

**CBP's Oversight of Its  
Non-Intrusive Inspection  
Equipment Maintenance  
Contracts Needs  
Improvement**





# HIGHLIGHTS

## ***CBP's Oversight of Its Non-Intrusive Inspection Equipment Maintenance Contracts Needs Improvement***

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**March 25, 2015**

### **Why We Did This**

The U.S. Customs and Border Protection's (CBP) Non-Intrusive Inspection (NII) program is vital to securing the Nation's borders while facilitating efficient flow of legitimate trade and travel. CBP uses NII equipment to screen cargo and conveyances at our Nation's land, sea, and air ports of entry.

In fiscal year 2014, CBP awarded six contracts and one interagency agreement valued at approximately \$90.4 million to perform preventive and corrective maintenance of NII equipment. We performed this audit to determine whether maintenance is being performed on CBP's screening equipment in accordance with contractual requirements and manufacturers' specifications.

### **What We Recommend**

CBP should develop a methodology and implement a plan to monitor and periodically review contractors' performance. The plan should include verification and validation steps for contractor-submitted data.

#### **For Further Information:**

Contact our Office of Public Affairs at (202) 254-4100, or email us at [DHS-OIG.OfficePublicAffairs@oig.dhs.gov](mailto:DHS-OIG.OfficePublicAffairs@oig.dhs.gov)

### **What We Found**

CBP monitored NII operations using methods such as conducting daily meetings to discuss NII availability and reviewing field office submissions of utilization reports. However, CBP has not ensured that contractors perform preventive and corrective maintenance on its screening equipment in accordance with contractual requirements and manufacturers' specifications. This deficiency occurred because CBP has not verified that maintenance is performed in accordance with manufacturers' specifications, evaluated contractors' performance, and assessed the reliability of maintenance data.

Without a process to validate maintenance data and to evaluate and assess that NII equipment is being repaired and maintained in accordance with manufacturers' specifications, CBP's NII equipment may not be repaired and maintained to retain full functionality and maximum useful life.

### **CBP Response**

In its response to our draft report, CBP reported that it is committed to the NII program and accordingly agrees with our report recommendation.



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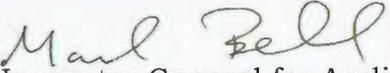
Department of Homeland Security

Washington, DC 20528 / [www.oig.dhs.gov](http://www.oig.dhs.gov)

MAR 25 2015

TO: Charles R. Armstrong  
Assistant Commissioner  
Office of Information and Technology  
U.S. Customs and Border Protection

Todd C. Owen  
Assistant Commissioner  
Office of Field Operations  
U.S. Customs and Border Protection

FROM: Mark Bell   
Assistant Inspector General for Audits

SUBJECT: *CBP's Oversight of Its Non-Intrusive Inspection Equipment  
Maintenance Contracts Needs Improvement*

Attached for your action is our final report, *CBP's Oversight of Its Non-Intrusive Inspection Equipment Maintenance Contracts Needs Improvement*. We incorporated the formal comments provided by your office.

The report contains one recommendation aimed at improving the Non-Intrusive Inspection program. Your office concurred with the recommendation and based on your response to the draft report, we consider it resolved and open. Once your office has fully implemented the recommendation, please submit a formal closeout letter to us within 30 days so that we may close the recommendation. The memorandum should be accompanied by evidence of completion of agreed-upon corrective actions.

Consistent with our responsibility under the *Inspector General Act*, we will provide copies of our report to appropriate congressional committees with oversight and appropriation responsibility over the Department of Homeland Security. We will post the report on our website for public dissemination.

Please call me with any questions, or your staff may contact Don Bumgardner, Acting Deputy Assistant Inspector General for Audits, at (202) 254-4100. You can also send your response to [OIGAuditsFollowup@oig.dhs.gov](mailto:OIGAuditsFollowup@oig.dhs.gov).

