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DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS MISSION SUPPORT GROUP (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO

MAY 2 2 2013

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Commander
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Mr. Daniel Comeau
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New Mexico Environment Department
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Dear Mr. Comeau

Attached is the *"Source Remediation Report Solid Waste Management Unit (SWMU) 107"* Cannon AFB. If you have any questions regarding this submittal, please contact Mr. Ronald Lancaster, Chief, Asset Management Flight at (575) 784-1146.

Sincerely,

DAVID C. PIECH, Colonel, USAF
Commander

Attachment:
Source Remediation Report Solid Waste Management Unit (SWMU) 107.

cc:
Environmental Protection Agency, Region VI, Ms. Wendy Jacques w/o Attachment

SOURCE REMEDIATION REPORT

FINAL

FIRE TRAINING AREA NO. 8 (SWMU 107)

CANNON AIR FORCE BASE, CURRY COUNTY, NEW MEXICO

AFCEE WERC09 PERFORMANCE-BASED REMEDIATION

CONTRACT NUMBER: FA8903-09-D-8562, TASK ORDER #0003

APRIL 5, 2013

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LIST OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
COC	Chain-of-Custody
DRO	diesel-range organics
EMR	EMR, Incorporated
EPA	U.S. Environmental Protection Agency
Ft	Foot or feet
FT-08	Fire Training Area No. 08
GRO	gasoline-range organics
hsa	Hollow-stem augers
mg/kg	milligrams/kilogram
NMED	New Mexico Environment Department

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

ORO	oil-range organics
PID	Photoionization Detector
QA	quality assurance
QC	quality control
QDP	Quantum Data Processing
QPP	Quality Program Plans
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SOW	Statement of Work
Spectrum	Spectrum Analytical, Incorporated
SSL	Soil Screening Level
SWMU	Solid Waste Management Unit
Talon	Talon LPE
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
T&D	Transport and disposal
VOC	Volatile Organic Compound

SOURCE REMEDIATION REPORT
FINAL

FT-08 (SWMU 107)
CANNON AIR FORCE BASE
CURRY COUNTY, NEW MEXICO

April 5, 2013

Prepared For:

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1.0 INTRODUCTION

Cannon Air Force Base (AFB) occupies approximately 4,000 acres south of U.S. Highway 60/84 in Curry County, New Mexico. The Base is situated 6 miles west of the city of Clovis, near the New Mexico-Texas border (**Site Vicinity Map - Figure 1**). The area surrounding Cannon AFB is used mainly for farming and ranching. Cannon AFB also maintains several satellite facilities.

In 1942, the Department of Defense established the Clovis Army Air Base, a training facility for B-17, B-24, and B-29 air crews. The Base was renamed Clovis Army Airfield in 1945 and eventually closed in 1947. Reactivated in 1951, the Base was reassigned to the Tactical Air Command and was renamed Cannon AFB in 1957. In 1975, the 27th Tactical Fighter Wing became the principal United States Air Force unit at Cannon AFB. The Base was reassigned to the Air Combat Command in 1992 and currently maintains a combat-ready force and provides replacement training of combat air crews for tactical organizations worldwide. More recently the Air Force successfully completed an Environmental Impact Statement in "record" time to support the Department of Defense decision transferring ownership of Cannon AFB, NM, from ACC to AFSOC, effective Oct. 1, 2007; in coordination with the 27th Fighter Wing and the offices of the Secretary of the Air Force and The Air Force Civil Engineer, AFSOC Civil Engineers completed the entire National Environmental Protection Agency process in less than 12 months.

2.0 PROBLEM BACKGROUND AND DEFINITION

Based upon the Statement of Work (SOW) supplied to EMR, Inc. (EMR), an excavation of contaminated soil is required for former Fire Training Area No. 8 (FT-08) Solid Waste Management Unit (SWMU) 107 located at Cannon AFB, New Mexico (**Figure 2 – Remediation Area Map**). Based on a previous Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report (URS, 2008) for this site and with the presence of a Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) plume, EMR developed a technical approach to complete the characterization, excavation, transport and disposal (T&D) of the contaminated soils at FT-08 (SWMU 107).

