



AUDIT OF THE FEDERAL BUREAU OF PRISONS' SEPTEMBER 2011 PROCUREMENT OF X-RAY EQUIPMENT UNDER CONTRACT GS-07F-0182T

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EXECUTIVE SUMMARY*

On August 9, 2010, Federal Bureau of Prisons' (BOP) staff at the United States Penitentiary in Pollock, Louisiana (USP Pollock), intercepted a shipment of contraband that an inmate intended to smuggle into the high security facility. The shipment included

The attempt was thwarted with help from an inmate informant and a subsequent BOP review determined that USP Pollock staff were not following institution screening protocol, including electronically scanning incoming deliveries for contraband. In response to this incident and as part of an effort to enhance BOP's ability to detect contraband, the BOP purchased 65 pallet sized x-ray machines in September 2011. The total cost of the x-ray machines was

The Department of Justice Office of the Inspector General (OIG) conducted this audit after being forwarded information by the office of Senator Tom Coburn that it had received regarding alleged wastefulness at the BOP, including the purchase of these x-ray machines. Our audit concentrated on, but was not limited to, October 2010 through November 2013, and sought to assess the effectiveness of the x-ray machines and to assess their usage.

\$3,955,382, or \$60,852 per machine.

Our review identified significant concerns about the ability of the pallet x-ray machines to assist with contraband detection and of the BOP institutions to ensure that they are used effectively and that contraband is identified prior to moving goods into secure areas of institutions. We confirmed that the machines were not effective for screening certain commodities commonly received by institution warehouses, such as those products are too dense to be effectively scanned. Additionally, prior to our audit the BOP had no formal policy outlining the actual capabilities of the new x-ray

^{*} The full version of this report includes information that the BOP considered to be law enforcement sensitive, and therefore cannot not be publicly released. To create this public version of the report, the Office of the Inspector General redacted (blacked out) these portions of the report.

¹ A September 2011 Government Accountability Office (GAO) report found that inmates smuggle cell phones into federal and state prisons to coordinate criminal activity, including assault and murder of non-incarcerated individuals. U.S. Government Accountability Office, *Improved Evaluations and Increased Coordination Could Improve Cell Phone Detection, GAO-11-893* (September 6, 2011). The Department of Justice Office of the Inspector General also investigates and substantiates allegations of contraband, including cell phones, being smuggled into federal prisons by correctional officers.

machines and what additional measures should be in place for pallets that are too dense to be effectively scanned.

We also identified significant delays between the delivery date and installation date of some x-ray machines, resulting in instances in which the machines went unused for periods exceeding 6 months, including three machines that took over a year to be installed. Further, we identified three machines which were not in use as of January 2014, over 2 years after the order was placed. These unused machines represent \$182,556 in expended funds for which no benefit has been realized. Additionally, not all the BOP employees who operated the machines had been adequately trained in their use, and the length of time allotted to the training was insufficient to provide a comprehensive guide on use of the machines. Finally, we found that inmates may have been able to view the x-ray machine monitors while being used by BOP staff. As a result, inmates potentially could identify weaknesses in the scanning system to circumvent or exploit weaknesses in the BOP's overall security system.

On August 13, 2013, the OIG issued a memorandum to the Office of the Deputy Attorney General (ODAG) and BOP leadership outlining the serious security concerns we had identified during our preliminary audit work. We received a response from BOP leadership on September 12, 2013, which we have summarized beginning on page 3 of this report. As the actions proposed by the BOP are still in progress, the OIG has not assessed their effects. On November 8, 2013, BOP issued a memorandum to its wardens outlining capabilities and limitations of the x-ray machines, recommending that institutions visually inspect items too dense to be effectively x-rayed, and recommending additional x-ray machine training for staff. The November 2013 memorandum is attached as Appendix III in this report.

We made seven recommendations to the BOP to help it ensure that the pallet x-ray machines are used effectively and efficiently, and that the security concerns discussed in this report are mitigated as quickly as possible.

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INTRODUCTION

The Federal Bureau of Prisons (BOP) was established in 1930 to provide more progressive and humane care for Federal inmates, to professionalize the prison service, and to ensure consistent and centralized administration of the prison system. The BOP's mission is to protect society by confining offenders in the controlled environments of prisons and community-based facilities that are safe, humane, cost-efficient, and appropriately secure.

Background

On August 9, 2010, BOP staff at the United States Penitentiary in Pollock, Louisiana (USP Pollock), intercepted a shipment of contraband that an inmate intended to smuggle into the high security facility. The shipment included

.¹ The attempt was thwarted by an inmate informant, and a subsequent BOP review determined that USP Pollock staff were not following institution screening protocol, including electronically scanning incoming deliveries for contraband.

A subsequent BOP working group reviewed overall warehouse security at the BOP facilities and recommended several new measures, including purchasing new pallet sized x-ray machines.² X-ray machines are not the BOP's sole method of security in its warehouses; BOP facility security measures also include the use of smaller x-ray machines, metal detectors, hand wands, and visual inspections. The BOP's Office of Security Technology (OST) was tasked with identifying appropriate x-ray machines to buy in consideration of cost, capacity, and facility needs. In general, x-ray machine cost can be affected by the generator. In addition, considerations when searching for a pallet x-ray machine may include:

(1) generator voltage rating, determined by the expected density of the items to be

¹ A September 2011 Government Accountability Office (GAO) report found that inmates were smuggling cell phones into federal and state prisons to coordinate criminal activity, including assault and murder of non-incarcerated individuals. U.S. Government Accountability Office, *Improved Evaluations and Increased Coordination Could Improve Cell Phone Detection, GAO-11-893* (September 6, 2011).

² The additional new measures recommended by the working group were: (1) limit the number of inmate workers assigned to the warehouse; (2) screen inmate workers assigned to the warehouse; (3) restrict inmates from possession of personal items in the warehouses; (4) create warehouse post orders and enhance warehouse policies and procedures; (5) install closed-circuit television (CCTV) cameras in all warehouses; (6) create a secure area in the general warehouse to store items that have been screened; and (7) install roll-up gates or slide gates in the warehouses.

scanned; (2) the opening or tunnel size of the x-ray system, determined by the actual size of the items to be scanned, and; (3) the positioning of the x-ray generator(s). OST evaluated two types of x-ray machines: a 160 Kilovolt (kV) at approximately \$100,000 each, and a 300 kV x-ray machine at approximately \$250,000 each.³

As a result of its review, OST determined that a 300 kV model offered only minimal penetration enhancement. As the increased cost of the 300 kV units was not considered cost effective based on the minimal improvement in image clarity, OST recommended purchase of the 160 kV x-ray machines. In September 2011, the BOP awarded a contract to the lowest bidder for 65 pallet sized x-ray machines to be deployed for use in 48 warehouses across the country. The total cost of the machines was \$3,955,382, or \$60,852 per machine, approximately \$40,000 less than the initial cost estimate. We have included a representation of the x-ray machine ordered in Exhibit 1.

EXHIBIT 1: PALLET SIZED X-RAY MACHINE ORDERED FOR 48 BOP FACILITIES



Source: Vendor website.

We conducted this audit to determine the effectiveness of the x-ray machines purchased and to assess their usage. Our work confirmed that the x-ray machines were not effective for screening certain commodities received by institution

 $^{^3}$ Kilovolts identify the size of the x-ray generator voltage rating, which affects the penetration of the x-rays into the scanned object. X-ray machines with higher voltage ratings can penetrate further into scanned objects.

⁴ In addition to providing the lowest bid, the winning bidder also provided a 200 kV generator, which exceeded the 160 kV minimum requirements set by the BOP. We verified that the x-ray machines were purchased in compliance with 21 CFR 1020.40, Cabinet X-Ray Systems.

warehouses. For example, some commodities such as are too dense to be effectively scanned. Additionally, prior to our audit the BOP had no formal policy outlining the actual capabilities of the new x-ray machines and what additional measures should be in place for pallets that are too dense to be effectively scanned.

We also identified significant delays between the delivery date and installation date of the machines, meaning that some x-ray machines sat unused for a period exceeding 6 months, including three machines that took over a year to be installed. Further, we identified three x-ray machines which were not in use as of January 2014, over 2 years after the order was placed; these machines represent \$182,556 in funds for which the intended benefit has not been realized. Finally, we found that not all users had been adequately trained to use the x-ray machines, and that inmates may be able to view the machine's monitor, potentially allowing inmates to identify weaknesses in the scanning system that might assist in plans to circumvent or exploit weaknesses in the BOP's overall security system.

Memorandum to the Office of the Deputy Attorney General

In an effort to ensure that the Department was made aware of the security concerns we identified in our ongoing work, the Office of the Inspector General (OIG) issued a memorandum to the Office of the Deputy Attorney General (ODAG) and BOP leadership in August 2013. Specifically, the memorandum disclosed our concerns that: (1) the x-ray machines are limited in their ability to effectively scan many commonly received items, (2) that some BOP staff have not been adequately informed of the equipment limitations, and (3) that some BOP staff have not been adequately trained in their use.

