



U.S. Department of Energy  
Office of Inspector General  
Office of Inspections and Special Inquiries

# Inspection Report

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## Concerns With Security Barriers at the Y-12 National Security Complex

DOE/IG-0741

October 2006




## Department of Energy

Washington, DC 20585

October 10, 2006

### MEMORANDUM FOR THE SECRETARY

FROM:

  
Gregory H. Friedman  
Inspector General

SUBJECT:

INFORMATION: Inspection Report on "Concerns With Security Barriers at the Y-12 National Security Complex"

### BACKGROUND

The Y-12 National Security Complex in Oak Ridge, Tennessee, is a component of the Department of Energy's National Nuclear Security Administration. Y-12 is an integral part of the nuclear weapons complex. BWXT Y-12, L.L.C. (BWXT) is the managing and operating contractor for the site, while Wackenhut Services, Inc. (Wackenhut) provides site security services.

The Office of Inspector General received an allegation that weapon port openings in newly constructed concrete security barriers at Y-12 were designed without the space required to accommodate the sight system of protective force weapons. Reportedly, this limited the ability of security police officers to maneuver their weapons when firing through the ports. The objective of our inspection was to determine the facts and circumstances surrounding the allegation.

### RESULTS OF INSPECTION

We substantiated the allegation. We found that the original measurements for the weapon ports in 90 concrete security barriers resulted in ports that were undersized and were, as a result, unable to adequately accommodate the sight system on the protective force weapons. Site officials discovered that the ports were undersized after the barriers were constructed. The weapon ports were subsequently modified at a cost of \$27,000. While the original measurements for the weapon ports were based on erroneous information provided by Wackenhut, the cost to modify the weapon ports in the 90 security barriers was paid using operating funds allocated for normal contingencies.

As part of our review, we noted that BWXT received \$525,000 under a performance based incentive (PBI) for completion of three security upgrades at Y-12, even though two of the upgrades were completed after the date specified in the PBI. A PBI is intended to incentivize contractor efforts to complete a discrete task within a specified time period.

We recommended several corrective actions. These included recommendations that management recoup from the contractor the \$27,000 cost that was paid from project contingency



funds to modify the weapon ports in the security barriers, and that management recoup the portion of the \$525,000 PBI award paid to the contractor for the two security upgrades that were not finished by the PBI completion date.

#### MANAGEMENT REACTION

In responding to our draft report, management generally disagreed with the conclusions and the recommendations relating to the recoupment of monies paid to the contractor. Management's comments are included in their entirety at Appendix B.

Regarding the sizing of the weapons ports, Management stated that "at the time of original design the size of the weapons ports was correct. It was after the decision to upgrade weapons capability by modifying weapons's [sic] sight systems that it was determined that the weapons ports needed to be modified." However, as stated in our report, the upgraded weapon sights were first ordered almost a year prior to providing specifications to the barrier design, and 15 months prior to the actual formation of the barriers. Thus, the contractors had every reason to be aware of the appropriate sizing for the ports well before construction. Under these circumstances, modification costs should be the responsibility of the contractors rather than the taxpayers.

Additionally, Management stated that it believed that the contractor met the completion criteria established in the PBI and, as a consequence, paid the contractor the full \$525,000. However, the contractor admitted in the completion form they submitted for payment of the PBI, that some of the security upgrades were "under final construction activities." Since the PBI established a clear completion date for the project, and this requirement was not met, we concluded that payment of the full \$525,000 incentive was not justified by the contractors' performance.