The vertical and horizontal extent of the TPH-DRO plume was determined during the soil assessment phase where the installation of 10 soil borings occurred. The soil boring locations are presented in **Figure 3** and the area of elevated TPH-DRO levels is presented in **Figure 5**.

In addition to the excavated contaminated soil, approximately 30 cubic yards of Arsenic contaminated soil, which is currently stockpiled on Cannon AFB, will be disposed of. The arsenic contaminated soil was removed end of year 2010 from behind Building 186, which is an air ground equipment drainage ditch. The ditch received runoff from multiple flight-line locations, that may have contained petroleum constituents.

3.0 PURPOSE AND OBJECTIVES OF INVESTIGATION AND REMEDIATION

As outlined in the approved Quality Program Plans (QPP), dated December 2011, EMR undertook a site investigation in the area of FT-08 (SWMU 107) at Cannon AFB. The goal of this investigation and remediation was to determine the presence and extent of petroleum contamination at the site and remediate the site of the contamination.

The remedial investigation (RI) included the installation of 10 soil borings to determine the horizontal and vertical extent of contamination. EMR field screened all of the soil samples collected from each boring for odors, visible staining, and headspace testing with a MiniRae 2000 Photoionization Detector (PID). The source removal included the excavation and disposal of contaminated soil. Samples selected for laboratory analysis were handled following the quality assurance/quality control (QA/QC) procedures as outlined in the approved QPP.

4.0 SOIL INVESTIGATION

On August 7, 2012 through August 10, 2012, EMR conducted a site investigation at FT-08 (SWMU 107) at Cannon AFB. Ten soil borings were installed by Talon LPE (Talon) of Amarillo, Texas using a truck-mounted GEFCO Strata Star 5 equipped with 4.25-inch inside diameter, 8.25-inch outside diameter hollow-stem augers (HSA). The soil borings were installed in the area of the TPH-DRO plume and extended out for delineation. The borings were continuously sampled using 5-foot split-spoon samplers from the ground surface to boring depths ranging from 30 feet (ft) below ground surface (bgs) to 45 ft bgs. Cores were logged for lithology and

visual indications of contamination, and discrete soil samples were collected from the soil samples for field screening. Soil boring locations are depicted in **Figure 3.** Boring logs with soil descriptions are provided in **Appendix A**.

The samples were field-screened for headspace volatile organic compounds (VOCs) using a PID in order to determine which samples to be collected for laboratory analysis. This consisted of filling a plastic re-sealable bag approximately half-full with a composite sample from each 5-foot interval and allowing sufficient time for organic vapors to volatize. The air contained in the headspace of the sample was monitored using a MiniRAE 2000 (Model PGM 7600) Portable VOC Monitor, equipped with a 10.6eV lamp PID. Prior to field screening, the MiniRae PID was calibrated daily using 100-ppm isobutylene calibration gas.

Headspace screening of soil samples collected from each boring found PID readings ranging from 0.0 to 1275 parts per million (ppm) with no visible sign or odor of petroleum contamination observed in 9 of the 10 borings. Soil boring C107-SB11 contained PID readings ranging from 6.8 ppm at 33 ft bgs to 1275 ppm at 11 ft bgs. Odors were also observed from C107-SB11. Based on PID data and field observations, EMR collected soil samples from the interval containing the highest PID reading and the terminus of each borehole for submittal to a laboratory for analysis. Boring logs with soil descriptions and PID readings are provided in **Appendix A**.

EMR shipped the collected soil samples, under a chain of custody (COC), to Spectrum Analytical Inc. (Spectrum) in Tampa, FL for analyses of VOCs by United States Environmental Protection Agency (EPA) Method 8260 and TPH-DRO and Gasoline Range Organics (GRO) by EPA Method 8015. The sample with the highest PID reading (C107-SB11-011) was analyzed for Perchlorate by EPA Method 6860. For waste characterization of soil, a composite sample was collected from the three intervals containing the highest PID readings and was analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Benzene and TCLP RCRA 8 Metals. In addition, a trip blank was submitted and analyzed for VOCs by EPA Method 8260. Spectrum Analytical supplied all sample containers with the appropriate preservative for each sample. The samples were packaged in ice and shipped in a laboratory supplied cooler, under a custody seal, and via overnight delivery.