In response to our memorandum, BOP officials conducted an internal survey regarding the x-ray machines. The survey was distributed through the warden for each facility. Results of the survey confirmed the concerns we outlined. Specifically, BOP officials found that 8 institutions reported that their x-ray machine was not yet in use, and that 38 of the institutions indicated they did not have written procedures in place regarding how the x-ray machines should be used.

⁵ This list is not fully inclusive of all items that may be too dense to be scanned effectively.

⁶ On August 13, 2013, we issued a memorandum to the Office of the Deputy Attorney General (ODAG) and BOP leadership. The memorandum outlined concerns identified by the OIG during our preliminary audit work. We received a response from BOP leadership on September 12, 2013, which we have summarized in the next section of this report. As the actions proposed by the BOP are in progress, the OIG has not assessed their effects.

⁷ The BOP's survey was distributed to the facilities that received an x-ray machine under the contract that is the focus of this audit, and to four additional facilities that received an x-ray machine after the original contract. The four x-ray machines purchased after the original contract were not covered in our audit with the exception of FCI Aliceville and FCI Gilmer, which were included in our survey.

Additionally, while all but one facility stated that they had received training from the vendor, more than half reported that the training was inadequate. BOP officials found that their internal survey results indicated that there is a significant need at the institutions for better training on how to use the x-ray machines and interpret the images, and for guidance regarding how the x-ray machines fit within the BOP's larger contraband deterrence and interdiction efforts.

BOP officials reported that they were in the process of developing specific guidance and standard operating procedures for use of the x-ray machines to ensure consistent application of all critical security and operational procedures at all BOP institutions that have received the equipment. The guidance was being developed through consultation with subject matter experts in BOP headquarters as well as with the vendor and other agencies using this equipment. In part, the guidance will instruct staff to manually search items that are too dense to be effectively scanned. In addition to specifying enhanced security procedures to be put in place, the BOP also planned to address warehouse operations procedures more generally by requiring wardens to develop new procedures to enhance regular security searches in their warehouses.

In November 2013, the BOP issued a memorandum to all wardens detailing new security procedures that relate to the x-ray machines. Specifically, the BOP responded to our concerns regarding inadequate training, and to our disclosure that some x-ray machine monitors were viewable by inmate laborers. In addition, the memorandum details the x-ray machine's capabilities and limitations, the types of items it can effectively scan, and recommended positioning of items going through the x-ray machine for maximum effectiveness. In our judgment, the measures taken by BOP leadership after learning of our concerns reflect the agency's responsiveness to the security concerns that we identified. These instances are further discussed in Findings I and II of this report.

Office of the Inspector General Audit Approach

The OIG initiated this audit after receiving information from Senator Tom Coburn that his office had been provided regarding various BOP issues, including the purchase of these x-ray machines. In our audit, we concentrated on, but were not limited to the period starting October 2010 through November 2013. We assessed the usage of 65 pallet sized x-ray machines purchased by the BOP in September 2011 contract GA-07F-0182T, and evaluated the effectiveness of that equipment. Each machine cost \$60,852 for a total purchase cost of \$3,955,382.

⁸ The BOP memorandum is attached to this report as Appendix III.

We conducted audit work at nine BOP facilities, as noted in Exhibit 2 below.

EXHIBIT 2: BOP SITE VISIT LOCATIONS AND SECURITY LEVELS

FACILITY	LOCATION	SECURITY LEVEL	
Federal Transfer Center (FTC)	الراب المرابع		
Oklahoma City	Oklahoma City, Oklahoma	Administrative ⁹	
Federal Medical Center (FMC)			
Carswell	Fort Worth, Texas	Administrative	
United States Penitentiary (USP)	all afficience or leave age of the compa	Commence de la mere	
Leavenworth	Leavenworth, Kansas	Medium	
Federal Correctional Institution	and a significant state of the same of the	Carlina fever semistrical	
(FCI) Three Rivers	Three Rivers, Texas	Medium	
FCI Phoenix	Phoenix, Arizona	Medium	
FCI La Tuna	Anthony, Texas	Low	
FCI Bennettsville	Bennettsville, South Carolina	Medium	
FCI Edgefield	Edgefield, South Carolina	Medium	
FCI Estill	Estill, South Carolina	Medium	

Source: BOP Website (www.bop.gov)

We also interviewed officials at BOP headquarters responsible for the management and security of the BOP warehouses, including officials from the Trust Fund Branch, Food Service Branch, Correctional Programs Division, and OST. 10 Finally, we employed an online survey designed to gather information about the usage of the x-ray machines, the quality of the training, and whether the users felt the x-ray machines met operational needs for screening the commodities they receive in the warehouses. The survey was sent to Trust Fund Supervisors and Food Service Administrators at 50 facilities that received new x-ray machines. 11

We discuss the issues identified here in further detail in the Findings and Recommendations section of this report. Our Scope and Methodology are included in Appendix I.

⁹ Administrative facilities are detention centers and medical centers capable of housing inmates with a variety of security/classification levels to include pre-trial inmates.

The Trust Fund Branch is responsible for Trust Fund and Deposit Fund operations. The Trust Fund account is designated by the U.S. Treasury for programs, goods, and services for the benefit of inmates (i.e., Commissary). The Deposit Fund account is designated by Treasury to maintain federal prisoner funds (i.e., individual inmate accounts). Trust Fund Supervisors are department heads with responsibility over the general warehouse operations at each facility.

Although in total we have received more than 100 contact names with e-mail addresses from BOP for the 50 facilities, the number was consolidated to 97 names as some of the contacts had retired or were unavailable. Out of the 97 survey invitations sent, 75 completed responses were received. The 50 facilities include two additional facilities that acquired x-ray machines subsequent to the original 65 purchased.

FINDINGS AND RECOMMENDATIONS

I. EQUIPMENT EFFECTIVENESS

We concluded that the purchased x-ray machines are limited in their capacity to effectively scan many of the items which BOP facilities receive. Additionally, prior to our audit the BOP had no formal policy outlining the actual capabilities of the new x-ray machines and additional measures for inspecting pallets that are too dense to be effectively scanned by the x-ray machines. We also found that users were not fully knowledgeable about the x-ray machines' capabilities and therefore may inappropriately be relying on the x-ray machines' ability to effectively scan dense pallets. We concluded that these factors result in significant risk that contraband may enter secure the BOP facilities.

Warehouse Procedures

Facility warehouses receive shipments of incoming goods, such as general supplies, clothing, commissary, food, and other personal property items. These shipments may contain prohibited items concealed inside that could jeopardize security and be harmful to BOP staff, inmates, and the general public. To mitigate this risk, BOP facility warehouse staff employs procedures that can vary among the institutions, including a combination of physical or visual inspections, using hand-held wands to detect metal objects, and scanning items using x-ray machines. Many warehouses also utilize inmate labor to help break down large pallets for easier inspection. Inmates can also assist in restacking pallets after inspection.

The BOP purchased the x-ray machines we reviewed in an effort to enhance the ability to detect contraband, as they are large enough to accommodate and screen whole pallets. BOP officials believed screening large pallets would increase efficiency in the inspection process.

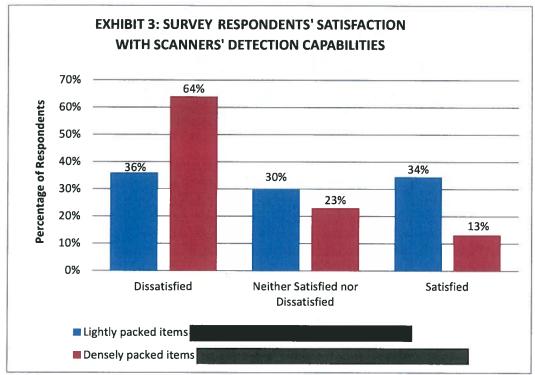
X-Ray Machine Capabilities

In order to assess the x-ray machine capabilities, we performed interviews and surveyed x-ray machine users regarding the effectiveness of the machines. Our survey found that a significant number of respondents were dissatisfied with the x-ray machines' detection capabilities. Specifically, of the 61 survey respondents, 39 (64 percent) stated they were dissatisfied with the x-ray machines' detection capabilities when scanning densely packed items such as

The BOP Central Office provides guidance regarding overall security practices; however, policy is also established at the institution level that includes Institution Supplements and other Post Orders.

