

**TRAINING OPERATIONS:
FLETC's Actions To Reduce A
Reported Material Weakness Associated
With Operation of Its Outdoor
Dirt Berm Ranges**

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Abbreviations

COE	Army Corp of Engineers
EPA	Environmental Protection Agency
EPD	Environmental Protection Division
FLETC	Federal Law Enforcement Training Center
FMFIA	Federal Managers' Financial Integrity Act
FY	Fiscal Year
OIG	Office of Inspector General
OMB	Office of Management and Budget
Treasury	Department of the Treasury
U. S.	United States

*The Department of the Treasury
Office of Inspector General*

December 19, 2002

Connie L. Patrick
Director
Federal Law Enforcement Training Center

This report presents the results of the Office of Inspector General's (OIG) review to determine whether the Federal Law Enforcement Training Center's (FLETC) actions taken, since it reported a material weakness associated with its four outdoor dirt berm firing ranges, were sufficient to reduce it from a material weakness to a "second tier" reportable condition.

Specifically, our review covered when and how actions were taken by FLETC from 1991 to the present. We conducted and documented physical observations and examinations at the FLETC's Glynco, Georgia site in August 2002. We evaluated the environmental risks tests and safety reports results. These results were compiled at the request of FLETC by the United States (U.S.) Army Corp of Engineers (COE), by the Environmental Protection Agency (EPA), Georgia Environmental Protection Division (EPD), and by the University of Georgia's College of Veterinary Medicine from 1992 to the present. As part of the evaluation process, we reviewed several internal reports generated by the FLETC. In addition, we assessed information obtained during the entrance conference, in our on-site interviews and from the discussions with FLETC officials and responsible personnel.

FLETC serves as the Federal government's leader for and provider of world-class law enforcement training. Through a series of carefully planned and coordinated activities, FLETC has continued efforts to monitor and manage potential safety and environmental hazards at its outdoor dirt berm firearms ranges, even as it has prepared for the ultimate resolution through deactivation and remediation of these ranges. We also believe that it is increasingly

crucial that FLETC continues to demonstrate its concern and commitment to mitigating the risks inherent in operating these ranges until eventual closure in April 2005.

Results in Brief

FLETC has devoted considerable efforts and conducted significant actions since 1991 to rectify the material weakness associated with its outdoor dirt berm firing ranges. These efforts and actions have demonstrated a concern and a commitment to mitigating the inherent risks in the continued operation of the ranges. As a result of these measures, we believe, that FLETC has clearly demonstrated that the deficiency no longer rises to the level of a material weakness. Therefore, we conclude, that the weakness should be reduced to a second-tier reportable condition.

However, along with that belief, we recommend that FLETC management provide assurances that the reportable condition will eventually be closed. This could be achieved by FLETC's efforts to complete remediation of the four outdoor dirt berm firing ranges by the revised target date of April 2005, and a plan of action to fully address interim measures.

Specifically, we found that FLETC has made several modifications over the years to the four outdoor dirt berm firing ranges to reduce the environmental and safety concerns associated with the operation of these ranges. These modifications included installation of barriers to prevent stray bullets from exiting the immediate range areas safety zones, installation of permanent groundwater wells to test for contaminants, construction of several new "state of the art" indoor/outdoor ranges, establishment of non-toxic ammunition use, implementation of restrictions on types of weapons used at the ranges and other operational modifications.

Background

In 1975, FLETC moved its operations to a 1,500-acre site near Brunswick, Georgia. To address requirements for firearms training,

FLETC used a preexisting outdoor dirt berm firing range¹ that had been constructed by the Navy in the early 1950s. Over the next several years, FLETC built three additional dirt berm ranges to quickly provide needed training capacity. These ranges were the most common, efficient, and cost effective method of firing range construction. FLETC currently operates 17 firearms ranges at its principal training facility at Glynco, Georgia. Four of these firing ranges are outdoor dirt berm, which released lead into the environment. Overall, in FY 2001, 19,435 students were trained at the Glynco, Georgia site, using over 14.3 million rounds of ammunition.