Laboratory analytical results indicated that soil samples collected from C107-SB11 at 3 ft bgs and 11 ft bgs were the only samples with detected concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX). C107-SB11-003 had detected concentrations of m,p-xylene (1.6 mg/kg), and o-xylene (3.8 mg/kg) and C107-SB11-011 had detected concentrations of toluene (0.86 mg/kg), ethylbenzene (7.8 mg/kg), m,p-xylene (41.8 mg/kg) and o-xylene (21.4 mg/kg). The detected concentrations for BTEX were below their respective New Mexico Environment Department (NMED) Soil Screening Levels (SSLs) (NMED 2012). TPH-GRO was detected in all soil samples collected and ranged from 0.013 mg/kg in C107-SB08-014 to 638.0 mg/kg in C107-SB11-011. TPH-DRO was detected in multiple soil samples but was above its applicable TPH Screening Guideline for residential direct exposure of 1000 mg/kg in two samples. TPH-DRO was detected at a concentration of 1110.0 mg/kg in sample C107-SB11-003 and 4680.0 mg/kg in sample C107-SB11-011. TPH-Oil Range Organics (ORO) was detected above its TPH Screening Guideline for residential direct exposure of 1000.0 mg/kg in sample C107-SB11-011 at a concentration of 3110.0 mg/kg. All other detected samples of TPH-ORO were below its TPH Screening Guideline for residential direct exposure of 1000 mg/kg (NMED 2012). **Table 1** and **Figure 4** show the laboratory results for the 21 soil samples collected from the 10 soil borings. The laboratory analysis data is provided in **Appendix B**. The applicable NMED soil screening levels are provided in **Appendix E**.

Between soil boring installations, Talon decontaminated augers and split spoons using a pressure washer and trough. The decontamination water was containerized in a 55-gallon drum, labeled, and left onsite near the Arsenic contaminated stockpile. Approximately 30 gallons of decontamination water were generated. The decontamination water waste characterization data is provided in **Appendix B**. Photographs of the soil boring install and decontamination are included as **Appendix D**.

For waste characterization of soil, a composite sample was collected from the three intervals containing the highest PID readings during the soil assessment phase and was analyzed for TCLP Benzene and TCLP RCRA 8 Metals. Arsenic, Chromium, and Mercury were the only constituents detected, but below the respective NMED SSLs. Arsenic was detected at a concentration of 0.0751 mg/kg, below its residential SSL of 3.9 mg/kg. Chromium was detected at a concentration of 0.00804 mg/kg, below its residential SSL of 2.97 mg/kg. Mercury was detected at a concentration of 0.000529 mg/kg, below its residential SSL of 15.6 mg/kg. The

remaining constituents were not detected at or above the method detection limit. Soil waste characterization data is provided in **Appendix B**.

In addition to the excavated contaminated soil, the scope of work included the characterization and disposal of approximately 30 cubic yards of Arsenic contaminated soil, stockpiled near the FT-08 (SWMU 107) site. As part of the Remedial Investigation, two composite samples were collected from the Arsenic contaminated stockpile for waste characterization. The samples were collected from the south face (ARSP-01) and the north face (ARSP-02) of the stockpile at approximately 18 inches below the surface. The samples were shipped, under a COC, to Spectrum in Tampa, FL for analyses of TCLP Arsenic. Analytical results indicated that Arsenic was detected at concentrations 0.0782 mg/kg from the south facing slope and 0.0766 mg/kg from the north facing slope. These concentrations are below the residential SSL of 3.9 mg/kg. The arsenic stockpile waste characterization data is provided in **Appendix B**. Based on the analytical data, the soil was approved for disposal at the Gandy-Marley facility near Roswell, New Mexico.

5.0 SOIL REMEDIATION ACTIVITIES

On January 16, 2013 through January 24, 2013, EMR conducted source removal activities at FT-08 (SWMU 107) at Cannon AFB. Source remediation activities included excavation of overburden and petroleum contaminated soils, closure soil sampling, offsite disposal, backfilling, grading, and watering of the disturbed area. These activities are detailed in the sections below.