Expressed dissatisfaction with the x-ray machines' detection capabilities when scanning loosely packed items, such as summarized in Exhibit 3 below. 13 (36 percent)

Respondents' results are summarized in Exhibit 3 below. 13

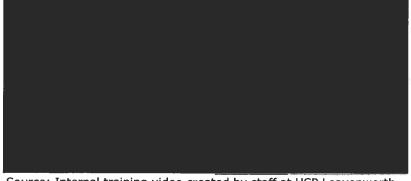


Source: BOP respondents to OIG survey

Through interviews with Trust Fund and Food Service staff, we confirmed that it was often difficult or impossible to rely solely on the x-ray machines to identify contraband. During our site work, we confirmed that the new x-ray machines do not adequately penetrate pallets of dense items such as particular increasing the risk that contraband would potentially not be identified. Exhibit 4 displays an example of a clear image where the contraband was identifiable and unclear image where the contraband was not identifiable from an x-ray scan. The left image shows the outline of a pallet; the right image is of a pallet containing items that are mostly impenetrable and does not show the that was placed in the pallet.

¹³ Percentages are based on the total respondents for each question. Some survey respondents were not required to provide an answer for skipped questions that redirected respondents to other questions based on previous selected responses.

EXHIBIT 4: EXAMPLES OF IDENTIFIABLE CONTRABAND (LEFT) AND UNIDENTIFIABLE CONTRABAND (RIGHT) IMAGES



Source: Internal training video created by staff at USP Leavenworth

We visited nine BOP facilities that received at least one of the new x-ray machines. Seven of the nine BOP facilities regularly used the machines and provided a demonstration for us of the x-ray machines' typical use. ¹⁴ As described in Exhibit 5, we observed as warehouse employees screened both lightly and densely packed items with various potentially dangerous contraband concealed within the pallet. ¹⁵ More detailed information about each institution's demonstration follows the exhibit.

At the time of our site visits, two of the nine facilities (FTC Oklahoma City and FMC Carswell) had not started using the new x-ray machine due to negotiations with the local unions regarding operation of the x-ray machines and other matters. While these two facilities also provided demonstrations, we did not include a description of those demonstrations because the facilities had little to no experience using the machines and facility personnel did not regularly use those machines to scan for contraband. We followed up with both facilities and found that FTC Oklahoma City began using its x-ray machine after procedures were finalized in March 2013 and FMC Carswell began using its x-ray machine after procedures were finalized in September 2013.

Pallets were filled with items such as

Hidden items ranged from and to and and seem's assessment of whether concealed items were identifiable in the scanner images.

EXHIBIT 5: FACILITIES THAT PROVIDED A DEMONSTRATION OF THE X-RAY MACHINE

FACILITY WAREHOUSE DEMONSTRATIONS	CONCEALED ITEMS
USP Leavenworth	La Ling Range Helping Street Co.
FCI Three Rivers	
FCI Phoenix	
FCI La Tuna	
FCI Bennettsville	(Triefsange
FCI Edgefield	and the state of the state of the
FCI Estill	THE PROPERTY OF THE PROPERTY OF

Source: OIG and BOP facilities listed

- USP Leavenworth: The warehouse staff scanned several pallets, including Warehouse staff concealed in the pallets, and concealed a and in the pallets of . We were able to identify the in the pallet. However, the image for the was largely black, indicating that the x-ray machine was unable to penetrate the item. Additionally, we were able to identify the in the pallet, but were unable to locate it within the pallet of
- FCI Three Rivers: The warehouse staff scanned four pallets, including . Warehouse staff in the pallets of concealed a and , and concealed a in the pallets of . We were not able to identify the in the pallet. However, we could easily identify the in the . In addition, we found that we could not identify the pallet of in the pallet of , but were able to clearly locate it within the pallet of
- FCI Phoenix: The warehouse staff scanned a pallet containing

 . Warehouse staff hid a pallet of the warehouse staff noted that we could not identify the contraband despite knowing where to look for it on the scanned image. We then requested that a pallet of the screened by the x-ray machine. We hid the pallet of the scanned images.

 and determined that neither was visible on the scanned images.
- FCI La Tuna: The warehouse staff scanned a pallet that contained
 , a pallet that
 contained
 , and a pallet with

 . Warehouse staff hid a in
 each of the pallets. We were able to see the in both the

and pallets. However, the image for the only showed black space, indicating that the x-ray machine was unable to penetrate the item.

FCI Bennettsville: The warehouse staff scanned several pallets, including Warehouse staff hid a in all five pallets. In addition to the the warehouse staff hid a and in the pallet containing the We were able to see the in both the pallets of and and However, we could neither identify the in the pallet of nor could we identify the or in the pallet of . Further, we could not see the in either of the or

• FCI Edgefield: The warehouse staff scanned a pallet that contained

. Warehouse staff hid an

in both of the pallets. We found that we were able to see the
in the

, but it was not visible in the pallet of

in the pallets, but we could not identify the in the scanned images. However, when a we found the were discernible in the resulting images. We were also unable to identify or hidden in a pallet of pallet. However, after , we were able to identify the items in the resulting images.

In general, we found that despite knowing the location of the contraband hidden inside the pallets, we were still unable to identify the contraband in many of the scanned images, or were only able to identify them after repositioning and scanning the items multiple times. This raises concerns that the x-ray machines may offer a false sense of security and increase the risk of contraband entering into the secure facility if no additional screening methods are used to inspect packages after they have been scanned.

End User Concerns

Our user survey indicated that, overall, of the 64 survey respondents, 38 (59 percent) believed that the x-ray machines did not meet expectations. For example, one official expressed concerns that the x-ray machine was complex and staff did not fully understand its capabilities. He stated that staff concealed several items, such as

. Further, he stated that the tests performed by the installers showed that it still would not be guaranteed that foreign objects would be detected after being broken down. Finally, the official stated that due to the inconsistencies of the detection of foreign objects and the overall complexity and difficulty of operating the x-ray machines, the staff at the facility feels that this model does not meet the operational needs of the institution.

We also received the following statements in response to our survey:



Overall, our user survey provided information indicating that a wide range of end users feel the x-ray machines do not meet operational needs. Therefore, we recommend the BOP consider conducting periodic and unannounced external testing of facilities' effectiveness in using the pallet x-ray machines and associated procedures to prevent the introduction of contraband. Such testing should be performed by appropriate BOP oversight personnel external to the facilities being tested, such as BOP headquarters or regional oversight offices.

Policies and Guidance

Appropriate policy and guidance detailing the capabilities and limitations of the new x-ray machine is an essential component of effective x-ray machine usage. However, prior to our review, the BOP had no formal policy outlining the actual capabilities of the new x-ray machines and what additional measures should be in place to enhance the possibility of detecting contraband in warehouse.

Although all of the new pallet x-ray machines have identical operational capabilities, we found that of the 75 survey respondents, 44 (59 percent) stated that their warehouses do not have specific policies or procedures for use of x-ray machines. During our site visits, some facility officials stated that they have not implemented new policies or procedures specific to x-ray machines because they use existing BOP or institution policies for searching and inspecting packages entering into the facility.

In our judgment, because all of the x-ray machines have identical operational capabilities and many of the commodities facilities receive in their shipments are similar, adequate training and consistent use by all users could potentially improve the effectiveness of the x-ray machine. In November 2013, the BOP issued a memorandum detailing general operating procedures for the new x-ray machines, requiring each institution to create warehouse procedures that direct staff to x-ray and visually inspect items that could not be penetrated by the x-ray machine. We recommend that the BOP confirm each institution has created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.

Other Matters

During our site visit to USP Leavenworth, we observed dense pallets being run through the x-ray machine and marked as "X-Rayed," despite the fact that the scans showed large amounts of "black space," meaning that the pallet

was too dense to produce a clear scan.¹⁶ We asked the staff if they employed any additional security measures, such as breaking down dense pallets and visually inspecting them. We were told that they do not break these types of pallets down. Instead, the pallets are cleared to be released into the secure facility without further scrutiny.

In addition, the warehouse has implemented procedures for the new pallet x-ray machine. However, these procedures do not provide operators with detailed guidance on how to properly scan dense items. Further, the procedures do not offer guidance regarding the application of additional security and inspection measures when the x-ray machines do not produce clear images.

In further discussions with warehouse personnel at USP Leavenworth, we determined that they continue to break all shipments down for visual inspection, and do not feel that the x-ray machines can be relied upon for contraband detection. Furthermore, we found that the warehouse x-ray machine had been out of service for approximately 5 months and no service call was placed until 1 week before OIG staff visited the institution. While the x-ray machine was out of service, the staff stated they conducted visual inspections for incoming items. A staff member voiced concerns that the x-ray machines do not function in the way that BOP management believes they do, and that BOP staff risk being faulted for smuggled contraband not identified due to the x-ray machines' weaknesses.

These concerns were not limited to USP Leavenworth. Staff at another facility stated that the machine does not produce clear scans if and using the machine is a waste of time. Staff at a different facility stated that staff members feel that the x-ray machine causes extra work since they run pallets through the x-ray machine in addition to conducting breakdowns and visual inspections. In addition, staff at other facilities described the x-ray machine's abilities to detect contraband in lightly packed items as being "moderately okay" and that the x-ray machines that were ordered do not accomplish the mission.

