavation

Excavation operations in 2011 continued along the eastern boundary of the 2005 excavation and focused on the installation of a phase separated hydrocarbon (PSH) recovery trench (Figure 1). Confirmation soil samples were not collected along any of the 2011 excavation sidewalls due to the continued presence of PCS in all directions. The total volume of soil removed during the 2011 excavation activities was 22,308 CY (overburden and PCS combined). Based on haul-truck logs, 9,282 CY of clean overburden was stockpiled and 13,026 CY of PCS was transported to the HAFB T-38 Landfarm for treatment.

As the removal of PCS at the T-38 Site advanced from 2004 and 2011 it became clear that treatment of inaccessible PCS, and if present PSH, beneath the Test Cell Pad needed to be undertaken. While inaccessible PCS could be resolved through a risk assessment, the removal of PSH from the water table was necessary under both the HAFB RCRA Permit and New Mexico Water Quality Control Commission (NMWQCC) regulations in order to obtain a clean site closure without prolonged long term monitoring. In 2011 a number of existing monitoring wells and previously utilized extraction wells were gauged to contain more than 3 ft of PSH. Based on this information, excavation operations in 2011 included the installation of a product recovery trench which surrounded existing infrastructure in place at the T-38 Site (i.e., buildings, apron, and existing taxiways). The product recovery trench was installed in December 2011 and did not commence operation until 2012. Figure 2 shows the product recovery trench layout along with the location of four transducers in and around the trench. Figure 3 illustrates trench construction details.

2.9 2012 Excavation

Excavation operations in 2012 continued along the northern edge of the apron present at the T-38 Site, and were also conducted east of the 2006, 2007, and 2009 excavation boundaries (Figure 1). A surface area of approximately 80,000 sq ft was excavated to an average depth of 19.5 ft bgs in 2012. The total volume of soil removed during 2012 excavation activities was 57,642 CY (overburden

and PCS combined). Based on haul-truck logs, 8.606 CY of clean overburden was stockpiled and 49,036 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2012.

A total of 21 sidewall confirmation soil samples were collected from the perimeter of the 2012 T-38 excavations to determine a clean excavation boundary (Figure 1). Sidewall confirmation soil samples were not collected along the remaining sidewalls due to the continued presence of PCS. Analytical results (detections only) for 2012 sidewall confirmation samples are summarized in Table 11.

A total of 7 confirmation soil samples were collected from the excavation bottom in 2012 (Figure 1). Analytical results (detections only) for 2012 bottom confirmation samples are summarized in Table 12.

Operation of the product recovery trench commenced in February of 2012. Beginning in in August 2012, PSH recovery via bailer was also performed in the following wells adjacent to the trench: EXT-2, EXT-3, EXT-4, EXT-7, EXT-8, A18, A19, A20, A21, A22, and MW-3 (Figure 4). A total of 160 gallons of PSH were recovered in 2012. Recovered fuel was removed from the site by the HAFB Defense Reutilization Management Office (DRMO) for recycling.

2.10 2013 Excavation

Excavation operations in 2013 continued along the eastern boundary of the 2006 excavation and were also conducted in areas of remaining accessible PCS near the product recovery trench. A surface area of approximately 45,000 sq ft was excavated to an average depth of 21 ft bgs in 2013. The total volume of soil removed during 2013 excavation activities was 47,918 CY (overburden and PCS combined). Based on haul-truck logs, 12,220 CY of clean overburden was stockpiled and 35,698 CY of PCS was transported to the HAFB T-38 Landfarm for treatment during 2013.

A total of seven sidewall confirmation soil samples were collected from the perimeter of the 2013 T-38 excavation to determine a clean excavation boundary (Figure 1). Sidewall confirmation soil samples were not collected along the remaining sidewalls due to the continued presence of PCS. Analytical results (detections only) for 2013 sidewall confirmation samples are summarized in Table 13.

A total of three confirmation soil samples were collected from the excavation bottom in 2013 (Figure 1). Each confirmation soil sample was analyzed by an offsite laboratory for VOCs, SVOCs, and TPH (GRO, DRO, and ORO). Analytical results (detections only) for 2013 bottom confirmation samples are summarized in Table 14.

Operation of the product recovery trench and periodic bailing from select wells (Figure 4) continued in 2013, recovering a total of 533.38 gallons of PSH. Recovered fuel was removed from the site by the HAFB DRMO for recycling.

2.11 2014 Activities

In 2014, excavation activity did not occur, as all remaining accessible PCS that was not covered by existing onsite infrastructure had been removed during 2013. However, operation of the product recovery trench and periodic bailing from select wells (Figure 4) continued in 2014, recovering a total of 85.5 gallons of PSH.

Product recovery at the T-38 site is conducted through a combination of bailing PSH from the wells that potentially have free product and collection through the automated system, located within the product recovery trench. The system is initiated on a daily basis and collects product and water from the trench recovery system. Total volumes of liquids collected from the trench recovery system are recorded, however the recorded amounts do not distinguish betweeen water and PSH. The annual volume of product is calculated based upon product removal when the collection tank is emptied,

Recovered fuel was removed from the site by the HAFB DRMO for recycling.

3 REFERENCES

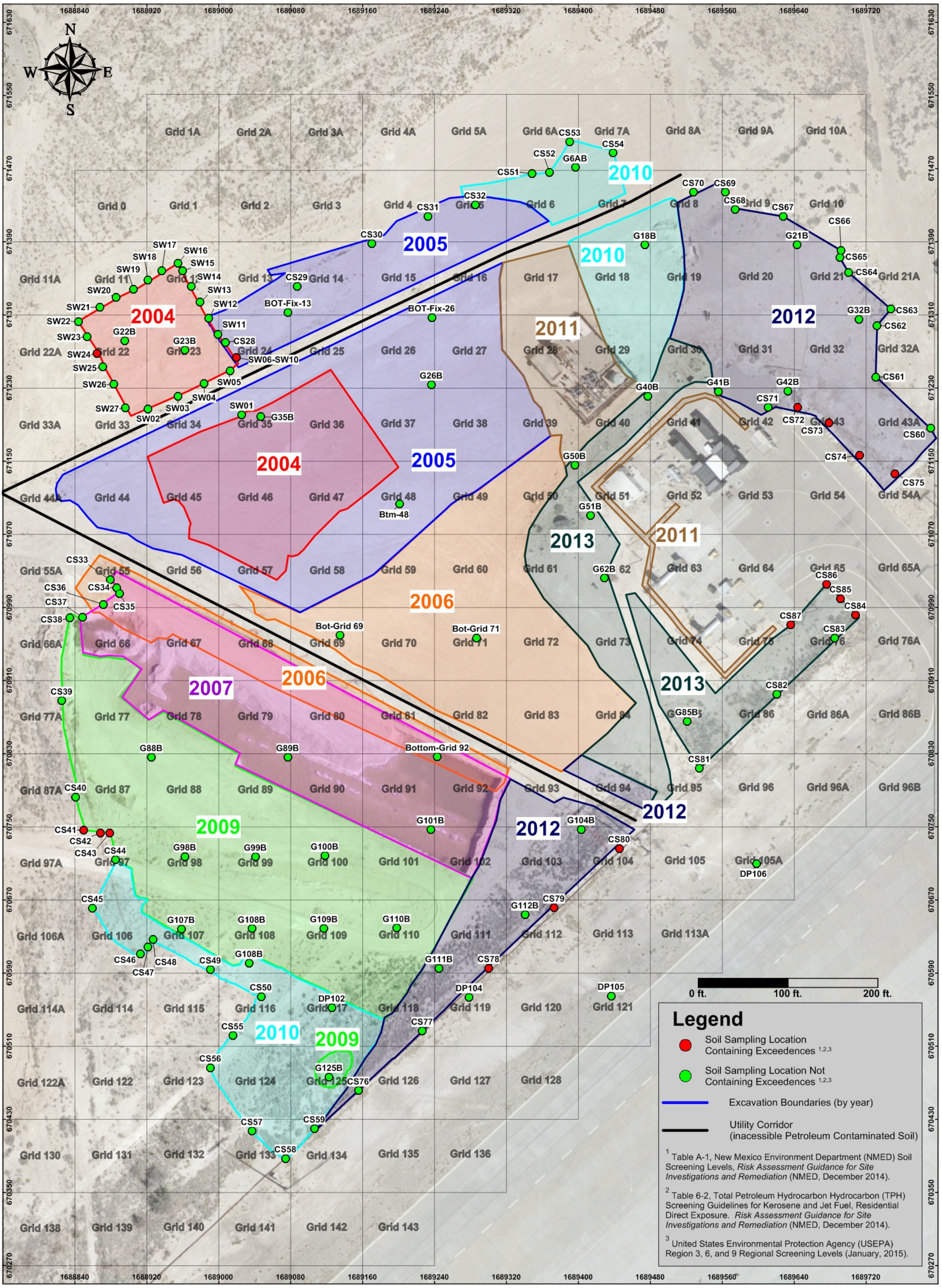
Bhate Environmental Associates Inc. November 2003. *Work Plan for Voluntary Corrective MeasuresT-38 Test Cell Fuel Spill Site, Holloman Air Force Base, NM*

Bhate Environmental Associates Inc. February 2005. *Revised Work Plan for Voluntary Corrective MeasuresT-38 Test Cell Fuel Spill Site, Holloman Air Force Base, NM*

New Mexico Environment Department, February 2004. Appendix 4-F: *Action Levels and Cleanup Levels,* Holloman Air Force Base, Hazardous Waste Facility Permit No. NM6572124422.