In an OMB Circular A-123 internal review conducted pursuant to the requirements of the Federal Managers' Financial Integrity Act (FMFIA) and Treasury Directive 40-04, the FLETC's Director's annual assurance letter to the Secretary of the Treasury, in Fiscal Year (FY) 1991, identified as a high-risk area the "safety, noise, and environmental problem" associated with the outdoor dirt berm firing ranges. The decision to classify this deficiency as a material weakness was based on guidance contained in OMB Circular A-123. As stated, this designation requires judgment by agency managers as to the "relative risk and significance of deficiencies." In hindsight, according to the current FLETC senior management, absent a compelling regulatory mandate to do so, it is questionable whether this was an appropriate designation and this condition may have been more properly reported as a second tier issue rather than a material weakness.

The initial target date of 1998 for correcting this material weakness became unachievable because appropriations, projected at \$22.5 million in 1991, were far short of the amounts required by FLETC. In FY 1993, the first year FLETC received an appropriation toward environmental remediation of the outdoor dirt berm firing ranges, trainees fired less than 6.5 million rounds of ammunition at the Glynco, Georgia facility. By FY 2001, over 14 million rounds of ammunition were fired at the Glynco facility. Accordingly, the

¹ A dirt berm firearms range is one that uses a large mound of soil as a downrange backstop for capturing bullets fired by the trainees.

1998 target date for remediation was revised to December 2001. However, as the target date approached, increased demand for firearms training at Glynco, resulting in part from the events of September 11, 2001, coupled with the critical need to rehabilitate FLETC's aging indoor firing ranges made that target date unachievable as well. According to FLETC officials, the increased demand for training, logistics and need for major maintenance on indoor ranges has inhibited the phasing out of the outdoor ranges.

Since FLETC reported the material weakness in its 1991 Secretary of the Treasury's Annual Assurance Letter, several revised target dates for completion were reported in the Department of the Treasury's (Treasury) FY 1996, 1999 and 2001 Accountability Reports. Recently, FLETC established a new target date of April 2005 for completion of remediation of the four outdoor dirt berm firing ranges.

FINDING AND RECOMMENDATIONS

Finding 1 FLETC Has Devoted Considerable Efforts to Remediate the Outdoor Dirt Berm Firing Ranges Material Weakness

FLETC has devoted considerable efforts and notable actions since 1991 to rectify the material weakness associated with its outdoor dirt berm firing ranges. In October 1991, in its annual assurance letter to the Secretary of the Treasury, the FLETC Director reported the high-risk problem as a material weakness.²

² Public Law 97-255, the Federal Managers Financial Integrity Act (FMFIA) of 1982, provides that by the end of each calendar year, the head of each executive agency shall prepare a statement that the agency's systems of internal accounting and administrative control fully comply with the requirements. If not, then the agency must submit a report of any material weaknesses identified and a plan and schedule of actions for correcting any such weaknesses. In addition, Treasury Directive 40-04 provides: Bureau heads will be responsible for establishing priorities in identifying, correcting and reporting management control material weaknesses. OMB Circular A-123 prescribes: a deficiency should be reported if it is or should be of interest to the next level of management. A deficiency that the agency head determines to be significant enough to be reported outside the agency should be considered a material weakness.

Specifically, we found that since FLETC reported the weakness, it has made several modifications to the four outdoor dirt berm firing ranges to reduce the possibility of stray bullets from exiting the immediate range areas safety zones. It has installed, with the assistance of COE, permanent groundwater wells to test for contaminants in the immediate area of the ranges. Also, FLETC constructed several new "state of the art" indoor/outdoor ranges at a cost of \$3.8 million dollars per range.

In addition, FLETC has established the use of non-toxic ammunition and has implemented restrictions on the types of weapons used at the four outdoor dirt berm firing ranges along with other enhancements. We found that FLETC has provided for several studies to assess remediation of the outdoor dirt berm firing ranges and plans of actions. At its request, numerous environmental risk tests and studies were performed by the COE and the Georgia EPD of the groundwater wells and soils in the immediate areas for contaminants. Also, the University of Georgia's College of Veterinary Medicine evaluated the exposure of wild birds and mammals to lead and zinc in the immediate vicinity of the outdoor dirt berm firing ranges.



State of the art indoor/outdoor baffled range from the front shooting position

FLETC's decision to classify the deficiency as a material weakness in October 1991 was based on guidance contained in OMB Circular A-123. In hindsight, according to the current FLETC senior management, absent a compelling regulatory mandate to do so, it is questionable whether or not this was an appropriate designation and this condition may have been more properly reported as a second tier issue rather than a material weakness.