While BOP headquarters officials stated that the new pallet x-ray machines are beneficial to staff workload in that they save staff time of having to break down every single pallet, the instances summarized above raise concern that, in some cases, the expectation to use the x-ray machines has increased the workload of warehouse staff. In November 2013, the BOP issued a memorandum advising facilities to physically inspect pallets it considers too dense to be effectively scanned, minimizing the number of items that would need to be scanned by the x-ray machine.

The x-ray machines are equipped with image enhancing features. However, we found that use of the enhanced features did not always result in the hidden contraband being identified, and we found that not all staff had been trained in order to effectively use the enhanced features.

Conclusion

Our review of the effectiveness of 65 pallet x-ray machines purchased by the BOP identified significant concerns about the ability of the machines to assist with contraband detection, and institutions' ability to ensure that the machines are used effectively to identify contraband prior to moving goods into secure areas of institutions, which was the primary reason for their purchase following the 2010 incident at USP Pollock. We confirmed that the x-ray machines were not effective for screening certain items commonly received by institution warehouses, such as . Further, we found that prior to our audit the BOP had not drafted a formal policy outlining the capabilities and limitations of the new x-ray machines and what additional measures should be in place for pallets that are too dense to be effectively scanned. The BOP's November 2013 memorandum represents significant steps to implement new policies and procedures which may help address the findings identified in our audit. However, we believe the BOP should obtain assurances from each facility that these issues have been addressed and should conduct tests to ensure that the actions taken by its institutions are effective. As a result, we provide the following recommendations.

Recommendations

We recommend that the BOP:

- Consider conducting periodic and unannounced external testing of facilities' effectiveness in using the pallet x-ray machines and associated procedures to prevent the introduction of contraband. Such testing should be performed by appropriate BOP oversight personnel external to the facilities being tested, such as BOP headquarters or regional oversight offices.
- 2. Confirm that each institution has created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.
- 3. Evaluate whether any additional measures are required in order to address the security concerns identified by the BOP working group following the incident at USP Pollock in 2010.

II. EQUIPMENT USAGE

We reviewed the usage of the 65 x-ray machines purchased by the BOP and identified conditions indicating that not all machines were utilized efficiently or effectively. Specifically, we found that 10 x-ray machines had not been installed until over 6 months after delivery. This included three facilities which took over 1 year to install the machine and two facilities which were not using their machines as of January 2014 – over 2 years after the order had been placed. Our audit survey identified some respondents who reported that training on the x-ray machines was not adequate and that time allotted for the training was not sufficient. Finally, some x-ray machine monitors were placed within the view of inmates, thereby creating the risk that inmates could identify and exploit weaknesses in the scanning process.

To assess equipment usage, we contacted each facility that received an x-ray machine and requested the dates of delivery and installation. We also requested usage information in the form of machine-generated activity reports.

Time from Delivery to Installation

The previously described incident at USP Pollock contributed to the BOP's decision to enhance security procedures in facility warehouses. BOP officials recognized that items concealed within a can be challenging to search at a rear gate, especially without sophisticated technology, and the x-ray machines were purchased to help strengthen security in this area. In order for the x-ray machine to be operational, each machine required vendor installation which was scheduled by BOP personnel at the facility level. To determine if the facilities arranged installment of their x-ray machine in a timely manner, we reviewed the delivery and installation dates for each warehouse that received a machine.

We found that 10 of the 65 x-ray machines were not installed until at least 6 months after they had been delivered, including 3 that were not installed until over 1 year after delivery. The 10 instances in which the x-ray machines were not installed for at least 6 months after delivery are detailed in Exhibit 6 on the following page.

¹⁷ Dates of receipt and installation for all facilities are included in Appendix II of this report.

EXHIBIT 6: FACILITIES EXCEEDING 6 MONTHS BETWEEN X-RAY MACHINE DELIVERY AND INSTALLATION

FACILITY NAME	DATE MACHINE WAS DELIVERED	DATE MACHINE WAS INSTALLED	TOTAL NUMBER OF DAYS BETWEEN DELIVERY AND INSTALLATION
FCC Lompoc	11/18/11	03/22/13	490
FCC Florence	03/30/12	05/21/13	417
FCC Oakdale	12/27/11	02/01/13	402
FCI El Reno	03/08/12	02/05/13	334
MCC Chicago	04/16/12	02/26/13	316
FCC Oakdale	12/27/11	09/10/12	258
FCI La Tuna	04/09/12	12/10/12	245
FCI Jesup X-Ray Machine 1	03/14/12	11/06/12	237
FCI Jesup X-Ray Machine 2	03/14/12	11/06/12	237
USP Lewisburg	05/30/12	12/15/12	199

Source: The BOP facilities in receipt of an x-ray machine.

We contacted the BOP to determine the reasons for delay, and found that the BOP facilities faced various challenges associated with installation of the new x-ray machines. The facilities listed in Exhibit 6 cited reasons including space issues, funding issues, and renovations that were required in order to accommodate the machines. ¹⁸

As previously noted, the x-ray machines must be installed by the vendor in order to be put into use. An x-ray machine that has not been installed is not available to assist BOP staff in enhancing the BOP's overall security process, allowing for the possibility that contraband could be introduced into the secure perimeter. While changes or additions made to warehouses contributed to the delays in installation, we consider the delays described above to be excessive, and question the bona fide need for a piece of equipment that went unused for over 6 months. We recommend that the BOP establish procedures to ensure that any x-ray machines ordered in the future will be utilized by the recipient institution and be put to intended use within a reasonable time frame.

Training

In our judgment, facility staff cannot use the x-ray machines to their full potential if users have not been adequately and effectively trained on the machine's use, including image enhancing features that may provide a clearer image of a scanned item, and on the machine's limitations. To determine if warehouse staff had received effective training, we surveyed users at each of the 50 facilities that

Funding issues after the original contracted purchase were an issue for the facilities because changes, additions, or renovations were the financial responsibility of the facility itself, whereas the original purchase of the x-ray machines had been funded by the BOP's central office.

received an x-ray machine.¹⁹ Sixty-one of those users provided feedback related to training of which 74 percent felt that the training provided by the vendor was moderately helpful or better; however, 26 percent indicated that the training was only slightly helpful or not at all helpful.²⁰ Respondents who reported dissatisfaction with the training provided various responses as to the reason, but generally concurred that the length of time allotted to the training was not sufficient to provide a comprehensive guide on use of the x-ray machines.

We also found that BOP officials had received reports from facility staff indicating that the quality of the training was not adequate. In response to these reports, a BOP official conducted an informal limited survey in March 2012 of all Trust Fund Supervisors at institutions that received a new x-ray machine. In this survey, the official requested feedback concerning the training they had received from the vendor. Only eight recipients responded to the survey, and the feedback was mixed with four of the eight respondents rating the training less than a 5 on a scale of 1-10. While BOP officials took action after receiving those responses to address training issues, we did not find that the BOP had taken adequate steps to ensure that all the BOP x-ray machine operators had been adequately trained.

We reported our concerns regarding insufficient training to the ODAG and the BOP in our August 2013 memorandum. The BOP's September 2013 response stated that as a result of this audit and its recent internal survey, the BOP has developed a statement of work for a customized training module that will be made available to all staff that use the x-ray machines.²¹

Additionally, in a November 2013 memorandum to its wardens, the BOP stated that it will be providing training through BOP-Learn, the agency's internal training system. The BOP stated that this training will address the fundamentals of x-ray screening, and the basics of x-ray interpretation, and threat recognition in the unique context of the correctional environment. BOP officials also stated that the new training will reinforce issues such as positioning of the pallets on the x-ray machine, the limitations of the equipment, and the types of items that cannot be scanned effectively. Each staff member who operates a pallet x-ray machine will be provided this computer-based training, which will include reviews of segment material and short quizzes to ensure that the staff member who is completing the training comprehends the material during each segment of the course.

¹⁹ For survey purposes, we included the responses of two additional facilities that purchased the same model x-ray machine after the initial purchase for 48 facilities. We received responses from all but four of the facilities we surveyed.

The BOP subsequently surveyed 52 facilities regarding training issues, and found that 53 percent of facilities reported that the training was inadequate.

The BOP officials stated that they expected it to take approximately 2-3 months for all staff members to complete the training module. Neither the training module nor the results of the training effort were reviewed by the OIG.

We recommend that the BOP ensure adequate x-ray machine training is deployed and completed by all current and future x-ray machine operators in a timely manner.

Equipment Use

We requested activity reports from the x-ray machines on the original contracted purchase in order to determine if the machines are actually in use. We reviewed these activity reports and determined they were unreliable for summary data because the "bag counts" were inaccurate. Eurther, the BOP does not require that facilities track all incoming deliveries in terms of the number of packages that were received. However, we were able to use the activity reports to identify 6 facilities that had little or no use reported as of August 2013 and followed up with those facilities, asking each for an explanation for the lack of use indicated on the activity reports. In January 2014, the BOP provided information to us indicating that four of those facilities were now using the x-ray machines. We ultimately confirmed that three x-ray machines at two institutions were not in use as of January 2014, over 2 years after the purchase was made. The list of facilities not using the x-ray machine as of January 2014 is provided in Exhibit 7.