Woodward-Clyde Associates. October 1993. *Draft RCRA Facility Investigation Report for SWMUs 229 and 230 Holloman Air Force Base Alamogordo, New Mexico.*

Figures



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

NATIONVIEW

T-38 Excavation Summary 2004-2013

PROJECT NO.	SCALE	DATE	DRAWN BY: dtm
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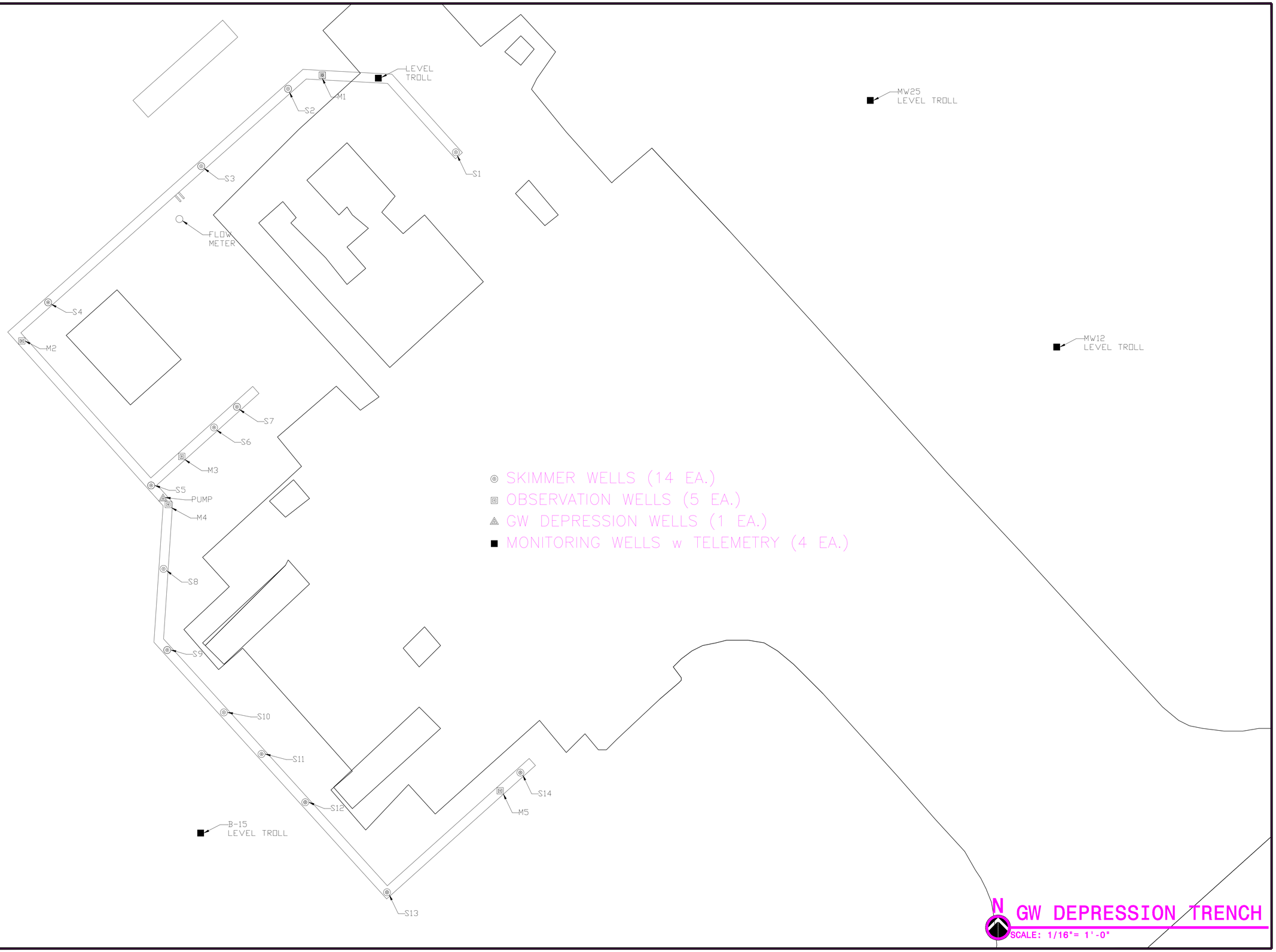
T-38 Test Cell Site (SS-59)
Summary Report
Holloman AFB, New Mexico

Figure 1



US AIR FORCE
ENGINEERING
& SERVICES
49th CIVIL ENGINEER SQ.
HOLLOMAN AFB, NEW MEXICO

NUMBER	DESCRIPTION	DATE	APPR.
REVISIONS			

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CONTRACT NO. W912PP-11-0015
PROJECT DATE: 10132011
DESIGN BY: XXX
DRAWN BY: JDH
DRAWING SCALE: AS SHOWN

49th CIVIL ENGINEER SQ.
HOLLOMAN AFB, NEW MEXICO
PROJECT ENGINEER
DATE:

HOLLOMAN AFB NEW MEXICO
HAFB VCM T-38 2011
GW DEPRESSION TRENCH

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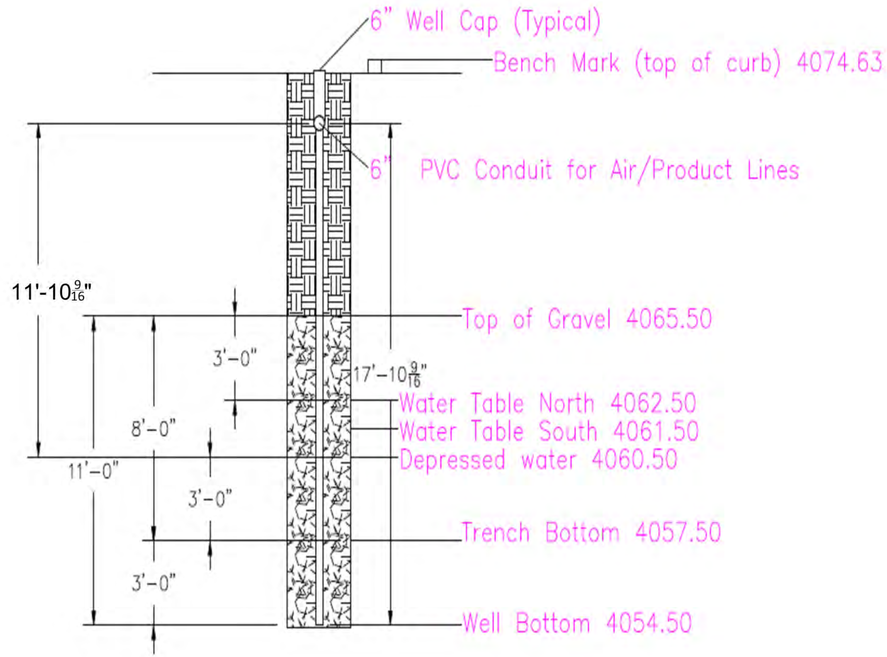
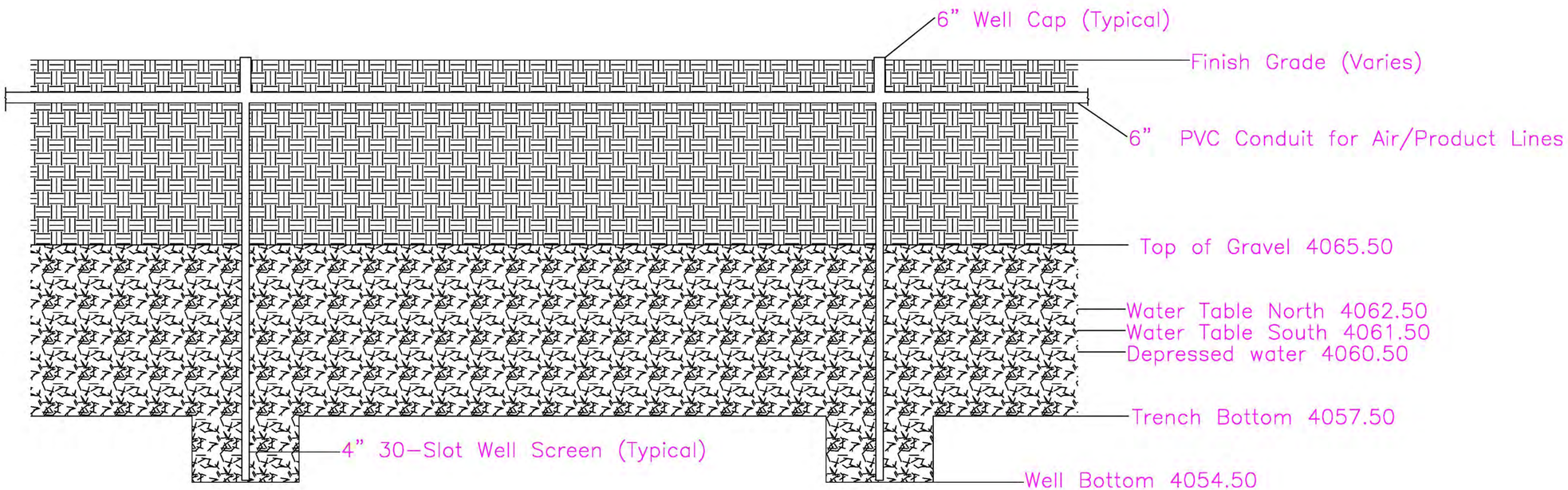
1 OF 1





US AIR FORCE
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49th CIVIL ENGINEER SQ.
HOLLOMAN AFB, NEW MEXICO

REVISIONS:	DESCRIPTION:	DATE	APPR.