5.1 Source Removal

On January 16, 2013 through January 17, 2013, EMR self-performed the excavation of overburden and petroleum contaminated soils from FT-08 (SWMU 107). The excavation limits at FT-08 (SWMU 107) were determined from laboratory analyses of soil samples collected during the soil assessment. Based on the assessment data, the area of impacted soil was approximately 30 ft by 30 ft, with an average vertical extent of 10 ft (333 cubic yards). Due to elevated PID readings in the southwest corner of the excavation (PID readings ranged from 56.2 ppm to 127 ppm), approximately 30 cubic yards of additional soil was removed. A total area of approximately 30 ft long on the east side (north to south), 32 ft long on the west side

(north to south), and 30 ft wide on the north and south sides (east to west) by 22 to 24 ft deep was excavated. **Figure 6** shows the excavated area. A track excavator was used to remove the overburden and petroleum contaminated soil from Site FT-08 (SWMU 107). As stated in the RI Report dated September 28, 2012, the upper 10 ft of the planned excavation area at FT-08 (SWMU 107) was removed and stockpiled to be used as backfill. The upper 10 ft around SB-11 was not used as backfill, but was stockpiled to be transported offsite due to the TPH-DRO concentration (1110.0 mg/kg) detected in sample C107-SB11-003. During the source removal activities, EMR field screened the excavated soil every 3 to 5 buckets (approximately 4.5 to 7.5 yards) using a PID. Soils with an average PID reading of 9.5 ppm and a high reading of 37.2 ppm were stockpiled to be used as backfill. As the petroleum contaminated soil was being excavated and stockpiled, a front-end loader was used to load the contaminated soil (PID readings greater than 50 ppm) onto dump trucks for transport to Gandy-Marley (approved NMED disposal facility). At the end of each day, orange construction fencing was used as a barricade around the excavation pit. The fencing was secured with t-posts driven into the ground. Photographs of the excavation activities are included as **Appendix D**.

5.2 Offsite Disposal

On January 17, 2013 and January 18, 2013, a total of 17 semi-trailer loads of petroleum contaminated soil from FT-08 (SWMU 107) was transported by Stephens Construction of Clovis, NM to Gandy-Marley. An estimated 16 to 20 cubic yards of petroleum contaminated soil was transported per semi-trailer for a total of 272 to 340 cubic yards. An exact amount of contaminated soil transported offsite could not be determined due to Gandy-Marley not weighing the trucks as they entered the facility. In addition to the excavated petroleum contaminated soil, approximately 30 cubic yards of Arsenic contaminated soil, which was stockpiled adjacent to FT-08 (SWMU 107), was transported to Gandy-Marly for disposal. Photographs of soil loading activities are included as **Appendix D**. Offsite disposal documentation is included as **Appendix F**.

5.3 Closure Soil Samples

On January 17, 2013 and following completion of the excavation activities, 10 confirmation sidewall and bottom soil samples were collected. Two samples were collected from each wall

and two samples were collected from the bottom of the excavation pit. The soil samples were collected by lowering the bucket of the track excavator to the desired depth on each wall and location of the bottom sample and excavating a small amount of soil. The soil sample collected was obtained from the middle of the excavated soil where there was no contact with the sides of the excavator bucket.

The samples were field-screened for headspace VOCs using a PID in order to determine if over excavation was needed. The headspace of the samples were monitored using a Ion Science ProCheck+ (Model 2000Ex) Portable VOC Monitor, equipped with a 10.6eV lamp PID. Prior to field screening, the Ion Science PID was calibrated daily using 100-ppm isobutylene calibration gas. The PID readings for each closure sample are included on **Table 2.**