EXHIBIT 7: X-RAY MACHINE EQUIPMENT NOT IN USE AS OF JANUARY 2014

FACILITY NAME	DATE INSTALLED	
USP Lee	12/19/11	
FCC Petersburg X-Ray Machine 1	12/15/11	
FCC Petersburg X-Ray Machine 2	12/15/11	

Source: BOP facilities in receipt of a x-ray machine

We contacted each institution to determine the reason or reasons that the x-ray machines were not in use, as summarized below.

- USP Lee received two x-ray machines, one of which is used by staff. The second machine is not in use due to ongoing funding issues that prevented the completion of a second warehouse at the facility in which the x-ray machine would be utilized. When we followed up with USP Lee, in January 2014, an official stated that the staff will begin using the x-ray machine once the new x-ray procedures are updated, which the BOP anticipates completing by the end of February 2014.
- Staff at FCC Petersburg stated that they are not using the two x-ray machines they received due to the inconsistencies in the detection of foreign

The bag count indicates how many items have been scanned by the x-ray machine. We contacted the vendor and found that inaccurate bag counts may be due to the way in which pallets trigger the x-ray machine's photo sensor. The representative indicated that the bag count would be a general indication of activity, even if it could not be relied upon for specific numbers.

objects and the overall complexity and difficulty of operating the x-ray machine. Staff stated that they do not feel that this particular model meets the operational needs of the institution. When we followed up with FCC Petersburg, an official stated that they will begin using the x-ray machines by the end of January 2014, following the BOP's new x-ray machine training.

The staff at FMC Carswell and FCI Pekin initially reported that they had not finalized agreements with their local unions regarding the procedures for usage of the x-ray machines and therefore were not using the equipment. When we followed up with the BOP in January 2014, it confirmed that both facilities had completed negotiations with their unions and put the x-ray machines into operation as of September 2013.

Staff at FMC Lexington initially stated they have used the x-ray machine to run test pallets, but found that the machine was not useful in obtaining clear images or evidence of contraband. The staff noted that boxes continue to be visually inspected, and the staff does not have enough confidence in the x-ray machine to use it as the sole method of inspection. The staff also stated that since they would continue to conduct visual inspections even if the x-ray machine were used, the process of using the x-ray machine adds an unnecessary step in the screening process. The x-ray machine ordered for FCI Otisville was not in use due to the facility not having a power source capable of handling the equipment, and a work request to install a larger transformer was submitted. When we followed up with the BOP in January 2014, it confirmed that both facilities had put the x-ray machines into operation in November 2013, after the BOP's memorandum was issued to its wardens.

BOP officials stated, and we confirmed during our site visits, that the x-ray machines are not the only method of reviewing incoming deliveries for contraband. However, the three x-ray machines we ultimately confirmed were not being used represent \$182,556 in expenditures for which no benefit has been realized. In their September 2013 response to our memorandum to the ODAG and the BOP, BOP officials stated that they anticipated removing x-ray machines from some institutions and transferring the equipment to other institutions where the equipment could enhance contraband detection. BOP officials noted that these decisions would be based on continuing evaluations of whether institutions that currently have the equipment also have the necessary space and staffing resources to ensure effective and safe operation of the equipment consistent with the new protocols. We recommend that the BOP put to more efficient use any pallet x-ray machines purchased that are not being used by the facility to which they were assigned.

²³ In their response to our memorandum to the ODAG and the BOP, the BOP noted that the new protocols will address areas such as ensuring secure storage and transportation after a pallet has been scanned, and additional issues related to warehouses in which facility staff may be limited. These new protocols are in the process of being drafted, are not complete, and have not been audited by the OIG.

Monitors Placed in View of Inmates

We previously described the incident at USP Pollock in which an inmate working in USP Pollock's warehouse attempted to introduce contraband into the facility's secure perimeter by concealing contraband in cereal boxes. The contraband included

The introduction of any contraband into a secure facility constitutes a security breach and a threat to corrections officers, staff, and inmates, but cellular phones present a unique threat. If an inmate is able to utilize a cellular phone, he or she can then circumvent approved prison telephone systems and hold unmonitored conversations.²⁴ As previously noted, a September 2011 Government Accountability Office (GAO) report found that by circumventing the telephone systems of correctional institutions, inmates may be able to coordinate criminal activity such as drug sales, assault, and murder. Specifically, GAO found that an inmate in a New Jersey state prison used a contraband cell phone to order the murder of his girlfriend, who had previously testified against him during a trail, and that an inmate in a Maryland detention center ordered the murder of a state witness via a cellular phone. Similarly, the OIG investigates, and substantiates, allegations of contraband being smuggled into federal prisons by correctional officers. For example, a correctional officer at the Rivers Correctional Institution in Winton, North Carolina, was found to have accepted payments from inmates in return for smuggling contraband items such as cell phones and cigarettes, and in October 2013 was sentenced to 20 months imprisonment.²⁵ These instances highlight not only the internal risks the BOP faces, but also the BOP's responsibility to effectively identify contraband in order to safeguard the welfare of the general public.

The inmate identified in the incident at USP Pollock was a laborer in that facility's warehouse. Sentenced inmates are required to work if they are medically able, and institution work assignments include employment in areas like food service or in the facility's warehouse. Such labor programs may provide inmates with an important opportunity to develop job skills and work experience that could help them after release. While the BOP staff members we interviewed during our site visits stated that inmates are under constant staff supervision, the incident at USP Pollock highlights the concern that the use of inmate labor can create areas of risk in the BOP's overall security process that increase the likelihood of contraband being introduced into a facility's secure perimeter. Consequently, if inmates are permitted to view the monitors on which scanned images are presented, they could potentially identify methods of concealing contraband in shipments as they learn to identify which types of shipments produce effective, clear scans, and which types of shipments produce darker, less clear scans.

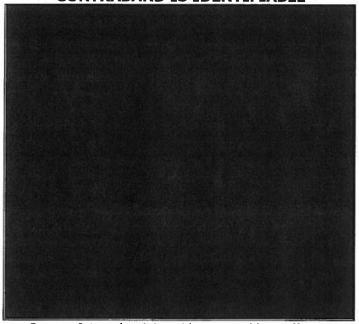
GAO contacted six regional offices and four institutions within the BOP's Correctional Programs Division, and reported that all cited contraband cell phones as an issue of serious concern.

²⁵ Rivers Correctional Institution is a contract facility and not a BOP operated institution.

While an untrained viewer may not be capable of immediately recognizing an object or assessing its threat level, an inmate with an ongoing ability to view x-ray machine monitors may be able to identify specific ways to place contraband so that the items that may present serious institutional threats are less likely to be identified.

Exhibit 8 shows an image of an item concealed in a shipment as it appeared on the x-ray machine's monitor.

EXHIBIT 8: EXAMPLE OF SCANNED IMAGE IN WHICH CONTRABAND IS IDENTIFIABLE



Source: Internal training video created by staff at USP Leavenworth Exhibit 9 below shows the actual item, which was captured by the x-ray machine after being removed from the shipment.

EXHIBIT 9: ACTUAL CONTRABAND IDENTIFIED IN

THE IMAGE PRESENTED ABOVE



Source: Internal training video created by staff at USP Leavenworth

. When inmates are able to view the monitors and become familiar with standard procedures, it increases the potential that they may identify and exploit weaknesses in the scanning process.

The risk of inmates becoming familiar with warehouse security procedures is increased by the fact that the BOP has no formal rotation policy to ensure that inmate laborers do not work in one area for an extended period of time. However, the reality that an inmate may work in the warehouse for an extended period of time increases the likelihood that the inmate will become familiar with staff security procedures and may be able to identify ways of circumventing or exploiting those procedures.

In its November 2013 memorandum to facility wardens, the BOP mandated that the x-ray machines be positioned so that the keyboards, monitors, and operator's station cannot be viewed by inmates while the actual screening is taking place, and noted that the installation of a monitor security screen may be necessary to accomplish this requirement.²⁶ We recommend that the BOP obtain written

The 1517 pallet x-ray machine measures approximately 22' in length, 9' in width, and is over 7' tall. Due to the dimensions and the additional space required to operate a forklift and accommodate the staff members reviewing the scanned images, it may not be feasible for all warehouses to place the entire unit in such a way as to completely obscure the monitors from inmate laborers. In these instances, the monitors should be placed in such a way that the additional security provided by the privacy screen accomplishes the goal of obstructing the view of inmate laborers.

confirmation that each institution has addressed the security concerns identified in this report and its November 2013 memorandum, including the concealment of monitors from inmate view.