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CONTRACT NO. W912PP-11-0015
PROJECT DATE: 11/7/2011
DESIGN BY: XXX
DRAWN BY: JDH
DRAWING SCALE: 3/8"=1'-0"

49th CIVIL ENGINEER SQ.
HOLLOMAN AFB, NEW MEXICO
PROJECT ENGINEER
DATE:

HOLLOMAN AFB NEW MEXICO
HAFB VCM T-38 2011
GW DEPRESSION TRENCH

SHEET NO.
C1
1 OF 1

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

NATIONVIEW

T-38 Additional Free Product Recovery Wells

PROJECT NO.	SCALE	DATE	DRAWN BY:
11-0006	1" = 30'	02/23/2015	dtm
			DRAWING NO: Fig.4

T-38 Test Cell Site (SS-59)
Summary Report
Holloman AFB, New Mexico

Figure 4

Tables

Table 1
2004 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-SW01	SS59-SW02	SS59-SW03	SS59-SW04	SS59-SW05	SS59-SW06-01	SS59-SW07-06
Lab Sample ID:	**NMED Residential [1]**	LR137188-558284	LR137188-558285	LR137188-558286	LR137188-558287	LR137188-558288	LR137598-560526	LR137598-560527
Date Sampled:		9/22/2004	9/22/2004	9/22/2004	9/22/2004	9/22/2004	10/1/2004	10/1/2004
Analyte		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
General Chemistry	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Percent Moisture	NV	NA	NA	NA	NA	NA	22.14	23.96
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	1,000 [2]	363	404	321	433	158	ND	13
Diesel Range Organics (C10-C22)	1,000 [2]	495	456	392	532	324	ND	29
Oil Range Organics (>C22-C36)	1,000 [2]	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
1,2,4-Trimethylbenzene	58 [3]	NA	NA	NA	NA	NA	ND	36
1,3,5-Trimethylbenzene	780 [3]	NA	NA	NA	NA	NA	ND	8.4
Benzene	17.8	NA	NA	NA	NA	NA	10	385
Ethylbenzene	75.1	NA	NA	NA	NA	NA	ND	42
Hexane	615	NA	NA	NA	NA	NA	ND	ND
Isopropylbenzene (Cumene)	2,360	NA	NA	NA	NA	NA	ND	12
Naphthalene	49.7	NA	NA	NA	NA	NA	ND	23
Toluene	5,230	NA	NA	NA	NA	NA	ND	ND
n-Butylbenzene	3,900 [3]	NA	NA	NA	NA	NA	ND	ND
n-Propylbenzene	3,300 [3]	NA	NA	NA	NA	NA	ND	10
p-Isopropyltoluene	NV [4]	NA	NA	NA	NA	NA	ND	3.8 J
sec-Butylbenzene	7,800 [3]	NA	NA	NA	NA	NA	ND	3.3 J
Xylenes, total	871	NA	NA	NA	NA	NA	ND	11
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Methylnaphthalene	230 [3]	NA	NA	NA	NA	NA	ND	113 J
Naphthalene	49.7	NA	NA	NA	NA	NA	ND	52 J

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
SW = Sidewall
FD = Sample suffix denoting a field duplicate

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 1
2004 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-SW08-10	SS59-SW09-13	SS59-SW10-10	SS59-SW11-8.0	SS59-SW12-8.0	SS59-SW13-8.0	SS59-SW14-8.0
Lab Sample ID:	**NMED Residential [1]**	LR137598-560528	LR137598-560529	LR137598-560530	LR138762-566429	LR138762-566430	LR138762-566431	LR138762-566432
Date Sampled:		10/1/2004	10/1/2004	10/1/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Analyte		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
General Chemistry	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Percent Moisture	NV	16.54	20.01	18.74	19.7	19.73	21.51	20.50
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	1,000 [2]	590	ND	**11,000**	ND	240	ND	419
Diesel Range Organics (C10-C22)	1,000 [2]	761	ND	**5,620**	16	89	4.7	130
Oil Range Organics (>C22-C36)	1,000 [2]	ND	ND	ND	4.7 J	ND	ND	ND
Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
1,2,4-Trimethylbenzene	58 [3]	**86,200**	ND	324	ND	438	718	8,060
1,3,5-Trimethylbenzene	780 [3]	30,700	ND	158	ND	124	195 J	2,260
Benzene	17.8	5,930	ND	9.9	ND	ND	ND	124 J
Ethylbenzene	75.1	**105,000**	ND	220	ND	96	365 J	4,750
Hexane	615	ND	ND	ND	ND	ND	ND	182 J
Isopropylbenzene (Cumene)	2,360	27,000	ND	110	ND	52	115 J	1,400
Naphthalene	49.7	24,600	ND	174	ND	296	594	3,270
Toluene	5,230	ND	ND	ND	ND	ND	304 J	2,290
n-Butylbenzene	3,900 [3]	ND	ND	72	ND	ND	ND	2,120
n-Propylbenzene	3,300 [3]	34,500	ND	118	ND	97	192 J	2,360
p-Isopropyltoluene	NV [4]	11,500	ND	72	ND	85	112 J	1,580
sec-Butylbenzene	7,800 [3]	14,600	ND	55	ND	60	ND	1,210
Xylenes, total	871	120,000	ND	181	ND	149	787	10,000
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Methylnaphthalene	230 [3]	3,210	ND	18,400	ND	467	ND	1,420
Naphthalene	49.7	2,130	ND	15,500	ND	168 J	ND	878

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
SW = Sidewall
FD = Sample suffix denoting a field duplicate

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 1
2004 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-SW15-8.0	SS59-SW16-8.0	SS59-SW17-8.0	SS59-SW18-8.0	SS59-SW19-8.0	SS59-SW20-8.0	SS59-SW21-8.0
Lab Sample ID:	**NMED Residential [1]**	LR138762-566433	LR138762-566434	LR138762-566435	LR138762-566436	LR138762-566437	LR138762-566438	LR138762-566439
Date Sampled:		10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Analyte		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
General Chemistry	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Percent Moisture	NV	15.56	18.56	18.85	23.35	24.43	16.91	26.33
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	1,000 [2]	44	190	52	521	161	67	ND
Diesel Range Organics (C10-C22)	1,000 [2]	24	68	28	167	55	31	ND
Oil Range Organics (>C22-C36)	1,000 [2]	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
1,2,4-Trimethylbenzene	58 [3]	ND	719	302 J	5,010	213 J	3,340	2,120
1,3,5-Trimethylbenzene	780 [3]	ND	214 J	853	1,600	ND	959	631
Benzene	17.8	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	75.1	ND	195 J	786	2,090	ND	2,940	918
Hexane	615	ND	ND	ND	257 J	ND	421 J	ND
Isopropylbenzene (Cumene)	2,360	ND	ND	387 J	943	ND	730	365 J
Naphthalene	49.7	44 J	557	1,170	1,750	428 J	1,070	972
Toluene	5,230	ND	ND	ND	ND	ND	1,980	361 J
n-Butylbenzene	3,900 [3]	ND	ND	ND	1,610	ND	611	508
n-Propylbenzene	3,300 [3]	ND	136 J	571	1,680	ND	1,200	588
p-Isopropyltoluene	NV [4]	ND	140 J	431 J	ND	ND	619	ND
sec-Butylbenzene	7,800 [3]	ND	116 J	491 J	990	ND	508	379 J
Xylenes, total	871	ND	221 J	2,420	4,270	ND	5,210	1,820
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Methylnaphthalene	230 [3]	ND	301 J	150 J	1,060	317 J	299 J	ND
Naphthalene	49.7	ND	122 J	ND	503	130 J	134 J	ND

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
SW = Sidewall
FD = Sample suffix denoting a field duplicate

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 1
2004 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-SW21-8.0 FD	SS59-SW22-8.0	SS59-SW23-8.0	SS59-SW24-8.0	SS59-SW25-8.0	SS59-SW26-8.0	SS59-SW27-8.0
Lab Sample ID:	**NMED Residential [1]**	LR138762-566442	LR138762-566443	LR138762-566444	LR138762-566445	LR138762-566446	LR138762-566447	LR138762-566448
Date Sampled:		10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Analyte		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
General Chemistry	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Percent Moisture	NV	23.19	17.28	20.27	13.47	23.37	24.22	12.50
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	1,000 [2]	2.6 J	ND	440	**3,000**	ND	ND	ND
Diesel Range Organics (C10-C22)	1,000 [2]	4.3	8.0	61	332	0.80 J	ND	4.1
Oil Range Organics (>C22-C36)	1,000 [2]	ND	ND	ND	ND	ND	4.5 J	4.9 J
Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
1,2,4-Trimethylbenzene	58 [3]	ND	ND	17,500	13,900	ND	ND	231 J
1,3,5-Trimethylbenzene	780 [3]	ND	ND	5,560	3,960	6.7	ND	ND
Benzene	17.8	ND	ND	2,350	100 J	ND	ND	ND
Ethylbenzene	75.1	ND	ND	27,200	6,990	ND	ND	ND
Hexane	615	ND	ND	8,730	186 J	ND	ND	ND
Isopropylbenzene (Cumene)	2,360	ND	ND	4,860	2,240	ND	ND	ND
Naphthalene	49.7	ND	ND	4,670	7,010	ND	ND	ND
Toluene	5,230	ND	ND	28,400	3,070	ND	ND	ND
n-Butylbenzene	3,900 [3]	ND	ND	ND	1,980	ND	ND	ND
n-Propylbenzene	3,300 [3]	ND	ND	7,090	3,830	ND	ND	ND
p-Isopropyltoluene	NV [4]	ND	ND	1,920	2,980	3.4 J	ND	ND
sec-Butylbenzene	7,800 [3]	ND	ND	2,600	2,140	ND	ND	ND
Xylenes, total	871	ND	ND	45,700	13,800	ND	ND	ND
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Methylnaphthalene	230 [3]	ND	75 J	1,720	3,220	ND	ND	ND
Naphthalene	49.7	ND	ND	978	1,740	ND	ND	ND

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
SW = Sidewall
FD = Sample suffix denoting a field duplicate