#### Attachment

cc: Deputy Secretary  
Administrator, National Nuclear Security Administration  
Under Secretary of Energy  
Under Secretary for Science  
Manager, Y-12 Site Office  
Director, Policy and Internal Controls Management (NA-66)  
Director, Office of Internal Review (CF-1.2)

# CONCERNS WITH SECURITY BARRIERS AT THE Y-12 NATIONAL SECURITY COMPLEX

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# Overview

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## **INTRODUCTION AND OBJECTIVE**

The DOE Office of Inspector General received an allegation that newly constructed concrete security barriers at the Y-12 site were inadequate because the design of the weapon ports did not take into consideration the space required for the weapons' sight system. Specifically, the complaint alleged that weapon port openings were not designed to accommodate the sight system of protective force weapons, limiting the ability of security police officers to maneuver their weapons when firing through the ports. Construction of the security barriers was one of three security upgrades under the "West Fort" project designation.

The objective of this inspection was to determine the facts and circumstances surrounding the allegation.

## **OBSERVATIONS AND CONCLUSIONS**

The allegation was substantiated. We found that the original measurements for the weapon ports in 90 concrete security barriers resulted in ports that were undersized and unable to adequately accommodate the sight system on the protective force weapons. Site contractor officials discovered the ports were undersized after the barriers were constructed. The weapon ports were subsequently modified.

We found that the original measurements for the weapon ports were based on erroneous information provided by Wackenhut, the security contractor. Yet, to pay for the \$27,000 cost to modify the weapon ports, the contractor used funds allocated for normal operational contingencies.

We also observed that BWXT received payment of \$525,000 under a performance-based incentive (PBI) for completion of three security upgrades for the West Fort project, even though two of the upgrades were completed after the date specified in the PBI. A PBI provides a contractor a monetary incentive to complete a specified task within a specified time period.

## Details of Findings

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### WEAPON PORTS

According to NNSA, the Y-12 security barriers were designed to meet the requirements of DOE's Design Basis Threat (DBT) Policy, dated May 2003. The design plans included detailed specifications for a weapon port in each security barrier.

We found that the original measurements for the weapon ports in 90 security barriers resulted in ports that were undersized and unable to adequately accommodate the sight system on protective force weapons. We learned that the barriers were constructed from concrete poured into forms and set in the location the barriers would be deployed. Reportedly, the weapon ports were found to be undersized during a protective force exercise after the barriers were constructed. The weapon ports were subsequently modified to accommodate the sight system of the protective force weapons.

Wackenhut acknowledged that one of its employees provided the specifications for the weapon ports to BWXT. The Wackenhut employee, in an interview with the Office of Inspector General, contended that the sight system for the protective force weapons was changed between the time when the specifications were provided to BWXT and when the security barriers were made. He said that the new sight system required the weapon port dimensions to be increased by two inches. The Wackenhut official said that when the sight system was changed, he did not readjust the weapon port specifications to accommodate the new sight system.

However, we found that Wackenhut first ordered the upgraded weapon sights in December 2003, almost a year before Wackenhut provided the weapon port specifications to BWXT in November 2004. Therefore, at the time of the original design, Wackenhut had information regarding the upgraded sight specifications and was in a position to provide the correct measurements for the weapon ports to BWXT. We concluded, based on the timing of the available information, that Wackenhut had the opportunity to provide the correct sizing specification to BWXT prior to construction, but that it failed to do so.

### OBSERVATIONS

During the inspection, we observed that the contractors were not held accountable for the cost of correcting the weapon ports. In fact, they used general project contingency funds to pay for the modification. Further, we noted that BWXT was paid over \$500,000 as part of a PBI for security upgrades for the West Fort project that were not, in fact, completed by the required PBI completion date.

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**Contingency Funds**

Although the original measurements for the weapon ports were based on erroneous information provided by Wackenhut, the \$27,000 cost to modify the weapon ports in the 90 security barriers was paid using funds allocated for normal operational contingencies.