Conclusion

Our review of the usage of 65 pallet x-ray machines purchased by the BOP identified significant concerns about the utilization of the machines. We found that 10 x-ray machines were not installed until over 6 months after delivery, including three machines that took over a year to install, and three x-ray machines that were installed but were not being used over 2 years after installation. Staff also reported that training on x-ray machine operation was inadequate. Further, monitors are placed within the view of inmates at some institutions, presenting a risk that inmates could identify and exploit weaknesses in the scanning process. The BOP's November 2013 memorandum represents significant steps to implement new policies and procedures which may help address the findings identified in our audit. However, we believe the BOP should obtain written assurances from each facility that these issues have been addressed. As a result, we provide the following recommendations.

Recommendations

We recommend that the BOP:

- 4. Establish procedures to ensure that any x-ray machines ordered in the future are useful and necessary for their intended purpose, and will be put to their intended use by recipient institutions within a reasonable time frame.
- 5. Ensure adequate x-ray machine training is deployed and completed by all current and future x-ray machine operators in a timely manner.
- 6. Put to more efficient use any pallet x-ray machines purchased that are not being used by the facility to which they were assigned.
- 7. Obtain written confirmation that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.

STATEMENT ON INTERNAL CONTROLS

As required by the *Government Auditing Standards*, we tested, as appropriate, internal controls significant within the context of our audit objectives. A deficiency in an internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to timely prevent or detect:

- (1) impairments to the effectiveness and efficiency of operations,
- (2) misstatements in financial or performance information, or (3) violations of laws and regulations. Our evaluation of the usage and effectiveness of 65 pallet x-ray machines purchased by the BOP was *not* made for the purpose of providing assurance on its internal control structure as a whole. The BOP's management is responsible for the establishment and maintenance of internal controls.

As noted in the Findings and Recommendations section of this report, we identified deficiencies in the BOP's internal controls that are significant within the context of the audit objectives and that we believe, based upon the audit work performed, adversely affect the BOP's ability to effectively guard against contraband introduction in their facilities. The lack of comprehensive policies and procedures has contributed to a lack of consistent oversight at the facility level.

Because we are not expressing an opinion on the BOP's internal control structure as a whole, this statement is intended solely for the information and use of the BOP. This restriction is not intended to limit the distribution of this report, which is a matter of public record.

STATEMENT ON COMPLIANCE WITH LAWS AND REGULATIONS

As required by the *Government Auditing Standards*, we tested, as appropriate given our audit scope and objectives, selected transactions, records, procedures, and practices to obtain reasonable assurance that the BOP's management complied with federal laws and regulations for which noncompliance, in our judgment, could have a material effect on the results of our audit. The BOP's management is responsible for ensuring compliance with federal laws and regulations applicable to the BOP. In planning our audit, we identified the following laws and regulations that concerned the operations of the BOP and that were significant within the context of the audit objectives:

• 21 CFR 1020.40, Cabinet X-Ray Machines.

Our audit included examining on a test basis, the BOP's compliance with the aforementioned regulation. We did not identify any instances of noncompliance with the regulation we reviewed.

OBJECTIVE, SCOPE, AND METHODOLOGY

Objectives

The objective of this audit was to assess the usage of the x-ray machine equipment purchased by the Federal Bureau of Prisons (BOP) in September 2011 under contract GA-07F-0182T, and evaluate the effectiveness of that equipment.

Scope and Methodology

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Our audit concentrated on, but was not limited to, October 2010 through November 2013. We reviewed 65 x-ray machines, which totaled \$3,955,382 under contract GA-07F-0182T.

To accomplish our audit objectives, we interviewed officials from the BOP, including officials from the Trust Fund Branch, Food Service Administration and the Office of Security and Technology. In addition, we interviewed relevant officials and performed testing and audit work at the following nine BOP facilities:

- Federal Transfer Center (FTC), Oklahoma City, Oklahoma
- Federal Medical Center (FMC), Carswell, Texas
- United States Penitentiary (USP), Leavenworth, Kansas
- Federal Correctional Institution (FCI), Three Rivers, Texas
- FCI, Phoenix, Arizona
- FCI, La Tuna, Texas
- FCI, Bennettsville, South Carolina
- FCI, Edgefield, South Carolina
- FCI, Estill, South Carolina

We selected our facility sample to adequately represent various aspects of the BOP institutions that received a new x-ray machine. Judgmental sampling design was applied to obtain data from facilities with an established history of usage.²⁷ This non-statistical sample design does not allow for projection of the test results to all the BOP facilities, or internal controls and procedures.

We could not rely on computer generated activity reports from the x-ray machines; therefore, we did not use them for testing purposes other than noting whether there was a general indication that the x-ray machines were being used.

For survey purposes, we included the responses of two additional facilities that purchased the same model x-ray machine after the initial purchase for 48 facilities. We initially invited the Trust Fund Supervisors and Food Service Administrators who are the primary custodians of the new x-ray machines to take the online survey. However, we subsequently invited non-custodian Food Service Administrators at the same locations that did not receive a new x-ray machine in their warehouses to take the survey if Food Service personnel utilizes the x-ray machine assigned to the Trust Fund Supervisor. Although in total we have received more than 100 contact names with e-mail addresses from the BOP, the number was consolidated to 97 names as some of the contacts had retired or were unavailable. Out of the 97 survey invitations sent, 75 completed responses were received.

We reviewed the Code of Federal Regulations, BOP Program Statements, and relevant standards published by the American National Standards Institute and the National Institute of Justice Standards. We also identified controls the BOP has in place to ensure the security policies were followed. In addition, we:

- Interviewed a BOP official regarding the solicitation and contract of the 65 x-ray machines.
- Analyzed x-ray machine activity reports.
- Conducted delivery and installation analysis.
- Surveyed 50 facilities that received a new x-ray machine as part of this contract.
- Tested x-ray machines at seven site visit locations, including USP Leavenworth, FCI Three Rivers, FCI Phoenix, FCI La Tuna, FCI Bennettsville, FCI Edgefield, and FCI Estill.

APPENDIX II

DATES OF DELIVERY AND INSTALLATION FOR EACH FACILITY IN RECEIPT OF AN X-RAY MACHINE

Name of Facility	NUMBER OF X-RAY MACHINES RECEIVED	DATE OF DELIVERY	DATE OF INSTALLATION	DAYS BETWEEN DELIVERY AND INSTALLATION
FCC Lompoc	1	11/18/11	03/22/13	490
FCC Florence	1	03/30/12	05/22/13	417
FCC Oakdale	1	12/27/11	02/01/13	402
FCI El Reno	1	03/08/12	02/05/13	334
MCC Chicago	1	04/16/12	02/26/13	316
FCC Oakdale ²⁸	1	12/27/11	09/10/12	258
FCI La Tuna	1	04/09/12		
FCI Jesup	2	03/14/12	12/10/12	245
USP Lewisburg	1		11/06/12	
	1	05/30/12	12/15/12	199
FCI Edgefield	2	06/18/12	10/09/12	113
FCI McKean		02/13/12	05/08/12	85
FCC Terre Haute	2	02/01/12	04/24/12	83
FMC Lexington	1	01/27/12	04/10/12	74
FCC Yazoo City	1	06/15/12	08/22/12	68
FCI Marianna	1	06/26/12	08/30/12	65
FCC Coleman	1	06/25/12	08/22/12	58
FCI Three Rivers	2	12/20/11	02/14/12	56
FCI Sandstone (transfer from FCI Oxford) ²⁹	1	06/21/12	08/14/12	54
FCI Berlin	1	05/30/12	07/20/12	51
USP Atlanta	1	07/25/12	09/11/12	48
FMC Carswell	1	03/02/12	04/18/12	47
FCI Cumberland	1	01/16/12	02/29/12	44
FCC Victorville	1	11/15/11	12/28/11	43
FCI McDowell	1	02/08/12	03/22/12	43
FCC Forrest City	2	03/29/12	05/10/12	42

 $^{^{28}\,}$ FCC Oakdale is listed twice as the x-ray machines were installed on different dates. All other facilities that received two x-ray machines reported that delivery and installation took place on the same dates.

One x-ray machine was originally ordered and shipped to FCI Oxford. However, upon receipt of the x-ray machine staff at FCI Oxford determined that the warehouse did not have enough space to accommodate it. The X-ray machine was redirected to FCI Sandstone.