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 2
2005 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS559-CS-28-4060		SS559-CS-29-4060		SS559-CS-30-4060		SS559-CS-31-4060		SS559-CS-32-4060	
Lab Sample ID:	**NMED**	F34422-1		F34422-2		F34422-3		F34422-4		F34422-5	
Date Sampled:	**Residential [1]**	8/29/2005		8/29/2005		8/29/2005		8/29/2005		8/29/2005	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	2.3	U	11.9		74.6		5.4	J	2.4	U
n-Butylbenzene	3,900 [4]	2.3	U	3.7	J	1.8	U	2.4	U	2.4	U
sec-Butylbenzene	7,800 [4]	2.3	U	2.9	J	1.8	U	2.4	U	2.4	U
Ethylbenzene	75.1	2.3	U	9.2		7.7		2.4	U	2.4	U
Hexane	615	2.3	U	4.7	J	2.3	J	2.4	U	2.4	U
Isopropylbenzene (Cumene)	2,360	2.3	U	3.5	J	1.8	U	2.4	U	2.4	U
Methylene chloride	409	19.8	B	15.4	JB	17.4	JB	29.1	JB	25.7	B
Naphthalene	49.7	2.3	U	8.7		7.1		3.2	J	2.4	U
n-Propylbenzene	3,300 [4]	2.3	U	5.2		1.8	U	2.4	U	2.4	U
1,2,4-Trimethylbenzene	58 [4]	2.3	U	14.9		7.0		2.4	U	2.4	U
1,3,5-Trimethylbenzene	780 [4]	2.3	U	5.0	J	2.2	J	2.4	U	2.4	U
Toluene	5,230	2.3	U	6.0		37.2		2.4	U	2.4	U
m,p-Xylene	871 [5]	2.9	U	12.4		17.0		3.1	U	3.0	U
o-Xylene	805	2.3	U	6.8		9.6		2.4	U	2.4	U
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
All SVOCs	NV	ND		ND		ND		ND		ND	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	3.0	U	3.2	U	2.5	U	2.9	U	3.1	U
Diesel Range Organics (C10-C22)	1,000 [3]	6.5	U	6.0	U	5.9	U	6.1	U	6.4	U
Oil Range Organics (>C22-C36)	1,000 [3]	6.5	U	6.0	U	5.9	U	6.1	U	6.4	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	75.2		81.7		82.9		80.7		77.6	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
Q = Laboratory Qualifier

Qualifiers
U = Not Detected
B = Indicates analyte found
J = Indicated an estimated

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample
Last digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 3
2005 Excavation Confirmation Bottom Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-BOT-Fix-13-4078		SS59-G22B-20		SS59-G23B-20		SS59-G26B-20		SS59-BOT-Fix-26-4077		SS59-G35B-20		SS59-SS-Btm-48-4074	
Lab Sample ID:	**NMED Residential [1]**	F34147-2		LR150373-619733		LR150373-619734		LR151809-627104		F34147-1		LR152661-631724		F34390-2	
Date Sampled:		8/17/2005		5/11/2005		5/11/2005		6/8/2005		8/17/2005		6/23/2005		8/26/2005	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	2.4	U	0.39	U	0.39	U	0.32	U	2.7	U	0.32	U	199	
n-Butylbenzene	3,900 [4]	2.4	U	0.38	U	0.38	U	0.57	U	2.7	U	0.57	U	6.1	J
sec-Butylbenzene	7,800 [4]	2.4	U	0.31	U	0.31	U	0.50	U	2.7	U	0.50	U	13.5	
Ethylbenzene	75.1	2.4	U	0.41	U	0.41	U	0.32	U	2.7	U	0.32	U	28.5	
Hexane	615	2.4	U	5.0	U	5.0	U	5.0	U	2.7	U	5.0	U	29.3	
Isopropylbenzene (Cumene)	2,360	2.4	U	0.38	U	0.38	U	0.35	U	2.7	U	0.35	U	15.0	
p-Isopropyltoluene	NV [5]	2.4	U	0.32	U	0.32	U	0.53	U	2.7	U	0.53	U	11.1	
Methylene chloride	409	15.3		0.91	U	0.91	U	1.1	U	15.7		1.1	U	6.7	U
Naphthalene	49.7	2.4	U	0.6	U	0.6	U	1.7	U	2.7	U	1.7	U	11.8	
n-Propylbenzene	3,300 [4]	2.4	U	0.32	U	0.32	U	0.38	U	2.7	U	0.38	U	15.7	
1,2,4-Trimethylbenzene	58 [4]	2.4	U	0.6	U	0.6	U	1.1	U	2.7	U	1.1	U	40.4	
1,3,5-Trimethylbenzene	780 [4]	2.4	U	0.55	U	0.55	U	0.46	U	2.7	U	0.46	U	13.9	
m,p-Xylene	871 [6]	3.1	U	0.67	U	0.67	U	0.70	U	3.4	U	0.70	U	15.2	
o-Xylene	805	2.4	U	0.35	U	0.35	U	0.41	U	2.7	U	0.41	U	16.8	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
All SVOCs	NV	ND		ND		ND		ND		ND		ND		ND	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	3.6	U	0.57	U	0.57	U	0.57	U	4.1	U	0.57	U	9.85	
Diesel Range Organics (C10-C22)	1,000 [3]	6.3	U	0.17	U	0.17	U	0.17	U	6.6	U	0.17	U	6.7	U
Oil Range Organics (>C22-C36)	1,000 [3]	6.3	U	1.4	U	1.4	U	1.4	U	6.6	U	1.4	U	6.7	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	78.5		NA		NA		NA		74.1		NA		73.1	
Moisture, Percent	NV	NA		24.4		25.59		28.08		NA		NA		NA	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
NA = Not Analyzed
Q = Laboratory Qualifier
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
G = Grid
Final digit(s) equal the sample interval elevation or depth below ground surface

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
[6] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 4
2006 Excavation Confirmation Bottom Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-Bot-Grid69-4067		SS59-Bot-Grid71-4050		SS59-BOTTOM GRID 92 4059	
Lab Sample ID:	**NMED Residential [1]**	F41626-1		F41714-1		680-19717-1	
Date Sampled:		6/20/2006		6/22/2006		8/28/2006	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	5.8	J	2.5	U	7.4	U
1,2-Dichloroethane	8.32	3.3	U	2.5	U	3.8	J
p-Dichlorobenzene	32.8	3.3	U	2.5	U	2.5	J
Ethylbenzene	75.1	3.3	U	3.1	J	2.1	J
Methyl Tert Butyl Ether	975	3.3	U	3.4	J	11	J
Naphthalene	49.7	3.3	U	3.5	J	7.4	U
1,2,4-Trimethylbenzene	58 [4]	4.9	U	4.3	J	2.7	J
1,3,5-Trimethylbenzene	780 [4]	3.3	U	2.5	U	2	J
Tetrachloroethylene	111	3.3	U	2.5	U	63	
Toluene	5,230	3.3	U	2.5	U	78	
Trichloroethylene	6.77	3.3	U	2.5	U	66	
m,p-Xylene	871 [5]	4.9	U	3.8	U	8.7	J
o-Xylene	805	3.3	U	2.5	U	2.2	J
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**	
All SVOCs	NV	ND		ND		ND	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	4.6	U	3.6	U	0.36	U
Diesel Range Organics (C10-C22)	1,000 [3]	6.2	U	6.0	U	4.6	U
Oil Range Organics (>C22-C36)	1,000 [3]	6.2	U	6.0	U	NA	
General Chemistry	**%**	**%**		**%**		**%**	
Solids, Percent	NV	80.3		83.8		71.0	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
ND = Not Detected
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
Q = Laboratory Qualifier

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
Last digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[5] Screening level for Xylenes (total) (Table A-1, NMED December 2014)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 5
2007 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample ID:	**Soil Screening Levels**	SS59-CS-33-4601		SS59-CS-34-4601		SS59-CS-35-4601		SS59-CS-36-4601		SS59-CS-37-4060	
Lab Sample ID:	**NMED Residential [1]**	F53767-1		F53767-2		F53767-3		F53767-4		F53767-5	
Date Sampled:		11/7/2007		11/7/2007		11/7/2007		11/7/2007		11/7/2007	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	30.5	J	1,700	U	1,700	U	26	U	27.6	J
Benzene	17.8	1.1	U	67	U	69	U	118		1.0	U
n-Butylbenzene	3,900 [4]	1.1	U	160	J	160	J	1.0	U	76.0	
sec-Butylbenzene	7,800 [4]	1.2	U	74	U	76	U	1.1	U	69.6	
Ethylbenzene	75.1	1.1	U	348		69	U	1.0	U	15.2	
Hexane	615	2.0	U	120	U	120	U	3.8	J	1.8	U
Isopropylbenzene (Cumene)	2,360	1.1	U	187	J	69	U	6.5		27.7	
p-Isopropyltoluene	NV [5]	1.1	U	67	U	69	U	1.0	U	61.4	
Methylene chloride	409	8.3	J	1,180		1,330		6.4	J	12.3	
Naphthalene	49.7	2.2	U	324	JB	185	JB	8.1	B	58.2	B
n-Propylbenzene	3,300 [4]	1.2	U	203	J	76	U	1.1	U	24.3	
1,2,4-Trimethylbenzene	58 [4]	1.2	U	802		601		2.8	J	4,390	
1,3,5-Trimethylbenzene	780 [4]	1.1	U	262	J	212	J	1.0	U	2,340	
Toluene	5,230	1.1	U	172	J	69	U	1.0	U	1.0	U
m,p-Xylene	871 [6]	1.2	U	1,060		154	J	2.6	J	2,810	
o-Xylene	805	1.1	U	322	J	69	U	1.0	U	3,410	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
All SVOCs	NV	ND		ND		ND		ND		ND	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Graoline Range Organics (C6-C10)	1,000 [3]	3.4	U	54.3		83.0		3.2	U	486	
Diesel Range Organics (C10-C22)	1,000 [3]	6.3	U	6.2	U	6.3	U	5.9	U	8.75	J
Oil Range Organics (>C22-C36)	1,000 [3]	6.3	U	6.2	U	6.3	U	5.9	U	5.9	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	78.0		80.4		79.1		82.3		82.8	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
Q = Laboratory Qualifier
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
U = Not detected
J = Indicates an estimated value
B = Indicates analyte found in associated method blank