FLETC's decision to reclassify the environmental condition was endorsed by the Georgia EPD. Specifically, the EPD stated that FLETC is operating its facilities including the outdoor firearms

ranges, in substantial compliance with applicable hazardous waste laws.

As a result of the above measures, it is our belief that the actions mentioned and taken by FLETC have clearly documented its case that the deficiency no longer raises to the level of a material weakness. In this regard, we believe, the reported material weakness should be lowered to a second tier reportable condition.

However, we recommend that FLETC management should continue its efforts to complete remediation of the four outdoor dirt berm firing ranges by its newly revised target date of April 2005. Also, we recommend that the FLETC establish an action plan to achieve the completion and any additional tasks associated with the remediation.

More detailed discussions of our assessment of the efforts and actions to address the material weakness are discussed in the two sections below:

Physical Observations

As part of our objective, we performed physical observations and examinations at the four outdoor dirt berm firing ranges at the Glynco, Georgia site on August 26-27, 2002. We also, conducted selected observations at several of the indoor firing ranges, particularly at one of eight indoor/outdoor baffled firing ranges³.

According to FLETC management, the modifications at the four outdoor dirt berm firing ranges were made to reduce stray bullets from exiting the immediate range areas safety zones. Although this risk is undeniable, in 27 years of operation, according to FLETC's management, no off-range injuries have resulted from the millions of rounds fired on the outdoor dirt berm ranges.

Specifically, at the outdoor dirt berm firing ranges, we observed several physical modifications that were made to reduce stray

³ Indoor/outdoor baffled ranges design incorporates bullet traps and air filtration systems that permits the recovery of all fired rounds and nearly all contaminants.

bullets from exiting the immediate range. Most significantly observed were *eyebrows*⁴ installed above the backstops along the dirt berm tops, and steel reinforced wooden barriers have been installed above most firing positions.



Eyebrow at the top of the dirt berm range



Steel reinforced wooden barriers from inside of range looking at the firing position

The purpose of both the eyebrows and the steel reinforced wood barriers is to prevent a bullet, which has been discharged at an improperly high angle of elevation from exiting the range. We were also told that the four outdoor dirt berm firing ranges had been resurfaced with additional soil in lieu of mining. This took place after a site visit by the EPA's Waste Compliance Section and recommendation in October 1990.

Additional significant efforts and actions noted since 1991 included the following:

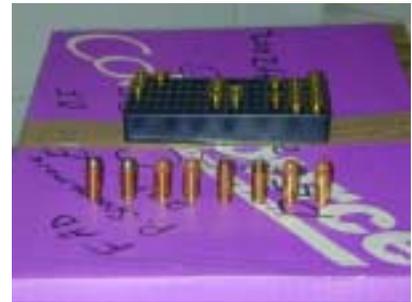
- Other than the outdoor ranges, all of Glynco ranges are designed to totally contain the bullets fired and to prevent any bullets from escaping the immediate range area, regardless of their trajectories. FLETC has constructed several of these outdoor/indoor baffled firing ranges, which were completed in 1995, 1999 and 2001, as funds were made available. Specifically, we observed the structural engineering at one of eight newly designed "state of the art" indoor/outdoor baffled ranges, which cost \$3.8 million each to construct. The new ranges are virtually completely

⁴ Eyebrows are safety barriers installed above the backstops at the end of the dirt berm firing ranges to stop a bullet that is discharged at an improperly high angle of elevation.

contained within four walls. Overhead fans blow the lead smoke away from the shooters. The bullet trap contains a vacuum system that draws in a large portion of the airborne particles along with the bullets, which are fired down range. The spent bullets are captured in waste drums that are checked daily, and when full, are properly labeled, sealed, and moved to a hazardous waste storage facility to await disposal. According to the FLETC environmental specialist, soil and groundwater conditions in the immediate vicinity of the new ranges have been assessed and will continue to be sampled periodically. FLETC officials also informed us that these ranges were intended for environmentally friendly *non-toxic ammunition*⁵ only. However, with permission and on a limited basis, some training classes are allowed to use leaded ammunition at these state of the art ranges.