According to a BWXT official, the cost to modify the weapon port in each barrier was \$300. Therefore, the total cost to modify the ports in the 90 security barriers was \$27,000. Although BWXT managed the barrier project, they relied on Wackenhut's expertise in security matters to provide the information for the size of the weapon ports. A BWXT official acknowledged that the \$27,000 used to modify the weapon ports was paid from project contingency funds. However, an NNSA Y-12 official told us that if the size of the weapon port openings was incorrect as a result of contractor error, the use of contingency funds to pay for the modifications would be inappropriate. According to the NNSA official, the final determination whether the use of the contingency fund was appropriate in this case should be made by the Y-12 Contracting Officer.

We noted that the BWXT Program Execution Plan for the barrier project, which addressed the use of contingency funds, stated that contingency for the project was included "to allow for unknown but reasonably expected additional costs to the project." We do not believe that the cost resulting from Wackenhut providing erroneous information to BWXT concerning the size of the weapon ports falls into the category of a reasonably expected additional cost. Thus, in our judgment, the contractor should have been held accountable for these additional costs.

**Performance Based Incentive**

BWXT received payment of \$525,000 under a PBI for completion of three security upgrades for the West Fort project, even though two of the upgrades were completed after the date specified in the PBI.

The total available PBI award was \$750,000 for completion of two projects; \$525,000, or 70 percent of the available PBI award, was for completion of the West Fort project, while the remainder was for completion of another project. The West Fort project consisted of three security upgrades, one of which was the construction of the 90 security barriers with the weapon ports. The effective date for the contractor to receive the full amount of the PBI award available for completion of the three security upgrades for the West Fort project was April 15, 2005.

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We learned that BWXT officials submitted the PBI completion form to NNSA stating that the three security upgrades had been completed on April 15, 2005. The “Completion Evidence Summary” for the PBI stated that “BWXT Y-12, WSI-OR [Wackenhut-Oak Ridge] and NNSA YSO [Y-12 Site Office] completed a walk down . . . on April 15, 2005 to verify the status of completed work” and the three security upgrades “were in place or under final construction activities [emphasis added] at the time of the walk through.” While the concrete security barriers were in place by April 15, 2005, the barriers contained weapon ports that did not adequately accommodate the sight systems of the protective force weapons. We learned that the modifications to the weapons ports were not fully completed until May 26, 2005, and that the other two security upgrades were not completed until December 2005, well after the PBI completion date. Subsequently, BWXT was paid the entire \$525,000 for completion of the three security upgrades under the West Fort project.

When we interviewed a BWXT manager, he acknowledged at that time that the weapon ports were not correctly sized. Nonetheless, the day after our interview, the manager signed and submitted the completion form for the PBI payment. An NNSA Y-12 official advised that at the time NNSA approved payment of the PBI to BWXT, NNSA was unaware that the weapon ports had been incorrectly designed and formed. The NNSA official said that if the weapon port openings could not be effectively used as designed by the security force and modifications were required, the barriers could not be considered complete until after the modifications were made. The NNSA official advised us that the PBI award would be re-evaluated.

We discussed the PBI award with an official from the Headquarters NNSA Office of Acquisition and Supply Management. The official told us that it would be inappropriate to pay a contractor under a PBI for incomplete work.



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**RECOMMENDATIONS**

We recommend the Manager, Y-12 Site Office:

1. As a minimum, recoup the portion of the \$525,000 PBI award paid to BWXT for the two security upgrades that were not fully operational on the completion date specified by the PBI;
2. Recoup from Wackenhut the \$27,000 cost to modify the weapon ports;
3. Ensure that contingency funds for projects managed by BWXT are not utilized for inappropriate purposes;
4. Ensure that future weapon ports placed in security barriers or other structures are properly sized to maximize the effectiveness of protective forces; and,
5. Consider the information disclosed by our review regarding BWXT's failure to inform NNSA about the incorrectly sized weapon ports before NNSA approved payment for the PBI, and take appropriate action with respect to determining award fee.

**MANAGEMENT  
COMMENTS**

NNSA generally disagreed with the conclusions and the recommendations that NNSA should recoup monies that were paid to the contractor. Management cited differences of opinion with the OIG as the basis for its disagreement with the recommendations. Management's comments are included in their entirety as Appendix B.