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample
Final digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015)
[6] Screening level for Xylenes (total) (Table A-1, NMED December 2014)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 6
2009 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-CS-38-4062.5		SS59-CS-39-4063		SS59-CS-40-4058.5		SS59-CS-41-4058.5		SS59-CS-42-4058.5		SS59-CS-43-4058.5		SS59-CS-44-4057	
Lab Sample Identification:	**NMED**	F67686-1		F67686-2		F67686-3		F67686-4		F67686-5		F67686-6		F67686-7	
Date Sampled:	**Residential [1]**	9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	1.4	U	98.9	J	74.7		**204,000**		1,950		4,410		801	
n-Butylbenzene	3,900 [3]	2.0	U	143	J	8.3		53,300		2,670		1,880		2,030	
sec-Butylbenzene	7,800 [3]	1.6	U	121	J	9.1		45,100		1,970		1,460		1,460	
Ethylbenzene	75.1	1.4	U	269	J	28.4		**586,000**		13,000		15,000		10,100	
Hexane	615	3.5	U	180	U	9.5		361,000		5,210		6,970		7,400	
Isopropylbenzene (Cumene)	2,360	1.6	U	103	J	16.7		96,000		3,000		2,840		2,590	
p-Isopropyltoluene	NV [4]	1.6	U	473		5.7	J	23,400	J	1,240		800		992	
Methylene chloride	409	7.2	U	1,240		8.4	JB	76,300	JB	1,460	JB	1,660	B	1,910	
Naphthalene	49.7	2.9	U	829		11.0		**69,600**		3,180		2,100		1,870	
n-Propylbenzene	3,300 [3]	1.7	U	116	J	15.1		134,000		4,750		4,030		3,410	
1,2,4-Trimethylbenzene	58 [3]	1.4	U	1240		9.4		**283,000**		11,300		8,920		8,780	
1,3,5-Trimethylbenzene	780 [3]	1.4	U	908		19.8		94,800		3,920		2,990		3,100	
Toluene	5,230	1.4	U	99.5	J	87.2		1,180,000		17,400		26,100		94.7	J
m,p-Xylene	871 [6]	2.7	U	626	J	18.4		760,000		17,700		20,100		15,500	
o-Xylene	805	1.4	U	245	J	37.0		286,000		7,320		7,730		133	J
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
2,4-Dimethylphenol	1,230	44	U	44	U	41	U	4,300	U	273	J	264	J	40	U
Phenol	18,500	44	U	46.0	J	41	U	4,300	U	85	U	84	U	55.7	J
Benzyl Alcohol	6,200 [3]	44	U	44	U	41	U	4,300	U	85	U	383	J	40	U
2,4-Dinitrotoluene	17.1	44	U	44	U	41	U	4,300	U	420	U	84	U	45.6	J
Dibenzofuran	72 [3]	44	U	44	U	41	U	4,300	U	193	J	170	J	40	U
2-Methylnaphthalene	230 [3]	44	U	449		41	U	47,300		7,510		7,040		473	
Naphthalene	49.7	44	U	110	J	41	U	23,100		2,250		2,380		90.0	J
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [5]	4.3	U	144		24.3		**52,200**		915		**1,020**		778	
Diesel Range Organics (C10-C22)	1,000 [5]	6.7	U	184		12.2		**11,100**		939		**1,040**		107	
Oil Range Organics (>C22-C36)	1,000 [5]	6.7	U	33	U	6.1	U	1,600	U	130	U	130	U	12	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	75.6		76.2		81.6		77.6		78.2		79.8		83.9	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
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mg/kg = milligrams per kilogram
% = percent
NV = No Value
Q = Laboratory Qualifier
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
U = Not detected
J = Indicates an estimated
B = Indicates analyte found

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample
Final digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
[5] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[6] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 7
2009 Excavation Confirmation Bottom Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-G88B-21'		SS59-G89B-18'		SS59-G100B-18'		SS59-G101B-15'		SS59-G107B-20'	
Lab Sample Identification:	**NMED**	680-45015-1		680-45052-1		680-45092-2		680-44803-3		F64634-1	
Date Sampled:	**Residential [1]**	2/25/2009		2/26/2009		2/27/2009		2/17/2009		4/16/2009	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	14		170		6.2	U	1.3	J	21.1	
Ethylbenzene	75.1	5.1	U	1.7	J	6.2	U	6.8	U	4.2	J
2-Hexanone	200 [4]	25	U	30	U	31	U	34	U	6.2	U
Isopropylbenzene (Cumene)	2,360	NA		NA		NA		NA		1.4	U
Methylene chloride	409	5.1	U	6	U	6.2	U	6.8	U	7.3	JB
n-Propylbenzene	3,300 [4]	NA		NA		NA		NA		1.5	U
1,2,4-Trimethylbenzene	58 [4]	NA		NA		NA		NA		2.3	J
Toluene	5,230	5.1	U	2.2	J	6.2	U	6.8	U	2.1	J
m,p-Xylene	871 [5]	NA		NA		NA		NA		6.3	J
o-Xylene	805	NA		NA		NA		NA		2.0	J
Xylenes (total)	871	10	U	14		12	U	14	U	NA	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Butyl benzyl phthalate	280 [4]	350	J	440	U	380	U	460	U	91	U
Diethylphthalate	49,300	410	U	48	J	380	U	460	U	230	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	0.087	J	2.6		1		0.46		3.9	U
Diesel Range Organics (C10-C22)	1,000 [3]	7.7		1.9	J	1.4	J	5.1		6.9	U
Oil Range Organics (>C22-C36)	1,000 [3]	25	U	26	U	23	U	28	U	6.9	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	NA		NA		NA		NA		72.3	
Moisture, Percent	NV	19		25		14		29		NA	

Notes:

NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
Q = Laboratory Qualifier
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers

U = Not detected
J = Indicates an estimated value
B = Indicates analyte found in associated method blank

Client Sample Nomenclature

SS59 = T-38 Test Cell Site
G = Grid
B = Bottom
Final digit(s) equal the sample interval depth below ground surface

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 7
2009 Excavation Confirmation Bottom Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-G108B-20'		SS59-G109B-21'		SS59-G110B-20'		SS59-G98B-18'		SS59-G99B-18'		SS59-G125B-'21	
Lab Sample Identification:	**NMED Residential[1]**	F64659-1		F64659-2		F64659-3		F65367-1		F65367-2		F65676-1	
Date Sampled:		4/17/2009		4/17/2009		4/17/2009		5/20/2009		5/20/2009		6/3/2009	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	73.0		188		176		3.4	J	12.3		1.0	U
Ethylbenzene	75.1	1.3	U	60.4		68.6		1.2	U	1.1	U	1.0	U
2-Hexanone	200 [4]	6.7	U	5.7	U	5.6	U	5.9	U	8.9	JB	5.0	U
Isopropylbenzene (Cumene)	2,360	1.5	U	4.2	J	5.8		1.3	U	1.2	U	1.1	U
Methylene chloride	409	6.7	U	12.5	B	9.1	JB	5.9	U	5.5	U	2.4	U
n-Propylbenzene	3,300 [4]	1.6	U	2.6	J	3.7	J	1.4	U	1.3	U	1.2	U
1,2,4-Trimethylbenzene	58 [4]	1.3	U	1.1	U	1.3	J	1.2	U	1.1	U	1.0	U
Toluene	5,230	1.3	U	1.1	U	1.1	U	1.2	U	1.1	U	1.0	U
m,p-Xylene	871 [5]	2.6	U	2.2	U	2.1	U	2.2	U	2.1	U	1.9	U
o-Xylene	805	1.3	U	1.1	U	1.1	U	1.2	U	1.1	U	1.0	U
Xylenes (total)	871	NA		NA		NA		NA		NA		NA	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Butyl benzyl phthalate	280 [4]	94	U	79	U	88	U	87	U	77	U	79	U
Diethylphthalate	49,300	240	U	220	J	220	U	220	U	190	U	200	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	4.5	U	3.6	U	4.0	U	3.6	U	3.1	U	18.2	
Diesel Range Organics (C10-C22)	1,000 [3]	7.1	U	5.9	U	6.5	U	6.4	U	5.9	U	6.1	U
Oil Range Organics (>C22-C36)	1,000 [3]	7.1	U	5.9	U	6.5	U	10.2	J	5.9	U	6.1	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	69.9		83.9		76.1		78.2		85.3		83.6	
Moisture, Percent	NV	NA		NA		NA		NA		NA		NA	

Notes:

NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
Q = Laboratory Qualifier
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers

U = Not detected
J = Indicates an estimated value
B = Indicates analyte found in associated method blank

Client Sample Nomenclature

SS59 = T-38 Test Cell Site
G = Grid
B = Bottom
Final digit(s) equal the sample interval depth below ground surface

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 8
Direct Push Soil Analytical Data (August, 2009)
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-DP102-5		SS59-DP104-10		SS59-DP105-8		SS59-DP106-8	
Lab Sample Identification:	**NMED**	F67525-1		F67525-2		F67525-3		F67525-4	
Date Sampled:	**Residential [1]**	8/23/2009		8/23/2009		8/23/2009		8/23/2009	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	1,700	U	26.4	J	29	U	27	U
n-Butylbenzene	3,900 [3]	191	J	1.4	U	1.6	U	1.5	U
sec-Butylbenzene	7,800 [3]	2,070		1.6	J	1.3	U	1.2	U
Ethylbenzene	75.1	1,360		8.2		1.1	U	1.1	U
Hexane	615	182	J	2.4	U	2.8	U	2.6	U
Isopropylbenzene	2,360	2,260		2.5	J	1.3	U	1.2	U
p-Isopropyltoluene	NV [5]	1,200		1.1	U	1.3	U	1.2	U
Methylene chloride	409	737	B	8	JB	10.9	JB	15.9	B
Naphthalene	49.7	2,100		2	U	2.3	U	2.2	U
n-Propylbenzene	3,300 [4]	2,970		3.5	J	1.4	U	1.3	U
1,2,4-Trimethylbenzene	58 [4]	9,920		1	U	1.1	U	1.1	U
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
2-Methylnaphthalene	230 [4]	648		41	U	42	U	41	U
Naphthalene	49.7	129	J	41	U	42	U	41	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	464		3.3	U	3.4	U	3.5	U
Diesel Range Organics (C10-C22)	1,000 [3]	63.1		6.2	U	6.4	U	6.2	U
Oil Range Organics (>C22-C36)	1,000 [3]	12	U	6.2	U	6.4	U	6.2	U
General Chemistry	**%**	**%**		**%**		**%**		**%**	
Solids, Percent	NV	81.4		81.4		78.8		79.6	

Notes:
NMED New Mexico Environment Department
USEPA U.S. Environmental Protection Agency
µg/kg micrograms per kilogram
mg/kg milligrams per kilogram
% percent
NV No Value
ND Not Detected
SVOC Semi-Volatile Organic Compound
TPH Total Petroleum Hydrocarbons
GRO Gasoline Range Organics
DRO Diesel Range Organics
ORO Oil Range Organics
Q Laboratory Qualifier

