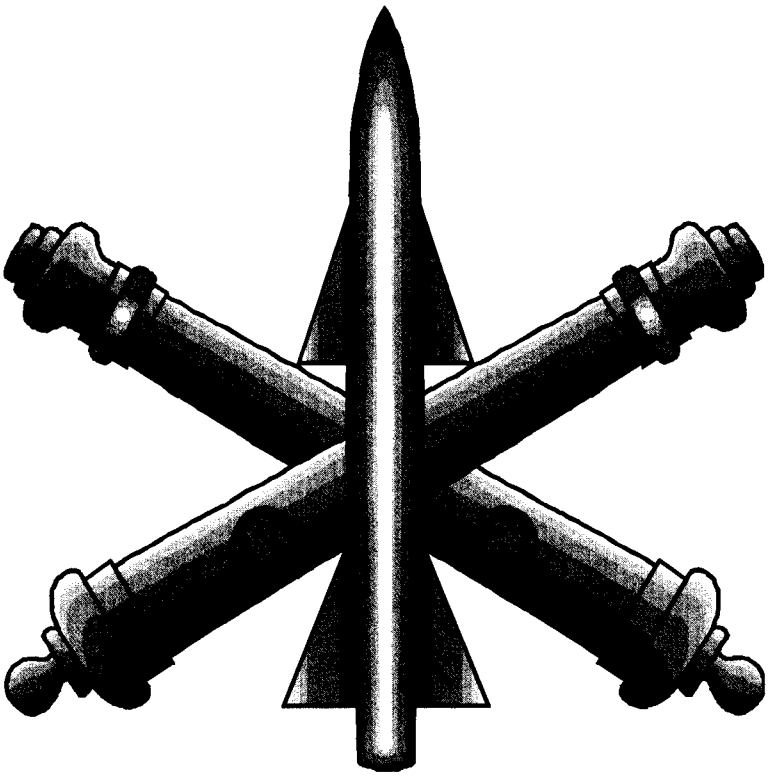
FINAL 2003 COMPLIANCE SAMPLING RESULTS REPORT

FOR

MCGREGOR RANGE OPEN DETONATION (OD) UNIT



FORT BLISS
OTERO COUNTY, NEW MEXICO

FEBRUARY 2004

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.

Olga Cruz, acting Director

for KEITH LANDRETH, Director
Directorate of Environment
Fort Bliss

3/12/04
(date)

2003 COMPLIANCE SAMPLING RESULTS REPORT
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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) was issued to the U.S. Army Air Defense Artillery Center, Fort Bliss by the New Mexico Environment Department (NMED, 1995). This Permit, EPA ID No. NM4213720101-01, authorizes treatment of hazardous waste (munitions) by open detonation at the McGregor Range Open Detonation Treatment Unit (OD Unit). Weston Solutions, Inc. (WESTON®) was contracted by the U.S. Army Corps of Engineers (USACE) to perform an initial characterization (in 1995) and subsequent compliance sampling at the OD Unit according to the requirements of the aforementioned Permit. The 2003 Compliance Sampling Event was authorized by USACE Contract No. DACA56-02-D-2008, Task Order 06.

This document represents the 2003 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 15 March 2003 (USACE, 2003). An initial OD Unit characterization was conducted in August 1995, and regular compliance monitoring has occurred to date.

1.1 OBJECTIVE OF COMPLIANCE SAMPLING

Compliance sampling is required by the Permit to evaluate potential changes in site conditions as a result of ongoing and future treatment activities conducted at the OD Unit. The compliance sampling results are compared to historical sampling results to determine if significant changes in the presence, magnitude, or location of constituents of potential concern have occurred because of continued treatment activities at the OD 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 McGregor Range OD Unit has been in operation since 1965. The U.S. Army Air Defense Artillery Center at Fort Bliss currently operates an Explosive Ordnance Detachment (EOD) that controls and performs work at the OD Unit. 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 approved and issued in 1995. The OD Unit is now operated and utilized according to the requirements specified in

the Operational 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. Munitions fitted with depleted uranium and similar warfare agents are not treated at the OD 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, and a site plan of the OD Unit is provided as Figure 1-2. Prior to the first compliance sampling event in 1996, the bottom of the OD Unit was regraded to remove vegetation (required by the Permit) and provide for an emergency exit road for trucks that carry the munitions to the OD Unit. A 6-feet tall 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 OD Unit. This measure was implemented, as required by the Permit, to eliminate entry of storm water and to mitigate standing water in the bottom of the OD Unit.

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, selected inorganic species, 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 whether any changes in conditions had occurred. Based on the results of the early compliance sampling events, no substantial change in conditions was noted.

A Permit Modification was issued by NMED on 22 July 1998 in response to a petition by Fort Bliss to reevaluate the compliance monitoring requirements. The Permit Modification, the third issued by NMED, was based on results from two years of compliance monitoring. Highlights of the 1998 Permit Modification include reducing the compliance monitoring from semiannual to annual, elimination of the deep soil boring and associated sampling, elimination of several sampling locations (those specifically related to blast pits) in the eastern portion of the OD Unit where OD activities do not typically occur, and elimination of some sampling parameters (pH, free liquids, ignitability, and polychlorinated biphenyls) from the monitoring program. A stipulation of the Permit Modification was that the full sampling scope, and not the reduced scope, be implemented every five years. The revised compliance monitoring requirements were implemented during the 1999, 2000, 2001, and 2002 Compliance Monitoring Events, and the 2003 Compliance Sampling Event utilized the full sampling scope as stipulated by the Permit.

In December 2000, Fort Bliss petitioned for and received a fourth permit modification to allow receipt and demolition of waste military munitions from the nearby White Sands Missile Range (WSMR).

1.3 REPORT FORMAT

The remainder of the 2003 Compliance Sampling Results Report has been organized as follows:

- Section 2—Compliance Sampling Activities
- Section 3—Summary of Results
- Section 4—Conclusions and Recommendations
- Section 5—References

Appendices to this Compliance Sampling Results Report include the following:

- Appendix A—Chain-of-Custody Forms and Shipping Receipts
- Appendix B—Data Validation Narrative Report
- Appendix C—Analytical Data Summary Tables