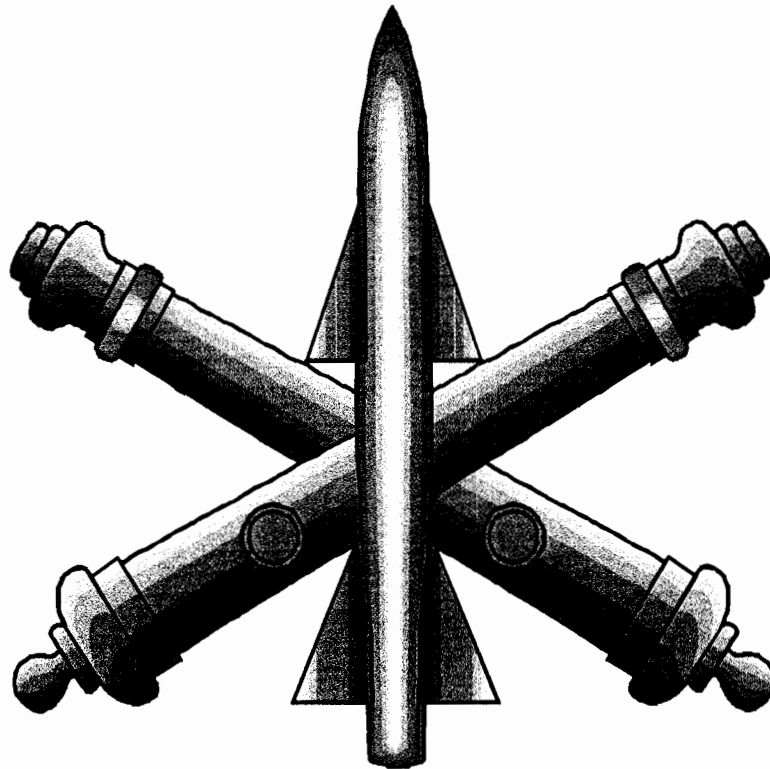


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2002 COMPLIANCE SAMPLING RESULTS REPORT

FOR
MCGREGOR RANGE
OPEN DETONATION (OD) UNIT



FORT BLISS
OTERO COUNTY, NEW MEXICO

JANUARY 2003

CERTIFICATION STATEMENT

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.



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(date)

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**2002 COMPLIANCE SAMPLING RESULTS REPORT
MCGREGOR RANGE OD TREATMENT UNIT
FORT BLISS, NEW MEXICO**

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SECTION 1 INTRODUCTION

In June 1995, a Final Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Operational Permit (Permit) (NMED, 1995) was issued to the U.S. Army Air Defense Artillery Center, Fort Bliss by the New Mexico Environment Department (NMED). This Permit, EPA ID No. NM4213720101-01, authorizes treatment of hazardous waste (munitions) by open detonation at the Open Detonation Treatment Unit (OD Unit). Weston Solutions, Inc. (Weston_{sm}) was contracted by the U.S. Army Corps of Engineers (USACE) to perform initial characterization and compliance sampling at the OD Unit according to the requirements of the aforementioned Permit. The 2002 Compliance Sampling Event was authorized by USACE Contract DACA56-01-D-2002, under Modification 01 to Task Order 01.

This document represents the 2002 Compliance Sampling Results Report for the OD Unit and was prepared in accordance with the specifications provided in the USACE Scope of Work (SOW), dated 18 March 2002 (USACE, 2002). An initial OD Unit characterization was conducted in August 1995, and regular compliance monitoring has occurred to date.

1.1 OBJECTIVE OF COMPLIANCE SAMPLING

Weston provided technical assistance to USACE and Fort Bliss by conducting the OD Unit compliance sampling at Fort Bliss on 26 August 2002. Compliance sampling is required by the Permit to evaluate site conditions with respect to ongoing and future treatment activities conducted at the OD Unit. The compliance sampling results are compared to historical sampling results to determine if changes in the presence, magnitude, or location of site-related contaminants have occurred as a result of continued treatment activities at the Unit.

1.2 SITE BACKGROUND AND DESCRIPTION

The OD Unit is located in the northern portion of the Fort Bliss Military Reservation within the McGregor Firing Range (FAW-10). The location is approximately 7 miles east of the McGregor Range Camp within the impact area for ballistic aerial targets, large-caliber munitions, and guided rockets. There are no structures within approximately 4 miles of the OD Unit. Operations at the OD Unit are only conducted when McGregor Range is inactive. A location map for the OD Unit is provided as Figure 1-1.