OU XEGURGES	NUMBER OF X-RAY			DAYS BETWEEN
2 PHONE NA	MACHINES	DATE OF	DATE OF	DELIVERY AND
NAME OF FACILITY	RECEIVED	DELIVERY	INSTALLATION	INSTALLATION
FCI Fairton	2	02/23/12	04/05/12	42
FCI Estill ³⁰	1	04/27/12	06/06/12	40
FMC Devens	1	06/01/12	07/10/12	39
FDC Miami	1	06/27/12	08/01/12	35
FCI Ray Brook	2	02/22/12	03/27/12	34
FCI Schuylkill	1	05/21/12	06/19/12	29
FCC Butner	2	12/07/11	01/04/12	28
FCI Manchester	1	02/08/12	03/07/12	28
FCI Otisville	1	05/29/12	06/26/12	28
USP Hazelton	1	08/29/12	09/25/12	27
(transfer from Estill)	1110		Navy rocki sková k	
FCI Pekin	1	05/17/12	06/12/12	26
FCI Talladega	2	04/08/12	05/03/12	25
USP McCreary	2	12/13/11	01/06/12	24
USP Marion	1	04/30/12	05/22/12	22
USP Leavenworth	2	01/18/12	02/07/12	20
FCI Greenville	2	01/10/12	01/29/12	19
FCC Petersburg	2	11/29/11	12/15/11	16
USMCFP	1	05/16/12	06/01/12	16
Springfield	in the second			
FTC Oklahoma City	1	04/18/12	05/02/12	14
USP Big Sandy	2	12/06/11	12/20/11	14
FCI Bennettsville	2	03/13/12	03/24/12	11
FCI Memphis	1	05/08/12	05/18/12	10
FCI Phoenix	1	12/27/11	01/06/12	10
USP Lee	2	12/09/11	12/19/11	10

Source: BOP delivery and installation data

 $^{^{30}}$ Two x-ray machines were ordered and shipped to FCI Estill. However, upon receipt of the x-ray machine FCI Estill's Food Service warehouse personnel determined that the machine could not fit in the warehouse. This machine was redirected to USP Hazelton.

BOP NOVEMBER 2013 MEMORANDUM FOR ALL WARDENS



U.S. Department of Justice Federal Bureau of Prisons

Washington, D.C. 20534

November 8, 2013

MEMORANDUM FOR ALL WARDENS

FROM:

Judisimon Garrett, Assistant Director

Information, Policy, and Public Affairs Division (IPPA)

Frank Stratta, Assistant Director Correctional Programs Division (CPD)

Newton Kendig, Assistant Directo Health Services Division (HSD)

W.F. Dalius, Jr., Ssistant Director Administration Division (ADM)

SUBJECT:

Guidance Regarding Use of Warehouse Pallet Scanners

This memorandum provides clarification regarding Bureau of Prisons' use of the 200kVp Astrophysics (pallet) x-ray machines and related contraband scanning devices. These machines were purchased at the end of Fiscal Year 2011, to enhance the detection of contraband contained in pallets brought into our warehouses. Some institutions have other pallet x-ray machines such as the Rapiscan 532/632 and Smiths Detection 145180. The procedures outlined below apply to all pallet scanners deployed by the agency regardless of manufacturer, make, or model (and regardless of the type of generator power-160kVp, 180kVp, or 200kVp, as in the case of the Astrophysics device). This guidance has been discussed with the American Federation of Government Employees/Council of Prison Locals-33 and is predicated upon BOP policy as delineated in Program Statement 5521.05, dated June 30, 1997, Searches of Housing Units, Inmates, and Inmate Work Areas.

We are aware that some of the institutions that have x-ray machines have experienced difficulties in determining suitable locations and identifying appropriate power sources for the machines. Accordingly, see the section below entitled "Suitability", which describes specific criteria that should be met to ensure the machines can be used effectively.

Scanners are intended to enhance, not replace, existing security policies and procedures related to searching items. When used properly, these machines effectively supplement other security procedures and prevent and limit the introduction of contraband into federal prisons.

General Operating Procedures: X-ray scanning of pallets is one of several security measures to identify contraband that may be brought into warehouses located outside the secure perimeter of our institutions. X-ray machines can be effective in screening pallets loaded with loosely-packed or low density items, such as Pallets loaded with very dense and/or tightly packed items such as cannot be effectively x-rayed using existing technology. These pallets should be broken

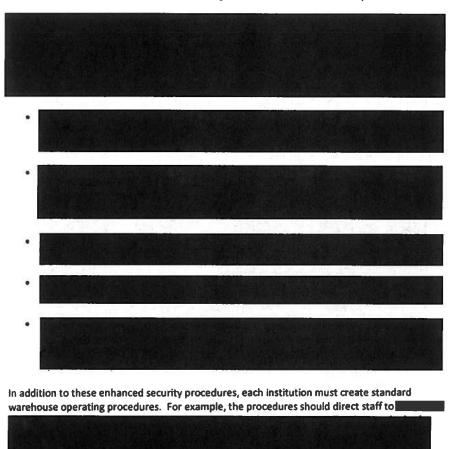
down into smaller units and x-rayed. Items that cannot be penetrated by x-ray must be physically inspected.



Training: In order to ensure the machines are being used appropriately and to ensure staff are able to appropriately discern what is being detected by the machines, additional training will be provided for staff who use pallet scanner x-ray machines (Astrophysics and other models), at all institutions. The training will be provided via a learning module in BOP-Learn. It will address the fundamentals of x-ray screening, and the basics of x- ray interpretation and threat recognition in the unique context of the correctional environment. Additionally, the new training will reinforce important aspects of the information outlined in this memorandum, such as the the limitations of the equipment, and the types of items that cannot be scanned effectively. Each staff member who operates a pallet scanner will be provided this computer-based training, which will include reviews of segment material and short quizzes to ensure that the staff member who is completing the training comprehends the

material during each segment of the course. Further information will be provided by the Human Resources Management Division, Training and Staff Development Section, once the training is available in BOP-Learn.

Maintenance: Institution staff should work with the vendor to perform maintenance testing of any individual scanners that are not performing in accordance with contract specifications.



The new warehouse procedures should be fully in place by January 31, 2014.

The Correctional Programs Division, Correctional Services Branch, will monitor the progress of implementing the enhanced security procedures as well as the new warehouse operating procedures described.

Suitability: The following suitability criteria will be applied to each institution to determine if the pallet x-ray equipment will remain at its current location or be re-located to an appropriate institution. The justification for approval to relocate any scanner must describe unique circumstances, since each institution has the common security concerns of interdicting contraband conveyed through outside warehouses and all institutions have similar staff constraints.

If you believe that your institution cannot satisfy the criteria described below, please submit a written explanation of your request to have the machine(s) removed. Please ensure such explanation provides specifics regarding why a particular criteria cannot be met.

Available space: The typical footprint for the Astrophysics 1517 unit and Rapiscan 632XR is 22 feet long, 9 feet wide and over 7 feet high. The Smiths Detection 145180 pallet x-ray unit is the same width and height as the other two but is typically longer depending on roller options up to 26 feet in length. Additionally space must be available to permit maneuverability of the forklift on both ends of the unit for placement and retrieval of the pallet off the rollers.

- 1) Power: Pallet x-ray machines will require either 120VAC, 20 AMP dedicated circuit or 220-230 VAC, 15 amp dedicated service. (Note: A line conditioner must be installed between the power source/outlet and the x-ray unit which is capable of stabilizing voltage inputs to the internal equipment/components including the x-ray unit computer. The line conditioner should act as a buffer/filter during unpredictable energy and power spikes, surges, and interruptions to include switch-overs from institution main power sources to institution back-up generator power).
- 2) Climate: The operating environment should maintain proper climatic (heating and cooling) conditions for proper operation of the unit; typically a temperature at 32°F-104°F and up to 95% non-condensing humidity.
- 3) Floor strength/capacity: The installation/deployment floor location should be able to support weights that range from 4,000 lbs. to over 7,000 lbs. depending on manufacturer make and model. However, the delivery location/dock area must be able to support up to 10,000 lbs. due to the added weight for shipping crates/materials.

- 4) Screen View Security: The unit must be positioned so that the keyboard/monitor/operator's station cannot be viewed by inmates while the actual screening is taking place. The installation of a monitor security screen may be necessary to accomplish this requirement.
- 5) Staffing: State any staffing constraints that affect use of the pallet x-ray equipment.

Please submit any requests to relocate the x-ray equipment to another institution to the Assistant Director for Correctional Programs Division through your Regional Director. The AD-CPD will consult with the AD-IPPA, AD-HSD and AD-ADM and provide approval or denial to the appropriate Warden.

Should you have any concerns, please contact your Regional Director.

cc: Executive Staff

APPENDIX IV

BOP RESPONSE TO THE DRAFT REPORT³¹



U.S. Department of Justice

Federal Bureau of Prisons

Office of the Director

Washington, DC 20534

April 30, 2014

MEMORANDUM FOR RAYMOND J. BEAUDET

ASSISTANT INSPECTOR GENERAL

FOR AUDIT

OFFICE OF THE INSPECTOR GENERAL

FROM:

Charles E. Samuels, Jr.

Director

Federal Bureau of Prisons

SUBJECT:

Response to the Office of Inspector General's (OIG)
DRAFT Audit Report: The Federal Bureau of Prisons'
September 2011 Procurement of X-Ray Equipment Under
Contract GS-07F-0182T

The Bureau of Prisons (BOP) appreciates the opportunity to respond to the open recommendations from the draft report entitled $\frac{\text{The}}{\text{Federal Bureau of Prisons' September 2011 Procurement of X-Ray}}$ Equipment Under Contract GS-07F-0182T.