Vacuum system outside state of the art range



Non-toxic ammunition

- FLETC pioneered the use of non-toxic training ammunition in FY 1998. It has continued the use of non-lead ammunition in FY 2000 and has increased its use at Glynco, Georgia to nearly 60 percent of all bullets fired in FY 2001. In the first half of FY 2002, the use of non-toxic ammunition was approaching 75 percent. This marked the first time non-lead ammunition exceeded the use of lead ammunition. We observed the use of non-toxic ammunition at one of the four outdoor dirt berm firing ranges. In addition, we examined

⁵ Non-toxic ammunition is ammunition with bullets comprised primarily of metal that are less environmentally hazardous than lead and that use other components that reduce environmental contamination.

the non-toxic ammunition at the Firearms Division contractor site located in building 221.

- Other significant observations included the beginning of renovation and refurbishment at building 221, which also houses several of the indoor computerized ranges. According to FLETC officials, lead contaminants and the deterioration of these ranges has prompted the need to refurbish these ranges to ensure sufficient training facilities are made available to meet the training needs of agencies.

Evaluation of Studies, Test Results and Reports

FLETC's actions since 1991 have been documented in numerous studies, test results and their own internal assessment reports. During our fieldwork, we evaluated and assessed studies, tests, and reports to determine when, how, and the results of actions taken since FLETC reported the material weakness. We found the following has occurred since FLETC reported the material weakness in its 1991 annual assurance letter:

- At FLETC's request, in August 1993, the COE agreed to pursue a course of action under the Comprehensive Environmental Response, Compensation, and Liability Act for the investigation and eventual remediation of the dirt berm outdoor firing ranges. Then in September 1994, the COE installed permanent groundwater monitoring wells in the vicinity of the outdoor dirt berm firing ranges.



Groundwater monitoring well

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- At FLETC's request, in December 1994, the COE issued its *Site Inspection Narrative Report* on FLETC's outdoor dirt berm firing ranges, which indicated high levels of lead in the berms and range surfaces and high concentrations of lead in the lagoons or catch basins directly behind the ranges. However, lead contamination was restricted to surface soils and water, and catch basin sediments. Also, the results showed that lead and other ballistic by-products had migrated into the groundwater and air but was not detected at statistically significant levels. The COE has continued its tests of groundwater, from the monitoring wells and perimeter wells in 1996, 1997, 1998, and again in 2001, and confirmed the absence of contamination.
 - At FLETC's request, in 1999, the University of Georgia's College of Veterinary Medicine issued a study on the exposure of wild birds and mammals to lead and zinc in the immediate vicinity of the outdoor dirt berm ranges. The study determined that 17 percent of the animals sampled contained enough lead to produce clinical impacts. However, the study also concluded that the diversity and abundance of wildlife in the area was not curtailed.
 - A FLETC report issued in April 2001, titled *What to Do About the Upcoming FLETC Firearms Range Shortfall*, highlighted that FLETC could face critical decisions regarding the timing of the demolition and environmental remediation of its outdoor firearms range complex, and critically needed renovation of its indoor firearms training complex. Based on the April 2001 report, FLETC decided to delay until April 2005, the remediation of the four outdoor dirt berm firing ranges until the new indoor firing ranges are completed. The COE and the EPD agreed with the delay citing the need to have sufficient firing ranges to accommodate closure of the four outdoor dirt berm ranges.
 - We observed and confirmed the beginning of the FLETC's renovations, refurbishment, and phased construction at the Firearms Division, Building 221 during our site visit.

According to FLETC, the challenge facing it is to balance the need to achieve its vital law enforcement training mission--made even more acute in light of the war on terrorism--with its responsibility to expeditiously rectify its material weakness and protect the environment. In another FLETC internal report titled, a *Report on Possible Models for Rectifying the FLETC's Material Weakness Under the FMFIA*, issued May 30, 2002, it questioned whether the decision by its predecessors was properly exercised in 1991.

As stated above, we agree that FLETC's management has taken significant efforts and actions to address the material weakness reported in 1991. We found no instances that would impact the reduction of the weakness to a second tier reportable condition. However, we again recommend that FLETC should strive to achieve the newly revised target date for remediation of the ranges and set forth an action plan to do so.

Recommendations

The FLETC Director should:

1. Continue efforts to complete the remediation of the four outdoor dirt berm firing ranges by its newly revised target date of April 2005.