Attachment



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### Background

The U.S. Customs and Border Protection's (CBP) Non-Intrusive Inspection (NII) program is vital to securing the Nation's borders while facilitating efficient flow of legitimate trade and travel. CBP officers, border patrol agents, and air and marine agents use NII equipment to screen cargo and conveyances for weapons and other contrabands at our Nation's land, sea, and air ports of entry without physically opening or unloading them.<sup>1</sup>

Within CBP, the Office of Field Operations is the lead authority and responsible for oversight of the NII program. CBP designated the responsibility of maintenance and support of NII equipment to the Office of Information and Technology, which executed most of its actions through multiple maintenance contracts administered by its Contracting Officer Representatives (CORs). The CORs are responsible for government surveillance of the contractors' performance.

Between 1995 and 2014, CBP spent more than \$1.9 billion on its NII program. CBP awarded six contracts and one interagency agreement valued at approximately \$90.4 million in fiscal year (FY) 2014 to perform preventive and corrective maintenance on its NII equipment (see appendix B). As of October 2014, CBP's NII equipment inventory consisted of 316 large-scale systems, 449 small-scale systems, 1,421 radiation portal monitors, 4,118 handheld NII devices, and 33,014 handheld radiation detectors. Of the 316 large-scale systems, 108 surpassed the manufacturers' estimated 10-year useful life. Additionally, at least 18 large-scale systems were taken out of operation before reaching that estimated useful life. However, according to a CBP official, there is no exact useful life expectancy of equipment in operation.

### Results of Audit

CBP monitored NII operations using methods such as conducting daily meetings to discuss NII availability and reviewing field office submissions of utilization reports. However, CBP has not ensured that contractors perform preventive and corrective maintenance on its screening equipment in accordance with contractual requirements and manufacturers' specifications. This deficiency occurred because CBP has not verified that maintenance is performed in accordance with manufacturers' specifications, evaluated contractors' performance, and assessed the reliability of maintenance data. Without a process to validate maintenance data, and to evaluate and assess that NII equipment is being repaired and maintained in accordance with manufacturers' specifications, CBP's NII equipment may not be repaired and maintained to retain full functionality and maximum useful life.

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<sup>1</sup> CBP also identifies and examines cargo at 58 foreign ports prior to entry in the U.S.  
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### **CBP Needs to Improve Its Oversight of Contractors' Performance**

CBP's current equipment maintenance process begins and ends with support or service contractors performing various tasks. However, CBP does not perform any independent assessments of the service contractors' performance or verify the accuracy of data on work completion forms. Furthermore, CBP uses this data to determine whether service contractors met performance measures.

CBP uses contractual performance measures such as repeat equipment failures, operational availability of equipment, and customer wait time for completion of repairs to evaluate the quality and responsiveness of contractors' preventive and corrective maintenance services. All contracts used in FY 2014 (except the Interagency Agreement) included these performance measures that contractors must meet.

CBP relies on different contractors for coordination and execution of its NII equipment maintenance program. The support contractors coordinate maintenance activities at CBP's NII helpdesk while service contractors perform preventive and corrective maintenance on NII equipment. Preventive maintenance refers to planned and regularly scheduled maintenance performed to maintain equipment functionality; whereas, corrective maintenance refers to the diagnosis and repair of unexpected equipment malfunctions. As shown in appendix C, support contractors create maintenance work orders for preventive and corrective maintenance in the Maximo Asset Management System (MAXIMO), which is used to manage maintenance activity and data for its NII equipment.

After support contractors create the work orders, they contact appropriate service contractors, who coordinate with field locations, for maintenance services. While at field locations, service contractors report changes in operational status of NII equipment. Upon completion of the work, service contractors submit forms that document work performed, parts replaced, time completed, and contact information of a port official. Support contractors update and close work orders in MAXIMO based on service contractors' work completion forms.

Without an independent assessment of service contractors' performance or verification of the accuracy of submitted data, CBP has no assurance that contractors have met contractual requirements and manufacturers' specifications.