Please find the Bureau's response to the recommendations below:

Recommendation 1: Consider conducting periodic and unannounced external testing of facilities' effectiveness in using the pallet x-ray machines and associated procedures to prevent the introduction of contraband. Such testing should be performed by appropriate BOP oversight personnel external to the facilities being tested, such as BOP headquarters or regional oversight offices.

³¹ The attachment to the BOP's response was not included in this final report.

BOP's Response: The BOP agrees with the recommendation. In consideration of this recommendation, the regional administrators overseeing the specific warehouse functions will conduct periodic reviews of the active screening process. These reviews will be random in nature, and conducted in conjunction with normal site visits. The regional administrators will receive x-ray pallet scanner training. They will provide immediate feedback on the effectiveness of the use of the pallet scanners and the utilization of appropriate procedures. If funds are not available for staff travel, the BOP will identify a staff member in a supervisory role, at each location, to conduct the review. Unannounced visits for staged testing of hidden contraband detection is not possible. This is due to the nature of the controlled access of the prison environment, and the enhanced security measures restricting access to all warehouses. Therefore, the Bureau requests this recommendation be closed.

Recommendation 2. Confirm that each institution has created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.

BOP's Response: The BOP agrees with the recommendation. The Correctional Programs Division (CPD) will conduct a nationwide survey by June 1, 2014, to verify that each institution that has the x-ray scanning equipment created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.

Recommendation 3. Evaluate whether any additional measures are required in order to address the security concerns identified by the BOP working group following the incident at USP Pollock in 2010.

BOP's Response: The BOP agrees with the recommendation. The Director's November 2013 Warden's Guidance Memorandum, detailing additional security procedures for the warehouse, has been distributed by BOP management to all wardens. This memorandum outlines all nine approved Phase I Decision Points identified by the workgroup. Additionally, the Trust Fund Manual, Program Statement 4500.10, has been revised to address these security concerns, in conjunction with the Union, and will be implemented in the near future.

Recommendation 4. Establish procedures to ensure that any x-ray machines ordered in the future are useful and necessary for their

intended purpose, and will be put to their intended use by recipient institutions within a reasonable time frame.

BOP's Response: The BOP agrees with the recommendation. Any x-ray machines ordered in the future will be approved by CPD upon the technical recommendation of BOP's Office of Security Technology (OST). This will ensure the devices are useful and necessary for their intended purpose, and will be put to their intended use by recipient institutions within a reasonable time frame. Therefore, the Bureau requests this recommendation be closed.

Recommendation 5. Ensure adequate x-ray machine training is deployed and completed by all current and future x-ray machine operators in a timely manner.

BOP's Response: The BOP agrees with the recommendation. The final portion of Pallet Scanner Training is now available to BOP warehouse employees. BOP management forwarded a memorandum to the field, dated April 11, 2014, instructing employees to begin completing the training immediately (reference attachment). This portion provides Pallet Operator Training for the specific model(s) used by BOP, and a simulation course to test the students' abilities. All employees who use a pallet scanner must complete this training within thirty days, or they will not be authorized to use a Pallet Scanner. Therefore, the Bureau requests this recommendation be closed.

Recommendation 6. Put to more efficient use any pallet x-ray machines purchased that are not being used by the facility to which they were assigned.

BOP's Response: The BOP agrees with the recommendation. In the Director's November 2013 Warden's Guidance Memorandum, local Chief Executive Officers were directed to identify any pallet x-ray machines that were purchased, and not being used by the facility to which they were assigned. The OIG identified three machines not in use: one at United States Penitentiary (USP) Lee and two at the Federal Correctional Complex (FCC) Petersburg. USP Lee had been utilizing both its machines; however, at this time, one machine is in need of repair. The institution is currently utilizing one pallet x-ray machine to screen items, and will resume using the second machine after it's repaired. In addition, the report identified two x-ray pallet scanner machines located at FCC Petersburg, which were not in use. Currently, staff at that facility are in the process of completing the pallet scanner x-ray training. They will begin

utilizing both machines within 30 days. Therefore, the Bureau requests this recommendation be closed.

Recommendation 7. Obtain written confirmation that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.

BOP's Response: The BOP agrees with the recommendation. In the same survey that will be issued to address Recommendation 2, wardens will be queried for written confirmation that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.

If you have any questions regarding this response, please contact Sara M. Revell, Assistant Director, Program Review Division, at (202) 353-2302.

Attachment

OFFICE OF THE INSPECTOR GENERAL ANALYSIS AND SUMMARY OF ACTIONS NECESSARY TO CLOSE THE REPORT

The OIG provided a draft of this audit report to the Federal Bureau of Prisons (BOP). The BOP's response is incorporated in Appendix IV of this final report. The following provides the OIG analysis of the response and summary of actions necessary to close the report.

Recommendation:

1. Consider conducting periodic and unannounced external testing of facilities' effectiveness in using the pallet x-ray machines and associated procedures to prevent the introduction of contraband. Such testing should be performed by appropriate BOP oversight personnel external to the facilities being tested, such as BOP headquarters or regional oversight offices.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response that regional administrators or supervisory staff member will conduct the random, periodic reviews of the active screening process and provide immediate feedback on the effectiveness of the use of the pallet scanners and the utilization of appropriate procedures. However, the BOP also stated that unannounced visits for staged testing of hidden contraband detection is not possible due to the nature of the controlled access of the prison environment and the enhanced security measures restricting access to all warehouses. BOP also stated that it may identify staff at facility locations to perform such reviews during periods of budget constraints.

The OIG recognizes that the prison security environment is unique and certain precautions need to be taken when performing tests of this sort. However, we believe it is important to ensure the integrity of the reviews to verify that the scanners are being consistently used in the manner they were intended. To best ensure that integrity, BOP should perform such reviews unannounced to the extent possible and use BOP personnel external to the facility being tested. Otherwise, BOP risks that the reviews will be manipulated and not review normal equipment usage accurately. BOP should also implement appropriate security measures for these reviews to ensure that they don't compromise security while ensuring their integrity.

This recommendation can be closed when we receive a copy of the formal policy for conducting periodic and unannounced external testing of facilities'

effectiveness in using the pallet x-ray machines and associated procedures to prevent the introduction of contraband.

2. Confirm that each institution has created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.

<u>Resolved</u>. The BOP concurred with our recommendation. The BOP stated in its response that the Correctional Programs Division (CPD) will conduct a nationwide survey by June 1, 2014, to verify that each institution that has the x-ray scanning equipment created and implemented new warehouse procedures.

This recommendation can be closed when we receive confirmation from BOP, that each institution has created and implemented new warehouse procedures directing staff to x-ray and visually inspect items when necessary.

3. Evaluate whether any additional measures are required in order to address the security concerns identified by the BOP working group following the incident at USP Pollock in 2010.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response that the Director's November 2013 Warden's Guidance Memorandum outlines all nine approved Phase I Decision Points identified by the workgroup. Additionally, the Trust Fund Manual, Program Statement 4500.10, has been revised to address these security concerns and will be implemented in the near future.

This recommendation can be closed when we receive a copy of the revised Trust Fund Manual that addresses the security concerns and the final version is implemented.

4. Establish procedures to ensure that any x-ray machines ordered in the future are useful and necessary for their intended purpose, and will be put to their intended use by recipient institutions within a reasonable time frame.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response that any x-ray machines ordered in the future will be approved by CPD upon technical recommendation of BOP's Office of the Security Technology (OST), which will ensure the devices are useful and necessary for their intended purpose, and will be put to their intended use within a reasonable time frame.

This recommendation can be closed when we receive a copy of the formal policy that ensures that any x-ray machines ordered in the future will be useful and necessary for their intended purpose, and will be put to their intended use by recipient institutions within a reasonable time frame.

5. Ensure adequate x-ray machine training is deployed and completed by all current and future x-ray machine operators in a timely manner.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response that the final portion of pallet scanner training is now available to BOP warehouse employees and employees have been instructed to begin completing the training immediately. In addition BOP stated that all employees who use a pallet scanner must complete this training within 30 days, or they will not be authorized to use a pallet scanner.

This recommendation can be closed when we receive documentation that all employees using a pallet x-ray machine has been trained by the 30-day deadline.

6. Put to more efficient use any pallet x-ray machines purchased that are not being used by the facility to which they were assigned.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response United States Penitentiary (USP) Lee has been utilizing both of its x-ray machines; however, one machine is in need of repair. USP Lee will resume using the second machine after it's repaired. In addition, BOP stated that Federal Correctional Complex (FCC) Petersburg is in the process of completing x-ray machine training and will begin using both of its machines within 30 days.

This recommendation can be closed when we receive confirmation that all the unused x-ray machines have been put to more efficient use.

7. Obtain written confirmation that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.

Resolved. The BOP concurred with our recommendation. The BOP stated in its response that the same survey that will be issued to address Recommendation 2 will request written confirmation from wardens that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.

This recommendation can be closed when we receive confirmation that each institution has addressed the security concerns identified in this report and the OIG's August 2013 memorandum, including the concealment of monitors from inmate view.