The closure soil samples were collected and submitted to Spectrum for analysis of TPH-DRO/ORO using EPA Method 8015B. Split duplicate closure soil samples (C107-BTM-22N and C107-S17-4WW) were hand delivered to Trace Analysis in Lubbock, TX for analyses of TPH-DRO/ORO by EPA Method 8015B. Based on the analytical results from the closure samples, concentrations of TPH-DRO and TPH-ORO for all samples collected were below the NMED soil screening levels. TPH-DRO concentrations ranged from 4.5 mg/kg in C107-N14-8EW to 98.0 mg/kg in C107-E18-8NW. TPH-ORO concentrations ranged from 10.1 mg/kg in C107-W16-5NW to 153.0 mg/kg in C107-S14-8EW. Based on the results of the RI, Cannon AFB and NMED approved the closure samples to be analyzed for TPH-DRO and TPH-ORO only. The detected concentrations for TPH-GRO and BTEX during the RI were below their respective NMED SSLs. **Table 2** and **Figure 7** show the laboratory results for the 10 closure soil samples collected from the excavation. The laboratory analysis data for the closure soil samples is provided in **Appendix C**. The applicable NMED soil screening levels are provided in **Appendix E**.

5.4 Backfill

On January 18, 2013 and January 22, 2013, 16 loads of backfill material were loaded from an approved stockpile on Cannon AFB and transported to site FT-08 (SWMU 107). After receiving and reviewing the split duplicate closure soil samples, determining that the samples were below the NMED soil screening levels for TPH-DRO and TPH-ORO, and getting confirmation from

Cannon AFB Civil Engineering and NMED, EMR personnel started backfilling the excavation. While the backfill material was being loaded and stockpiled on January 22, 2013, EMR personnel began backfilling the excavation with overburden soils that had an average PID reading of 9.5 ppm and a high reading of 37.2 ppm. After all the overburden soils were backfilled, the excavation was backfilled with material from the Cannon AFB stockpile. Photographs of backfilling activities are included as **Appendix D**.

5.5 Grading and Watering of Disturbed Area

On January 23, 2013, after backfilling the excavated area, approximately 5 loads of backfill material was used to "mound" the disturbed area to prevent water from standing and to slope the area away from the center of the excavation. Due to dry conditions, the disturbed area was watered to prevent dust and to "lock down" some of the backfill material. Photographs of grading and watering activities are included as **Appendix D**.

6.0 DISCUSSION and EVALUATION

EMR conducted a Remedial Action (RA) at FT-08 (SWMU 107) in August 2012. The investigation included the installation of 10 soil borings to determine the horizontal and vertical extent of contamination. PID data and field observations during the soil assessment did indicate petroleum contamination at soil boring C107-SB11. The laboratory results confirmed the field data, as exceedances of the NMED SSLs were reported in soil samples collected from boring C107-SB11 at depths of 3 ft bgs and 11 ft bgs.

EMR collected all soil samples in accordance with the approved QPP and applicable EMR and NMED Standard Operating Procedures for Field Methods and Sampling. Samples were collected from the interval containing the highest PID reading and the terminus of each borehole. Field QA/QC samples included one equipment rinsate sample and one trip blank. Spectrum Analytical analyzed for VOCs, TPH-DRO and TPH-GRO for all field samples.

The laboratory results reported exceedances of the NMED SSLs. **Table 1** and **Figures 4** and **5** show the laboratory results for the 21 soil samples collected from the 10 soil borings. The laboratory analysis data is provided in **Appendix B**.

EMR conducted source removal activities at FT-08 (SWMU 107) in January 2013. Source removal activities included excavation of overburden and contaminated soils, closure soil sampling, offsite disposal, backfilling, grading, and watering of the disturbed area. Source removal included the excavation of a 30 ft long on the east side (north to south), 32 ft long on the west side (north to south), and 30 ft wide on the north and south sides (east to west) by 22 to 24 ft deep area. Approximately 272 to 340 cubic yards of contaminated soil were excavated from FT-08 (SWMU 107) and transported offsite.

After the excavation of the petroleum contaminated soils, EMR collected ten closure soil samples in accordance with the approved QPP and applicable EMR and NMED Standard Operating Procedures for Field Methods and Sampling. Two closure soil samples were collected from each wall and two closure soil samples were collected from the bottom of the excavation. Spectrum analyzed the closure samples for TPH-DRO and TPH-ORO for all field samples. Two split duplicate samples were submitted to Trace Analysis and were analyzed for TPH-DRO and TPH-ORO.