Qualifiers
U Not Detected
B Indicates analyte found in associated method blank
J Indicated an estimated value

Client Sample Nomenclature
SS59 T-38 Test Cell Site
DP Direct Push
Last digit(s) equal the depth of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 9
2010 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification	**Soil Screening Levels**	SS59-CS-45-4056.5		SS59-CS-46-4058.5		SS59-CS-47-4058.5		SS59-CS-48-4058.5		SS59-CS-49-4057.5		SS59-CS-50-4057.5		SS59-CS-51-4063		SS59-CS-52-4063	
Lab Sample Identification	**NMED**	F73441-1		F73680-1		F73680-2		F73680-3		F73680-4		F73680-5		1096134		1096135	
Date Sampled:	**Residential [1]**	4/30/2010		5/13/2010		5/13/2010		5/13/2010		5/13/2010		5/13/2010		07/15/2010		07/15/2010	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6 -C10)	1,000 [3]	2.8	U	2.7	U	2.9	U	2.8	U	2.7	U	2.8	U	3.8		5.0	
Diesel Range Organics (C10-C22)	1,000 [3]	5.7	U	5.7	U	5.9	U	5.7	U	5.8	U	5.7	U	11		19	
Oil Range Organics (>C22-C36)	1,000 [3]	5.7	U	5.7	U	5.9	U	5.7	U	5.8	U	5.7	U	1.6	U	11	
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
1,2,4-Trimethylbenzene	58 [4]	1.1	U	1.0	U	1.3	U	1.2	U	1.6	U	1.1	U	2.1	J	21	
1,3,5-Trimethylbenzene	780 [4]	1.5	U	1.4	U	1.7	U	1.7	U	2.2	U	1.4	U	1.3	J	24	
Ethyl benzene	75.1	1.1	U	1.0	U	1.3	U	1.2	U	1.6	U	1.1	U	0.23	U	0.23	U
Isopropylbenzene (Cumene)	2,360	1.4	U	1.3	U	1.6	U	1.6	U	2.1	U	1.3	U	0.25	U	16	
Methylene chloride	409	5.1	U	4.7	U	5.8	U	5.6	U	7.4	U	4.8	U	0.21	U	0.21	U
Naphthalene	49.7	2.0	U	1.9	U	2.3	U	2.2	U	3.0	U	1.9	U	9.4		43	
Xylenes, total	871	NA		NA		NA		NA		NA		NA		0.38	U	0.38	U
Hexane	615	2.0	U	1.9	U	2.3	U	2.2	U	3.0	U	1.9	U	0.34	U	3.1	J
n-Propylbenzene	3,300 [4]	1.5	U	1.4	U	1.7	U	1.7	U	2.2	U	1.4	U	0.22	U	12	
p-Isopropyltoluene	NV [5]	1.0	U	0.94	U	1.2	U	1.1	U	1.5	U	0.96	U	0.27	U	9.1	
sec-Butylbenzene	7,800 [4]	1.2	U	1.1	U	1.4	U	1.3	U	1.8	U	1.2	U	1.2	J	22	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Diethylphthalate	49,300	200	U	190	U	190	U	190	U	190	U	190	U	69	U	69	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	86.0		88.5		85.1		86.6		86.2		87.9		NA		NA	
Percent Moisture	NV	NA		NA		NA		NA		NA		NA		21.32		21.47	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
Q = Laboratory Qualifier
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample
Final digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 9
2010 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification	**Soil Screening Levels**	SS59-CS-53-4063		SS59-CS-54-4063		SS59-CS-55-4058		SS59-CS-56-4058		SS59-CS-57-4058		SS59-CS-58-4058		SS59-CS-59-4058	
Lab Sample Identification	**NMED**	1096136		1096137		F75275-1		F75275-2		F75275-3		F75275-4		F75275-5	
Date Sampled:	**Residential [1]**	07/15/2010		07/15/2010		7/21/2010		7/21/2010		7/21/2010		7/21/2010		7/21/2010	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6 -C10)	1,000 [3]	0.018	U	0.018	U	3.6	U	2.9	U	4.2	U	3.2	U	3.1	U
Diesel Range Organics (C10-C22)	1,000 [3]	0.37	U	0.37	U	6.2	U	5.7	U	5.9	U	5.9	U	5.9	U
Oil Range Organics (>C22-C36)	1,000 [3]	1.6	U	1.6	U	6.2	U	5.7	U	5.9	U	5.9	U	5.9	U
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
1,2,4-Trimethylbenzene	58 [4]	7.1		2.7	J	1.3	U	1.1	U	1.2	U	1.1	U	1.1	U
1,3,5-Trimethylbenzene	780 [4]	1.6	J	0.23	U	1.7	U	1.5	U	1.6	U	1.5	U	1.5	U
Ethyl benzene	75.1	6.2		0.23	U	1.3	U	1.1	U	1.2	U	1.1	U	1.1	U
Isopropylbenzene (Cumene)	2,360	4.2	J	0.25	U	1.6	U	1.4	U	1.5	U	1.4	U	1.4	U
Methylene chloride	409	0.21	U	0.21	U	17.0		10.3		11.7		11.3		10.2	
Naphthalene	49.7	18		7.1		2.3	U	2.0	U	2.1	U	2.0	U	2.0	U
Xylenes, total	871	2.0	J	0.38	U	NA		NA		NA		NA		NA	
Hexane	615	2.8	J	0.34	U	6.6		2.9	J	2.1	U	2.0	U	2.0	U
n-Propylbenzene	3,300 [4]	2.7	J	0.22	U	1.7	U	1.5	U	1.6	U	1.5	U	1.5	U
p-Isopropyltoluene	NV [5]	1.7	J	0.27	U	1.1	U	1.0	U	1.1	U	0.99	U	1.0	U
sec-Butylbenzene	7,800 [4]	1.7	J	0.28	U	1.4	U	1.2	U	1.3	U	1.2	U	1.2	U
Semi-Volatile Organic Compound	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Diethylphthalate	49,300	69	U	69	U	3600		190	U	190	U	200	U	200	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	NA		NA		79.0		86.8		84.1		83.6		84.3	
Percent Moisture	NV	27.61		26.78		NA		NA		NA		NA		NA	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
Q = Laboratory Qualifier
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample
Final digit(s) equal the elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 10
2010 Excavation Confirmation Bottom Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-G108B-'22	SS59-G6A-B-4060	SS59-G18B-16'
Lab Sample Identification:	**NMED**	1077960	1096138	F76051-1
Date Sampled:	**Residential [1]**	05/04/2010	07/15/2010	8/24/2010
Analyte		**Result**	**Result**	**Result**
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	1,000 [2]	ND	ND	8.37
Diesel Range Organics (C10-C22)	1,000 [2]	ND	ND	ND
Oil Range Organics (>C22-C36)	1,000 [2]	ND	ND	ND
Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
1,2,4-Trimethylbenzene	58 [3]	ND	590	ND
1,3,5-Trimethylbenzene	780 [3]	ND	144 J	ND
Ethyl benzene	75.1	ND	883	ND
Isopropylbenzene (Cumene)	2,360	ND	224 J	ND
Xylenes, total	871	ND	333	NA
Hexane	615	ND	138 J	ND
n-Propylbenzene	3,300 [3]	ND	338	ND
p-Isopropyltoluene	NV [4]	ND	150 J	ND
sec-Butylbenzene	7,800 [3]	ND	119 J	ND
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
All SVOCs	NV	ND	ND	ND
General Chemistry	**%**	**%**	**%**	**%**
Percent Moisture	NV	23.47	28.81	NA
Solids, Percent	NV	NA	NA	78.4

Notes:
NMED = New Mexico Environment Department
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
ND = Not Detected
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
G = Grid
Final digit(s) equal the sample interval below ground surface or elevation of sample interval

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014)
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015)
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015)
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 11
2012 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-CS-60		SS59-CS-61		SS59-CS-62		SS59-CS-63		SS59-CS-64		SS59-CS-65		SS59-CS-66	
Lab Sample Identification:	**NMED Residential [1]**	F91092-1		F91092-2		F91092-3		F91126-1		F91126-2		F91126-3		F91126-4	
Date Sampled:		3/12/2012		3/12/2012		3/12/2012		3/13/2012		3/13/2012		3/13/2012		3/13/2012	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	18	U	18	U	21	U	24	U	20	U	19	U	18	U
Benzene	17.8	1.4	U	1.3	U	1.6	U	1.8	U	1.8	J	1.4	U	1.3	U
n-Butylbenzene	3,900 [4]	1.2	U	1.2	U	1.4	U	1.6	U	1.3	U	1.2	U	1.1	U
sec-Butylbenzene	7,800 [4]	1.5	U	1.4	U	1.7	U	1.9	U	1.6	U	1.5	U	1.4	U
tert-Butylbenzene	7,800 [4]	1.1	U	1.1	U	1.3	U	1.4	U	1.2	U	1.1	U	1.1	U
Carbon disulfide	1,550	1.8	U	1.8	U	2.1	U	2.4	U	2	U	1.9	U	1.8	U
Ethylbenzene	75.1	0.92	U	0.9	U	1.1	U	1.2	U	0.98	U	0.95	U	0.88	U
Hexane	615	1.7	U	1.7	U	2	U	2.3	U	1.9	U	1.8	U	1.7	U
Isopropylbenzene (Cumene)	2,360	1	U	0.99	U	1.2	U	1.3	U	1.1	U	1	U	0.97	U
p-Isopropyltoluene	NV [5]	1.1	U	1.1	U	1.3	U	1.4	U	1.2	U	1.1	U	1.1	U
Methylene chloride	409	4.4	J	5.2	J	9.2	J	9	J	5.6	J	8.6	J	4.6	J
Naphthalene	49.7	1.8	U	1.8	U	2.1	U	2.4	U	2	U	1.9	U	1.8	U
n-Propylbenzene	3,300 [4]	1.3	U	1.3	U	1.5	U	1.7	U	1.4	U	1.3	U	1.2	U
1,2,4-Trimethylbenzene	58 [4]	1	U	0.99	U	1.2	U	1.3	U	1.1	U	1	U	0.97	U
1,3,5-Trimethylbenzene	780 [4]	1.2	U	1.2	U	1.4	U	1.6	U	1.3	U	1.2	U	1.1	U
Toluene	5,230	1.1	U	1.1	U	1.3	U	1.4	U	1.8	J	1.1	U	1.1	U
m,p-Xylene	871 [5]	2	U	2	U	2.3	U	2.6	U	2.1	U	2.1	U	1.9	U
o-Xylene	805	0.92	U	0.9	U	1.1	U	1.2	U	0.98	U	0.95	U	0.88	U
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
3&4-Methylphenol (m,p-cresol)	3,100/6,200 [4]	31	U	33	U	32	U	36	U	34	U	31	U	31	U
Phenol	18,500	22	U	23	U	23	U	25	U	23	U	22	U	22	U
Dibenzofuran	72 [4]	22	U	23	U	23	U	25	U	23	U	22	U	22	U
bis(2-Ethylhexyl)phthalate	380	87	U	91	U	90	U	591		94	U	87	U	87	U
Fluorene	2,320	22	U	23	U	23	U	25	U	23	U	22	U	22	U
2-Methylnaphthalene	230 [4]	22	U	23	U	23	U	25	U	23	U	22	U	22	U
Naphthalene	49.7	35	U	36	U	36	U	40	U	37	U	35	U	35	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	3.0	U	3.4	U	3.5	U	14.6		3.8	U	3.5	U	3.0	U
Diesel Range Organics (C10-C22)	1,000 [3]	4.4	U	4.5	U	4.5	U	5.35	J	4.7	U	4.4	U	4.3	U
Oil Range Organics (>C22-C36)	1,000 [3]	4.4	U	4.5	U	4.5	U	5.0	U	4.7	U	4.4	U	4.3	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	75.7		73.8		72.9		67.3		70.5		75.5		76.3	