Management Comments

FLETC concurred with this recommendation. As a result, FLETC will continue its efforts to complete the remediation of the four outdoor dirt berm firing ranges. It is expected that total remediation can be completed by the target date of April 2005.

OIG Comments

The OIG believes that the actions taken and planned by FLETC meet the intent of our recommendation.

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2. Establish an action plan to achieve the completion of any additional tasks associated with the remediation, once the material weakness is reclassified as a second tier reportable condition and brought to closure.

Management Comments

FLETC concurred with this recommendation. An action to achieve the complete remediation of the ranges is now in place. FLETC has ensured that the action plan will be closely monitored to ensure that due dates are met.

OIG Comments

The OIG believes that the actions taken or planned by FLETC meet the intent of our recommendation.

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We would like to extend our appreciation to FLETC for the cooperation and courtesies extended to our staff during the review. If you have any questions, please contact me at (202) 927-5591, or a member of your staff may contact Ethel Taylor-Young, Audit Manager, at (202) 927-6453. Major contributors to this report are listed in Appendix 4.

Alexander Best, Jr
National Director, Enforcement Program Audits

The objective of this audit was to evaluate FLETC's actions to remediate the environmental and safety risks associated with its outdoor dirt berm ranges. Specifically, our review included FLETC's efforts since it reported the material weakness in October 1991 until the present.

We conducted physical observations and examinations at selected sites at FLETC's Glynco, Georgia facility in August 2002. Also, we held interviews and discussions with FLETC officials and responsible personnel. In addition, we evaluated the environmental risks and safety studies, test results, and reports. The United States Army Core of Engineers, the Georgia Environmental Protection Division and the University of Georgia's College of Veterinary Medicine, conducted these studies and tests, at the request of FLETC. Also, we evaluated several internal assessment reports that were prepared by FLETC.

Additional review work included physical observations at one of eight indoor/outdoor baffled ranges, several indoor ranges located in the Firearms Division's building 221, examination of non-toxic ammunition and methods used to remove contaminants from the baffled ranges. An entrance conference was held with FLETC's senior management on August 26, 2002. Our review was conducted from August 12, 2002 through September 30, 2002.

We conducted our audit in accordance with generally accepted government auditing standards.



DEPARTMENT OF THE TREASURY
FEDERAL LAW ENFORCEMENT TRAINING CENTER
GLYNCO, GEORGIA 31524

NOV 27 2002

INSP 1.1 (OOC)

MEMORANDUM TO: Alexander Best, Jr.
National Director, Enforcement Program Audits
Office of the Inspector General

FROM: Connie L. Patrick *Connie L. Patrick*
Director

SUBJECT: Draft OIG Audit Report – "Review of the FLETC's
Actions to Reduce a Reported Material Weakness
Associated with its Outdoor Berm Firing Ranges"

As reflected in the subject draft audit report, the Federal Law Enforcement Training Center (FLETC) has taken considerable corrective actions to remedy the environmental weaknesses at the FLETC's four outdoor dirt berm firearms ranges. Thank you for supporting the FLETC's position that the corrective actions already taken, have resulted in the reclassification of the weakness from material to a second-tier issue. The prompt action on part of the Office of the Inspector General (OIG) to visit the FLETC's four outdoor ranges in order to observe the corrective actions, is greatly appreciated.

The FLETC concurs with the OIG's finding and recommendation included in the above subject draft audit report. The FLETC will continue its efforts to complete the remediation of the four outdoor dirt berm firing ranges. It is expected that total remediation can be completed by the target date of April 2005. Moreover, an action plan to achieve the complete remediation of the ranges is now in place. The action plan will be closely monitored to ensure that due dates are met.

Thank you for the opportunity to provide comments to the draft OIG report. If you have any questions or require further clarification, please contact Alan Zygowicz, Chief, Inspection Division at (912) 267-2074.

Appendix 3
Major Contributors To This Report

Alexander Best, Jr., National Director, Enforcement Program
Audits
Ethel Taylor-Young, Audit Manager
Eno Uhik, Staff Auditor

U. S. Department of the Treasury

Under Secretary for Enforcement
Assistant Secretary for Enforcement
Assistant Secretary for Legislative Affairs
Office of Strategic Planning and Evaluations
Office of Accounting and Internal Controls

Federal Law Enforcement Training Center

Director
Director, Office of Compliance

Office of Management and Budget

OIG Budget Examiner