The laboratory results for the closure soil samples reported no exceedances of the NMED SSLs. **Table 2** and **Figure 7** show the laboratory results for the ten closure soil samples collected. The laboratory analysis data is provided in **Appendix C**.

6.1 Data Verification and Validation

The analysis of closure soil samples collected during the source removal activities followed the proposed Methodologies presented in the QPP, REMEDIAL ACTION - CONSTRUCTION AT SITE FT-08 (SWMU 107) (Cannon AFB, December 2011). All soil closure samples were analyzed for the following:

- TPH-DRO by EPA Method 8015
- TPH-ORO by EPA Method 8015

All of the laboratory data generated as part of the source removal conducted at FT-08 (SWMU 107) was validated by Quantum Data Processing (QDP). Field quality assurance (QA)/quality control (QC) samples, including trip blanks, equipment blank, matrix spikes, and matrix spike

duplicates were collected to document field and laboratory QA/QC. Spectrum in Tampa, FL performed the analysis of all samples collected.

The following minor QC issues were identified during the data validation of the laboratory results and the laboratory made all necessary corrective actions.

- All closure soil samples collected from FT-08 (SWMU 107) were B qualified for detected VOC results. A B qualifier was applied due to the reported values being detected in the associated method blanks (that were between the laboratory method detection limit and the practical quantitation limit. For data validation, a B qualifier is noted when an analyte was found in an associated blank, as well as in the sample.

- Detected constituents TPH >C10-C28 from soil samples C107-N16-5WW, C107-N14-8EW, and C107-W16-5NW and TPH >C28-C40 from soil sample C107-W16-5NW were J qualified. For data validation, a J qualifier is noted when the analyte was positively identified, but the quantitation is an estimation.

- A J qualifier was applied to detected TPH >C10-C28 for soil closure samples C107-N16-5WW, C107-N14-8EW, and C107-W16-5NW and C28-C40 for soil closure sample C107-W16-5NW due to the reported value is being between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL). An F qualifier needed to be applied. An F qualifier is noted when the analyte was positively identified but the associated numerical value is below the RL.

According to the validation report, the sample data and laboratory QC data were generally found to be suitable for their intended use with qualifications. None of the quality control excursions encountered during the data assessment process of this analytical data set resulted in rejected data. Information regarding the precision, accuracy, representativeness, and completeness is provided in the validation report included as **Appendix G**.

7.0 CONCLUSIONS / RECOMMENDATIONS

EMR conducted the RI and source removal at FT-08 (SWMU 107) in accordance with the approved RI and RA-Construction Work Plan. TPH-DRO concentrations were above its applicable NMED SSL in soil samples C107-SB11-003 and C107-SB11-011 collected during the RI. The results of the RI confirmed the presence of a TPH-DRO contaminated soil above the NMED SSLs. Based on the results of the RI, EMR estimated a volume of 250 to 350 cubic yards of petroleum contaminated soil to be excavated and disposed of offsite.

During source removal activities approximately 272 to 340 cubic yards of petroleum contaminated soil was excavated from FT-08 (SWMU 107) and transported offsite. After the excavation of the petroleum contaminated soils, EMR collected ten (10) closure soil samples in accordance with the approved QPP and applicable EMR and NMED Standard Operating Procedures for Field Methods and Sampling. Two closure soil samples were collected from each wall and two closure soil samples were collected from the bottom of the excavation. Spectrum analyzed the closure soil samples for TPH-DRO and TPH-ORO. Two split samples were collected and submitted to Trace Analysis for analysis of TPH-DRO and TPH-ORO. The laboratory results for all the closure soil samples reported no exceedances of the NMED SSLs.

The objective of the project was to remove and properly dispose of all petroleum contaminated soils in excess of the NMED SSLs at site FT-08 (SWMU 107). EMR successfully met this objective and the site meets the criteria for Site Closure. EMR, on behalf of AFCEE and Cannon AFB, recommends Site Closure for FT-08 (SWMU 107).

8.0 REFERENCES

EMR, Inc., 2011, *Quality Program Plans – Remedial Action Construction at Site FT-08 (SWMU 107), Cannon AFB, NM*, December 2011.

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