Notes:
NMED New Mexico Environment Department
USEPA U.S. Environmental Protection Agency
µg/kg micrograms per kilogram
mg/kg milligrams per kilogram
% percent
NV No Value
Q Laboratory Qualifier
TPH Total Petroleum Hydrocarbons
GRO Gasoline Range Organics
DRO Diesel Range Organics
ORO Oil Range Organics

Qualifiers
U Not detected
J Indicates an estimated value

Client Sample Nomenclature
SS59 T-38 Test Cell Site
CS Confirmation Sample

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 11
2012 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-CS-67		SS59-CS-68		SS59-CS-69		SS59-CS-70		SS59-CS-71		SS59-CS-72		SS59-CS-73	
Lab Sample Identification:	**NMED**	F91126-5		F91126-6		F94177-1		F94177-2		F95904-1		F95904-2		F95904-3	
Date Sampled:	**Residential [1]**	3/13/2012		3/13/2012		6/18/2012		6/18/2012		8/14/2012		8/14/2012		8/14/2012	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	21	U	24	U	20	U	24	U	1,500	U	1,800	U	1,400	U
Benzene	17.8	1.6	U	1.8	U	1.5	U	1.8	U	6,60		1,010		315	J
n-Butylbenzene	3,900 [4]	1.4	U	1.6	U	1.3	U	1.5	U	947		2,460		1,750	
sec-Butylbenzene	7,800 [4]	1.7	U	1.9	U	1.6	U	1.9	U	1,590		4,420		3,280	
tert-Butylbenzene	7,800 [4]	1.3	U	1.5	U	1.2	U	1.4	U	87	U	199	J	131	J
Carbon disulfide	1,550	2.1	U	2.4	U	2	U	2.4	U	150	U	180	U	140	U
Ethylbenzene	75.1	1.1	U	1.2	U	0.99	U	1.2	U	9,950		39,400		22,100	
Hexane	615	2	U	2.3	U	1.9	U	2.3	U	140	U	170	U	130	U
Isopropylbenzene (Cumene)	2,360	1.2	U	1.3	U	1.1	U	1.3	U	2,540		7,930		5,290	
p-Isopropyltoluene	NV [5]	1.3	U	1.5	U	1.2	U	1.4	U	969		2,820		2,080	
Methylene chloride	409	9.4	J	6.8	J	5.4	J	7.5	J	330	U	410	U	310	U
Naphthalene	49.7	2.1	U	2.4	U	2	U	2.4	U	1,980		5,390		4,520	
n-Propylbenzene	3,300 [4]	1.5	U	1.7	U	1.4	U	1.7	U	3,910		11,700		7,540	
1,2,4-Trimethylbenzene	58 [4]	1.5	J	1.3	U	1.1	U	1.3	U	7,670		25,800		19,300	
1,3,5-Trimethylbenzene	780 [4]	1.4	U	1.6	U	1.3	U	1.5	U	913		4,860		5,720	
Toluene	5,230	1.3	U	1.5	U	1.2	U	1.4	U	150	J	110	U	82	U
m,p-Xylene	871 [5]	2.3	U	2.7	U	2.2	U	2.6	U	4,890		32,000		34,000	
o-Xylene	805	1.1	U	1.2	U	0.99	U	1.2	U	1,170		97.1	J	68	U
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
3&4-Methylphenol (m,p-cresol)	3,100/6,200 [4]	33	U	35	U	30	U	30	U	34	U	35	U	31	U
Phenol	18,500	23	U	24	U	21	U	21	U	24	U	24	U	22	U
Dibenzofuran	72 [4]	23	U	24	U	21	U	21	U	24	U	29.6	J	22	U
bis(2-Ethylhexyl)phthalate	380	93	U	97	U	82	U	84	U	95	U	97	U	87	U
Fluorene	2,320	23	U	24	U	21	U	21	U	24	U	24	U	27.2	J
2-Methylnaphthalene	230 [4]	23	U	24	U	21	U	21	U	101	J	543		1,030	
Naphthalene	49.7	37	U	39	U	33	U	34	U	38	U	135	J	268	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	3.5	U	4.0	U	3.2	U	3.0	U	387		**1,090**		831	
Diesel Range Organics (C10-C22)	1,000 [3]	4.7	U	4.8	U	4.1	U	4.1	U	64.9		132		271	
Oil Range Organics (>C22-C36)	1,000 [3]	4.7	U	4.8	U	5.01	J	4.36	J	4.7	U	19	U	34	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	70.8		68.2		81		79.1		69.8		69.3		76.5	

Notes:
NMED New Mexico Environment Department
USEPA U.S. Environmental Protection Agency
µg/kg micrograms per kilogram
mg/kg milligrams per kilogram
% percent
NV No Value
Q Laboratory Qualifier
TPH Total Petroleum Hydrocarbons
GRO Gasoline Range Organics
DRO Diesel Range Organics
ORO Oil Range Organics

Qualifiers
U Not detected
J Indicates an estimated value

Client Sample Nomenclature
SS59 T-38 Test Cell Site
CS Confirmation Sample

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 11
2012 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-CS-74		SS59-CS-75		SS59-CS-76		SS59-CS-77		SS59-CS-78		SS59-CS-79		SS59-CS-80	
Lab Sample Identification:	**NMED**	F95904-4		F95904-5		F96013-1		F99475-1		F99505-1		F99649-1		F99649-2	
Date Sampled:	**Residential [1]**	8/14/2012		8/14/2012		8/15/2012		11/30/2012		12/3/2012		12/5/2012		12/5/2012	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	6,800	U	9,300	U	89.4		22	U	1,600	U	1,400	U	1,400	U
Benzene	17.8	510	U	690	U	13.2		205	J	78	U	5,010		4,900	
n-Butylbenzene	3,900 [4]	6,780		9,720		24.2		516		1,510		4,020		9,350	
sec-Butylbenzene	7,800 [4]	10,200		13,700		424		1170		5,120		3,170		7,330	
tert-Butylbenzene	7,800 [4]	671	J	665	J	1.3	U	19.1		234	J	82	U	82	U
Carbon disulfide	1,550	680	U	930	U	9.7		5.3	J	160	U	140	U	140	U
Ethylbenzene	75.1	48,000		49,700		1,710		2,080		44,000		33,800		58,600	
Hexane	615	640	U	880	U	2.6	J	210	J	180	U	4,160		5,140	
Isopropylbenzene (Cumene)	2,360	12,900		17,800		470		494		8,590		6,120		12,200	
p-Isopropyltoluene	NV [5]	7,870		8,860		50.6		87.3		2,890		2,060		4,810	
Methylene chloride	409	1,600	U	2,100	U	5.2	U	5	U	360	U	323	J	310	U
Naphthalene	49.7	19,100		16,000		21.6		846		160	U	4,960		10,200	
n-Propylbenzene	3,300 [4]	18,400		25,400		758		885		14,300		9,520		18,200	
1,2,4-Trimethylbenzene	58 [4]	56,100		**74,500**		2,010		2,120		85	U	18,700		38,800	
1,3,5-Trimethylbenzene	780 [4]	12,000		28,600		1.9	J	680		82	U	6,130		13,400	
Toluene	5,230	410	U	2,740		3.8	J	901		78	U	15,500		37,200	
m,p-Xylene	871 [5]	53,100		89,800		61.1		2,020		160	U	26,600		65,000	
o-Xylene	805	340	U	19,600		6.2		931		78	U	11,000		26,400	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
3&4-Methylphenol (m,p-cresol)	3,100/6,200 [4]	300	U	180	U	33	U	43	U	47	U	160	U	192	J
Phenol	18,500	210	U	130	U	23	U	33	U	37	U	130	U	177	J
Dibenzofuran	72 [4]	751	J	267	J	23	U	30.1	J	81	J	134	J	261	J
bis(2-Ethylhexyl)phthalate	380	840	U	510	U	91	U	41	U	45	U	160	U	160	U
Fluorene	2,320	346	J	167	J	23	U	23	U	39.7	J	87	U	142	J
2-Methylnaphthalene	230 [4]	21,900		9,070		70.1	J	87.9	J	26	U	5,000		9,750	
Naphthalene	49.7	7,360		2,870		36	U	21	U	23	U	1,960		4,180	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	**2,930**		**2,760**		110		305		984		**1,210**		**2,880**	
Diesel Range Organics (C10-C22)	1,000 [3]	**3,770**		**1,710**		44.4		57.6		184		740		**1,430**	
Oil Range Organics (>C22-C36)	1,000 [3]	430	U	260	U	4.6	U	4.1	U	23	U	80	U	210	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	78.8		64.7		72.6		80.2		73.7		83.3		81.2	