#### Limited Contractor Performance Evaluations

CBP required service contractors to obtain the contact information of a port official upon completion of maintenance services. However, this does not provide CBP assurance that the service contractors performed the maintenance



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in accordance with manufacturers' specifications. Furthermore, a port official may not be able to verify the accuracy of the service contractors' work. According to 16 of the 18 field locations we visited, field officials said they provided their contact information to confirm that the contractor performed a maintenance service and restored the equipment to an operational status, not that the service contractors performed maintenance as contractually required or according to manufacturers' specifications.<sup>2</sup>

To assess the service contractors' performance, CBP developed quality assurance surveillance plans (QASP) as a mechanism for CORs to measure performance. The QASP requires CORs to track and document surveillance results, complete quality assurance checklists, and periodically review various performance reports. Although four of the six contracts we reviewed contained a QASP, the CORs did not use the methods within the QASP to document, monitor, and analyze the service contractors' performance. Rather CBP relied solely on the contractor-submitted data in its MAXIMO system to assess contractor performance. The remaining two contracts and the interagency agreement did not include a QASP.

### Lack of Data Reliability Assessment

CBP does not perform reliability assessments on maintenance data generated by support and service contractors. In the past, the Office of Information and Technology's quality assurance section, led by an NII COR, sent corrective maintenance surveys to field locations for feedback regarding contractors' performance. Although this provided CBP independent information regarding its service contractors, according to CBP, it currently no longer conducts these surveys. It now relies on the service contractor-submitted work order data and reports to assess its service contractors' performance. For instance, CBP used contractor-submitted data from its MAXIMO system to determine that the contractors exceeded the 95 percent requirement for operational availability of the NII equipment. CBP made this determination without performing any validation or verification of this data.

## Recommendation

**Recommendation:** We recommend that the Assistant Commissioner, Office of Information and Technology develop a methodology and implement a plan to monitor and periodically review support and service contractors' performance. The plan should include verification and validation steps for contractor-submitted maintenance data.

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<sup>2</sup> We visited 18 field locations where 3 had multiple operations, which included 2 agriculture and 1 international mail facility.



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### Management Comments and OIG Analysis

In its response to our draft report, CBP reported that it is committed to the NII program and agrees with our report recommendation. Specifically, CBP will take the following actions to address the recommendation:

1. Restart the Office of Information Technology's Enterprise Networks & Technology Support Directorate/Integrated Logistics Branch (ILB) random repair customer service inquiries and metrics as performed previously prior to Maximo Asset Management System migration by March 31, 2015.
2. Draft and incorporate Quality Assurance Surveillance Plans to contract activities presently lacking by June 30, 2015.
3. Dedicate a cognizant ILB government employee to perform existing QASP inspections and metrics by March 31, 2015.

OIG Analysis: We consider CBP's proposed actions responsive to our report recommendation. It will remain open and resolved pending completion of the corrective actions identified above.

### Objective, Scope, and Methodology

The Department of Homeland Security, Office of Inspector General was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one of a series of audit, inspection, and special reports prepared as part of our oversight responsibilities to promote economy, efficiency, and effectiveness within the Department.

We conducted an audit of CBP to determine whether corrective and preventive maintenance is being performed on CBP's screening equipment in accordance with contractual requirements and manufacturers' specifications. To achieve our objective, we interviewed CBP headquarters officials, CORs, and field personnel. We also visited and observed NII operations at six land border crossings, four border patrol checkpoints, four seaport terminals, and one airport. We reviewed policies and procedures, contractor performance data, contract documents, work order data, NII daily and monthly reports, and NII equipment inventory data regarding NII equipment maintenance processes. We performed limited data reliability tests on the data received from CBP, as it was not the basis for our report finding and recommendation.

We conducted this performance audit between June and November 2014 pursuant to the *Inspector General Act of 1978*, as amended, and according to generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to



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provide a reasonable basis for our findings and conclusions based upon our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objective.

The Office of Audits major contributors to this report include Brooke Bebow, Director; LaParacina Williams, Audit Manager; Kevin King, Auditor-in-Charge; Virginia Feliciano, Johnson Joseph, and LaTrina McCowin, Auditors; Kevin Dolloson, Communications Analyst; and Anne Mattingly, Independent Referencer.