The U.S. Army Air Defense Artillery Center currently operates an Explosive Ordnance Detachment (EOD) that performs work at the OD Unit. This OD Unit has been in operation since 1965. The 741st EOD conducts explosives demolition (generally small) at the OD Unit approximately 1 to 2 times per quarter or on an as needed emergency basis. The OD Unit was historically operated under RCRA interim status as a hazardous waste thermal treatment facility until the Operational Permit was granted and issued in 1995. The Unit is now operated and

utilized according to the requirements specified in the Part B Permit and subsequent modifications. Quantities of explosives (net explosive weight) that are currently allowed for treatment (detonation) according to the Permit (modification dated 9 May 1996) are 2,500 pounds or 1,135 kilograms (kg) per quarter. Military chemical warfare agents and related compounds or materials contaminated with or suspected of being contaminated with these agents or compounds are not destroyed (treated) at the Unit.

The OD Unit is a manmade excavation and the dimensions are approximately 500 feet by 200 feet by 30 feet deep. All structures at the OD Unit are earthen. Prior to the first compliance sampling event, the bottom of the OD Unit was regraded to remove vegetation and provide for an emergency exit road for trucks that carry the munitions to the OD Unit. A 6-foot chain link fence with lockable gates was constructed around the OD Unit to control access. In June 1996, a storm water diversion and control system was constructed to prevent storm water from entering the Unit. A site plan of the OD Unit is presented as Figure 1-2.

As required by the Permit, Weston completed an initial site investigation at the OD Unit in September 1995. Surface, near-surface, and subsurface soil samples were collected and submitted for metals, inorganics, and organic compound analyses. Results of the initial characterization revealed the presence of explosives, metals, and nitrate, particularly in the western portion and along the western perimeter of the OD Unit. Once the initial characterization of the OD Unit was completed, semiannual compliance sampling was performed during 1996 and 1997 as required by the Permit. The results of the compliance sampling were compared to those of the initial characterization to evaluate changes in conditions.

A Permit modification was issued by NMED on 22 July 1998 in response to Fort Bliss' petition to reevaluate the compliance monitoring requirements. The Permit modification, the third issued by NMED, was based on results from 2 years of compliance monitoring. Highlights of the 1998 Permit modification include reducing compliance monitoring to annual from semiannual, elimination of the deep soil boring, elimination of several sampling locations (those specifically related to blast pits) in the eastern portion of the Unit where OD activities do not occur, and elimination of some sampling parameters (pH, free liquids, ignitability, and polychlorinated biphenyls) from the monitoring program. The revised compliance monitoring requirements were implemented during the 1999, 2000, 2001, and 2002 Compliance Monitoring Events. The sampling events that have been conducted in response to the RCRA Permit include:

- Initial OD Unit Characterization—August 1995
- First 1996 Compliance Sampling Event—April 1996
- Second 1996 Compliance Sampling Event—August 1996
- First CY97 Compliance Sampling Event—February 1997
- Second CY97 Compliance Sampling Event—August 1997
- 1998 Compliance Sampling Event—September 1998
- 1999 Compliance Sampling Event—August 1999
- 2000 Compliance Sampling Event—July 2000
- 2001 Compliance Sampling Event—September 2001
- 2002 Compliance Sampling Event—August 2002

In December 2000, Fort Bliss petitioned for and received a fourth permit modification to allow receipt and demolition of waste military munitions from White Sands Missile Range (WSMR). As of the August 2002 compliance sampling event, no munitions from WSMR had been treated at the McGregor Range OD Unit.

1.3 REPORT FORMAT

The remainder of the 2002 Compliance Sampling Results Report has been organized as follows:

- Section 2—Investigation Activities
- Section 3—Nature and Extent of Contamination
- Section 4—Conclusions and Recommendations
- Section 5—References

Appendices to this Compliance Report include the following:

- Appendix A—Chain-of-Custody Forms and Federal Express Airbill Receipts
- Appendix B—Data Validation Narrative and Exception Reports
- Appendix C—Analytical Data Summary Tables