**INSPECTOR  
COMMENTS**

In our view, management's disagreement with the recommendations to recoup monies from the contractor ignores the factual record and places the burden on the taxpayers to pay for the contractors' failure to provide due diligence in the design of the barriers and the timely completion of the West Fort project.

Regarding Recommendation 1, management did not concur with the recommendation to recoup a portion of the \$525,000 PBI award. Management stated that it paid the award based on the Site Office's belief that the completion criteria established in the incentive plan for the subject portion of the PBI were met.

We note that management's comments are inconsistent with the facts of the matter. Specifically, two of the security upgrades under the West Fort project were clearly not completed by the completion date of April 15, 2005, established by the PBI. These

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two upgrades were not completed until December 2005. Therefore, in our view, the principal completion requirements established by the PBI were not met.

According to management, the completion criteria for the two upgrades were contained in the “Evidence of Completion” section of the PBI. These criteria consisted of closure of the perimeter and implementation of revised access controls. However, we noted that BWXT was unable to implement the revised access controls as required by the “Evidence of Completion” section because one security upgrade, the vehicle and pedestrian access, did not have complete fence grounding and electricity to the turnstiles. Consequently, BWXT had to post additional protective force personnel at the vehicle and pedestrian access. Also, the second security upgrade did not have the required concertina wire and three gate operator relays were incorrect, as reported in the BWXT Project/System Turnover Review documentation.

Regarding Recommendation 2, management did not concur with the recommendation to recoup the \$27,000 cost to modify the weapons ports. Management stated that at the time of original design of the weapon ports, the size of the weapon ports was correct. It was after the decision to upgrade weapons capability by modifying weapons’ sight systems that it was determined that the weapons ports needed to be modified.

However, as stated in our report, Wackenhut had first ordered the upgraded weapon sights in December 2003, almost a year before Wackenhut provided the weapon port specifications to BWXT in November 2004. Therefore, Wackenhut was in a position to initially provide the correct measurements for the weapon ports to BWXT.

Regarding Recommendation 3, management did not concur with the recommendation to ensure contingency funds for projects managed by BWXT are not utilized for inappropriate purposes. Management stated that it was a correct management decision to utilize contingency funds to modify the weapons ports.

As discussed in our report, BWXT’s Program Execution Plan for the barriers stated that contingency funds allow for unknown but reasonably expected additional costs to the project. However, we do not view an error by the contractor as being an expected additional cost to the project. Therefore, the \$27,000 cost to modify the weapon ports should not be paid by project contingency

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funds, and ultimately the taxpayer. Instead, the contractor that provided the incorrect measurements should be held accountable for the cost.

Although management concurred with Recommendation 5, management stated that contractor award fee would not be impacted. In our view, BWXT officials were, at a minimum, being disingenuous when they submitted the PBI completion form to NNSA stating that all the security upgrades had been completed on April 15, 2005. As previously discussed, two of the security upgrades were not completed until December 2005. We believe the award fee determination should include the contractor's failure to provide accurate project information to NNSA officials.

## Appendix A

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### **SCOPE AND METHODOLOGY**

The DOE Office of Inspector General received an allegation that substantial funds were wasted on newly constructed security barriers at the Y-12 National Security Complex. Specifically, the complaint alleged that the gun ports that are part of the security barriers are inadequate because they were designed without the necessary room needed to accommodate the weapon's sight system. We identified and reviewed key documents applicable to the inspection and interviewed DOE and contractor officials.

Also, pursuant to the "Government Performance and Results Act of 1993," we reviewed Y-12's performance measurement processes as they relate to contract management.

This inspection was conducted in accordance with the "Quality Standards for Inspections" issued by the President's Council on Integrity and Efficiency.