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## Appendix A CBP Comments to the Draft Report

1300 Pennsylvania Avenue NW  
Washington, DC 20229

FEB 27 2015



U.S. Customs and  
Border Protection

MEMORANDUM FOR: Mark Bell  
Assistant Inspector General  
Office of Audits

FROM: Eugene H. Schied  
Assistant Commissioner  
Office of Administration

SUBJECT: CBP Response to OIG Draft Report – CBP’s Oversight of its Non-Intrusive Inspection Equipment Maintenance Contracts

Thank you for the opportunity to review and comment on the Department of Homeland Security (DHS), Office of the Inspector General (OIG) draft report entitled, “CBP’s Oversight of its Non-Intrusive Inspection Equipment Maintenance Contracts Needs Improvement,” (14-124-AUD-CBP). U.S. Customs and Border Protection (CBP) appreciates OIG’s work in planning and conducting its review and issuing this report.

We are pleased to note OIG’s recognition that CBP’s Non-Intrusive Inspection (NII) program is vital to securing the Nation’s borders while facilitating efficient flow of legitimate trade and travel. CBP is committed to the NII Program and accordingly we concur with the OIG’s recommendation. Please see below for the specific OIG recommendations, as well as CBP’s response and corrective action plans.

**Recommendation 1:** We recommend that CBP develop a methodology and implement a plan to monitor and periodically review contractors’ performance. The plan should include verification and validation steps for contractor submitted maintenance data.

**Response:** Concur. The Office of Information and Technology (OIT) will take the following actions to address the recommendation:

1. Restart OIT/Enterprise Networks & Technology Support Directorate /Integrated Logistics Branch (ILB) random repair customer service inquiries and metrics as performed previously prior to Maximo Asset Management System migration. Expect to complete by March 31, 2015.
2. Draft and incorporate Quality Assurance Surveillance Plans (QASP) to contract activities presently lacking. Expect to complete by June 30, 2015.
3. Dedicate a cognizant ILB government employee to perform existing QASP inspections and metrics. Expect to complete by March 31, 2015.

**Estimated Completion Date:** June 30, 2015



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CBP Response to OIG Draft Report - CBP's Oversight of its Non-Intrusive Inspection  
Equipment Maintenance Contracts  
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CBP remains committed to improving its program effectiveness and looks forward to working with you on future homeland security matters. Technical comments have been provided under separate cover.

If you have any questions, or would like any additional information, please contact me at (202) 344-2300, or have a member of your staff contact Ms. Kathy Dapkins, CBP Audit Liaison, Management Inspections Division at (202) 325-7732.