Notes:
NMED New Mexico Environment Department
USEPA U.S. Environmental Protection Agency
µg/kg micrograms per kilogram
mg/kg milligrams per kilogram
% percent
NV No Value
Q Laboratory Qualifier
TPH Total Petroleum Hydrocarbons
GRO Gasoline Range Organics
DRO Diesel Range Organics
ORO Oil Range Organics

Qualifiers
U Not detected
J Indicates an estimated value

Client Sample Nomenclature
SS59 T-38 Test Cell Site
CS Confirmation Sample

[1] Table A-1, NMED Soil Screening Levels (SSL).*Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[5] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 12
2012 Excavation Bottom Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-G21B		SS59-G32B		SS59-G41B		SS59-G42B		SS59-G104B		SS59-G111B		SS59-G112B	
Lab Sample Identification:	**NMED**	F91127-1		F91127-2		F94457-1		F94457-2		F99361-1		F99361-2		F99361-3	
Date Sampled:	**Residential [1]**	3/13/2012		3/13/2012		6/26/2012		6/26/2012		11/28/2012		11/28/2012		11/28/2012	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	19	U	19	U	20	U	19	U	76.2		63.7	J	77.8	
Benzene	17.8	1.4	U	1.4	U	1.5	U	1.4	U	4.3	J	5.1	J	3.3	J
Methylene chloride	409	5.7	J	6.3	J	4.9	J	4.4	U	5.6	U	6.4	U	5.4	U
Methyl Tert Butyl Ether	975	1.9	U	1.9	U	2.0	U	1.9	U	5.9	J	4.7	J	4.9	J
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
All SVOCs	NV	ND		ND		ND		ND		ND		ND		ND	
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [3]	3.1	U	3.6	U	3.1	U	3.1	U	3.7	U	3.9	U	3.7	U
Diesel Range Organics (C10-C22)	1,000 [3]	4.4	U	4.7	U	4.4	U	4.3	U	4.2	U	4.2	U	4.2	U
Oil Range Organics (>C22-C36)	1,000 [3]	4.4	U	4.7	U	4.4	U	4.3	U	4.2	U	4.2	U	4.2	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	74.6		70.9		76.2		76.0		77.9		78.9		79.5	

Notes:
NMED = New Mexico Environment Department
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
NA = Not Analyzed
ND = Not Detected
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics

Qualifiers
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
G = Grid

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 13
2013 Excavation Sidewall Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-CS-81		SS59-CS-82		SS59-CS-83		SS59-CS-84		SS59-CS-85		SS59-CS-86		SS59-CS-87	
Lab Sample Identification:	**NMED**	FA2599-1		FA2599-2		FA2599-3		FA2599-4		FA2599-5		FA2599-6		FA2643-1	
Date Sampled:	**Residential [1]**	3/12/2013		3/12/2013		3/12/2013		3/12/2013		3/12/2013		3/12/2013		3/13/2013	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Benzene	17.8	6,350		496		72	U	67	U	957		13,400		3,360	
n-Butylbenzene	3,900 [3]	1,400		1,020		851		659		3,610		11,800		10,200	
sec-Butylbenzene	7,800 [3]	1,470		1,380		1,450		1,510		5,600		12,700		14,000	
tert-Butylbenzene	7,800 [3]	78	U	82	U	86	U	79	U	67	U	472		5,850	
Ethylbenzene	75.1	15,200		7,100		6,860		1,790		31,700		**125,000**		68,000	
Hexane	615	981		160	U	160	U	150	U	130	U	894		704	
Isopropylbenzene (Cumene)	2,360	2,670		2,110		2,330		1,590		8,940		24,600		20,000	
p-Isopropyltoluene	NV [4]	921		791		956		917		3,170		7,460		8,540	
Naphthalene	49.7	1,790		1,620		1,850		712		7,090		15,700		14,600	
n-Propylbenzene	3,300 [3]	3,880		3,330		3,420		2,590		13,800		36,100		31,200	
1,2,4-Trimethylbenzene	58 [3]	8,220		7,650		7,440		6,360		30,800		**72,500**		**80,900**	
1,3,5-Trimethylbenzene	780 [3]	2,470		2,530		2,550		2,370		10,500		24,500		23,100	
Toluene	5,230	9,420		815		72	U	67	U	611		131,000		12,500	
m,p-Xylene	871 [6]	12,500		8,660		7,560		1,150		42,800		151,000		85,800	
o-Xylene	805	3,520		1,480		72	U	67	U	6,860		63,400		29,800	
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Phenol	18,500	134	J	132	J	37	U	36	U	130	U	140	U	350	U
Dibenzofuran	72 [3]	50.8	J	43.2	J	23	U	44.0	J	148	J	259	J	220	U
Fluorene	2,320	24.8	J	24	U	25	U	24	U	91	U	98.8	J	240	U
2-Methylnaphthalene	230 [3]	1,230		906		991		1,130		5,580		10,900		15,200	
Naphthalene	49.7	378		229		357		132	J	2,490		5,690		7,400	
Phenanthrene	1,740	24.3	J	21	U	22	U	22	U	82	U	87	U	210	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [5]	166		232		250		**1,080**		**1,460**		**5,130**		**5,460**	
Diesel Range Organics (C10-C22)	1,000 [5]	185		180		154		213		462		**1,490**		**2,510**	
Oil Range Organics (>C22-C36)	1,000 [5]	42	U	21	U	22	U	22	U	41	U	110	U	220	U
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	79.6		78.0		74.1		76.0		81.3		77.3		76.5	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
ND = Not Detected
SVOC = Semi-Volatile Organic Compound
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
Q = Laboratory Qualifier

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
CS = Confirmation Sample

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
[5] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[6] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)

Table 14
2013 Excavation Bottom Confirmation Soil Analytical Data
T-38 Test Cell Site (SS-59)
Holloman Air Force Base, New Mexico

Client Sample Identification:	**Soil Screening Levels**	SS59-G62B		SS59-G85B		SS59-G50B		SS59-G40B		SS59-G51B	
Lab Sample Identification:	**NMED**	FA4374-1		FA4374-2		FA4711-1		FA6252-1		FA6252-2	
Date Sampled:	**Residential [1]**	5/6/2013		5/6/2013		5/15/2013		7/9/2013		7/9/2013	
Analyte		**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**	**Result [2]**	**Q**
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Acetone	66,300	28.2	J	29.2	J	35.1	J	21	U	129	
Benzene	17.8	7.8		1.8	J	1.4	U	1.1	U	1.2	U
n-Butylbenzene	3,900 [3]	1.2	U	1.5	U	1.8	U	1.4	U	11.5	
sec-Butylbenzene	7,800 [3]	1.1	U	1.4	U	1.7	U	1.3	U	16.1	
Ethylbenzene	75.1	1.0	U	1.3	U	1.6	U	1.2	U	54.4	
Hexane	615	2.1	U	2.6	U	3.2	U	2.4	U	8.4	
Isopropylbenzene (Cumene)	2,360	1.2	U	1.5	U	1.9	U	1.4	U	23.5	
p-Isopropyltoluene	NV [4]	1.6	J	3.7	J	1.9	U	1.4	U	8.6	
Methyl ethyl ketone	37,400	4.9	J	7.8	J	7.1	U	5.3	U	6.1	U
Naphthalene	49.7	1.8	U	5.4	J	2.9	U	2.1	U	13.1	
n-Propylbenzene	3,300 [3]	0.94	U	1.2	U	1.5	U	1.1	U	28.1	
1,2,4-Trimethylbenzene	58 [3]	0.99	U	1.2	U	1.5	U	1.1	U	40.1	
1,3,5-Trimethylbenzene	780 [3]	2.2	J	4.7	J	1.5	U	1.1	U	13.1	
Toluene	5,230	0.91	U	1.1	U	1.4	U	1.1	U	2.4	J
m,p-Xylene	871 [6]	1.9	U	2.4	U	2.9	U	2.2	U	15.4	
o-Xylene	805	0.91	U	1.1	U	1.4	U	1.1	U	3.6	J
Semi-Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Diethyl phthalate	49,300	41	U	41	U	46	U	52.6	J	42	U
bis(2-Ethylhexyl)phthalate	380	41	U	41	U	46	U	54.5	J	42	U
2-Methylnaphthalene	230 [3]	42.9	J	97.3	J	27	U	26	U	24	U
Naphthalene	49.7	21	U	309		23	U	23	U	21	U
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Gasoline Range Organics (C6-C10)	1,000 [5]	3.3	U	2.8	U	3.6	U	3.0	U	3.5	U
Diesel Range Organics (C10-C22)	1,000 [5]	27.7		18.5		4.6	U	4.4	U	4.2	U
Oil Range Organics (>C22-C36)	1,000 [5]	4.0	U	4.1	U	4.6	U	5.24	J	5.77	J
General Chemistry	**%**	**%**		**%**		**%**		**%**		**%**	
Solids, Percent	NV	81.7		81.1		72.4		75.5		79.4	

Notes:
NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
Q = Laboratory Qualifier

Client Sample Nomenclature
SS59 = T-38 Test Cell Site
G = Grid
B = Bottom

Qualifiers
U = Not detected
J = Indicates an estimated value

[1] Table A-1, NMED Soil Screening Levels (SSL). *Risk Assessment Guidance for Site Investigations and Remediation* (NMED, December 2014).
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL).
[3] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (January 2015).
[4] No Value established for NMED Residential SSL (December 2014) and USEPA RSL (January 2015).
[5] Table 6-2, TPH Screening Guidelines for Kerosene and Jet Fuel, Residential Direct Exposure (NMED, December 2014).
[6] Screening level for Xylenes (total) (Table A-1, NMED December 2014).
Bold value indicates analytes above NMED SSLs (December 2014) or TPH results above NMED TPH Screening Guidelines (December 2014)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Kerosene and Jet Fuel, Residential Direct Exposure)