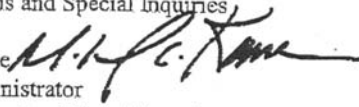


Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585



April 24, 2006

MEMORANDUM FOR      Alfred K. Walter  
                                 Assistant Inspector General  
                                 for Inspections and Special Inquiries

FROM:                     Michael C. Kane   
                                 Associate Administrator  
                                 for Management and Administration

SUBJECT:                 Comments to Y-12 Security Barriers Draft Report;  
                                 S05IS025/2006-06625

The National Nuclear Security Administration (NNSA) has reviewed the Inspector General's (IG) draft report, "Concerns With Security Barriers at the Y-12 National Security Complex." We understand that this was an allegation-based inspection because of an allegation that security barriers at the Y-12 site were inadequate because of inadequate design.

NNSA generally disagrees with the conclusions and the subsequent recommendations that NNSA should recoup monies that were paid to the contractor. Regarding the sizing of the weapons ports discussed in the report, at the time of original design, the size of the weapons ports was correct. It was after the decision to upgrade weapons capability by modifying weapons's sight systems that it was determined that the weapons ports needed to be modified. While we have a difference of opinion with the IG, it was a correct management decision to utilize contingency funds to modify these weapons ports. Equally, there is a difference of opinion related to management's decision to make a Performance Based Incentive payment to the contractor. We based our decision to make a 70 per cent payment of the Performance Based Incentive because the Site Office believes that the completion criteria established in the incentive plan for the subject portion of the Incentive was met. Consequently based on our differences of opinion, NNSA does not agree with the recommendations. Our comments to the recommendations are below.

#### Recommendation 1

Recoup the \$525,000 PBI award, given that the security barriers and other security upgrades were not fully operational on the completion date specified by the PBI.



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**Management Comment**

Nonconcur

There is no basis for recouping the fee awarded for the Performance Based Incentive. The PBI was approved by the Y-12 management team on advise of the Contracting Officer. This was based on the fact that the portion of the PBI were met and the fee allocated to that deliverable was paid in full.

**Recommendation 2**

Recoup from either BWXT or Wackenhut, the \$27,000 cost to modify the weapon ports.

**Management Comment**

Nonconcur

There is no basis for the contractor to reimburse the government since the government benefitted from the changes made. NNSA believes that this was an appropriate use of contingency funds.

**Recommendation 3**

Ensure the contingency funds for projects managed by BWXT are not utilized for inappropriate purposes.

**Management Comment**

Nonconcur

NNSA agrees that the use of contingency funds must always be utilized appropriately. However, this recommendation was developed with the assumption that contingency funds were inappropriately utilized.

**Recommendation 4**

Ensure that weapon ports in security barriers or other structures are properly sized to maximize the effectiveness of protective forces.

**Management Comment**

3

Concur

If taken out of context, this recommendation is misleading. After the barriers were constructed, Wackenhut officials discovered that the weapon ports were undersized. The weapon ports were subsequently modified to accommodate the sight system of the protective force weapons. NNSA believes these actions demonstrate compliance with the recommendation.

**Recommendation 5**

Consider the information disclosed by our review regarding BWXT's failure to inform NNSA about the incorrectly sized weapon ports before NNSA approved payment for the PBI, and take appropriate action with respect to determining award fee.

**Management Comment**

Concur

NNSA reviewed the draft report and the conclusions that are stated in the report. We disagree with the position that is being taken by the IG. Since the size of the weapon ports were correct when initially designed, and no apparent malfeasance on the part of WSI or BWXT Y-12 was noted when the need to modify the ports was communicated to BWXT Y-12, award fee will not be impacted.

Should you have any questions related to this response, please contact Richard Speidel, Director, Policy and Internal Controls Management.

cc: Theodore Sherry, Manager, Y-12 Site Office  
Robert Braden, Senior Procurement Executive  
William Desmond, Associate Administrator for Defense Nuclear Security  
Karen Boardman, Director, Service Center

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