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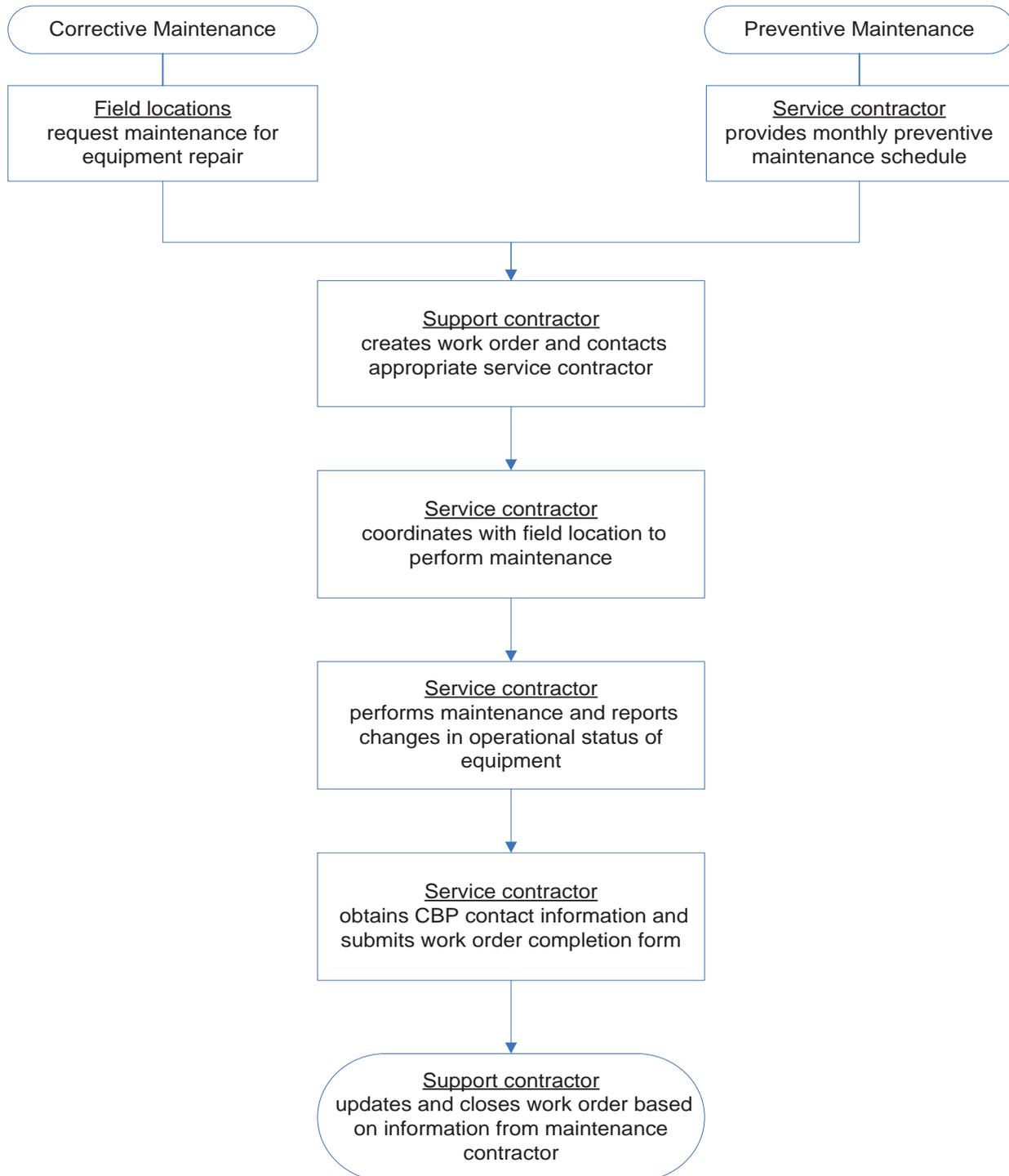
## Appendix B NII Maintenance Contracts

Contract Type	Contractor	Equipment Type	Quantity	FY 14 Cost
Firm-Fixed-Price	Varian Medical Support Services	X-RAY	7	\$1,418,842
Firm-Fixed-Price	American Science & Engineering	X-RAY	225	\$11,498,027
Firm-Fixed-Price	Smiths Detection Support Services	X-RAY	90	\$14,413,778
		RadSeeker	389	
Firm-Fixed-Price	Rapiscan Systems Support Services	X-RAY	284	\$11,304,734
		Portal GaRD	5	
Firm-Fixed-Price	Leidos, Inc.	RIID	1,156	\$29,950,208
		Mobile RPM	59	
		RPM Lanes	1,100	
		VACIS	142	
Cost-Plus-Fixed-Fee	Chenega Technology Services Corporation (CTSC)	RIID	1,320	\$16,583,158
		Buster	1,859	
		Fiberscope	1,064	
		Itemiser	61	
		Radmeter	32	
		LRF	767	
		Mobile Ramp Sys	12	
		Mobile Signal Sys	12	
		PRD	27,842	
		RadSeeker	231	
		RPM Lane	290	
		Survey Meter	241	
		Tool Truck	94	
		Vapor Tracer	159	
		X-RAY	17	
Interagency Agreement	Pacific Northwest National Laboratory	RPM Lanes	1,449*	\$5,271,985
<b>Grand Total</b>			<b>37,458**</b>	<b>\$90,440,732</b>
*RPM Lanes supported by the Interagency Agreement, primarily for calibration purposes, are also supported by CTSC or Leidos contracts for maintenance services, and not included in the Grand Total quantity.				
**This number is not reflective of total NII equipment inventory.				

Source: DHS OIG compiled from contract data provided by CBP.



## Appendix C NII Equipment Maintenance Process Flowchart



Source: DHS OIG review of policies and NII maintenance contracts.



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### **Appendix D** **Report Distribution**

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