



Tactical Communications Modernization Program

Program Specific Recovery Act Plan
May 15, 2009



Homeland
Security

U.S. Customs and Border Protection

Message from the CBP Senior Accountability Official

May 15, 2009

I am pleased to present the following report, “U.S. Customs and Border Protection Tactical Communications Modernization Recovery Act Plan.”

This document has been completed in response to the Office of Management and Budget (OMB) *Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009, M-09-15*, which provides guidance for carrying out programs and activities enacted in the American Recovery and Reinvestment Act (“Recovery Act”) of 2009. Agencies are required to submit separate Recovery Program Plans for each program funded by the Recovery Act. This plan summarizes the Recovery Act projects and activities planned for Tactical Communications Modernization.



CBP would be pleased to respond to any questions you may have. Please do not hesitate to contact me at (202) 344-2300.

Sincerely,

Eugene H. Schied
Chief Financial Officer

Executive Summary

The purpose of this plan is to provide information on the activities of the CBP Tactical Communications Modernization program which has been dedicated funding by the American Reinvestment and Recovery Act (ARRA). The plan contains an overview of the activities, monitoring/evaluation, delivery schedule, and spend plan for these activities. Additional information is included to provide a snapshot of how the program will ensure the funding is used wisely with extensive accountability.

CBP has been planning an enterprise-wide Tactical Communications Modernization project to upgrade Land Mobile Radio systems used by nearly 40,000 Office of Border Patrol, Office of Field Operations, and CBP Air and Marine law enforcement agents and officers in the course of their duty to protect the Nation's borders. Many agents and officers work in remote areas where commercial communications do not exist, and their radios are their only connection to colleagues and Headquarters. However, existing LMR systems are stove-piped (they were established by the legacy agencies that predated CBP, and were never intended to interoperate); antiquated (many of the systems were purchased in the 1970s and 80s, are decades past their expected lifecycle, and are difficult to maintain because spare parts are not readily available); and fail to meet CBP operational and functional requirements.

In response to this challenge, CBP is working to modernize existing LMR systems with state-of-the-art digital technology that complies with Project 25 (P25) standards.¹ The modernization will provide narrowbanding, Advanced Encryption AES encryption² to protect radio communications from scanning, and Global Positioning System (GPS)-supported Blue Force Tracking to track agent and officer location and safety. CBP also seeks to expand coverage to minimize the risk of agents operating without tactical voice communications. At this point, CBP is focused on LMR as the sole technology that can meet the mission needs of its law enforcement agents and officers.

This plan addresses important management approaches (e.g., activities, schedule, measures, and transparency) that is required of the recipients of ARRA funding. The table below is a summary of the activities that will be performed using ARRA funding.

¹ Project 25 (P25) is a standard for the manufacturing of interoperable digital two-way wireless communications products. Developed in North America under state, local and federal representatives and Telecommunications Industry Association (TIA) governance, P25 is gaining worldwide acceptance for public safety, security, public service, and commercial applications. The published P25 standards suite is administered by the Telecommunications Industry Association (TIA Mobile and Personal Private Radio Standards Committee TR-8). Radio equipment that [demonstrates compliance](#) with P25 is able to meet a set of minimum requirements to fit the needs of public safety. These include the ability to interoperate with other P25 equipment, so that users on different systems can talk via direct radio contact.

The P25 standard was created by and for public safety professionals.
<http://www.project25.org/modules.php?name=Content&file=viewarticle&id=2>

² The Federal Information Processing Standards (FIPS) Publication 197 authorizes use of AES encryptions for sensitive (unclassified) information (as defined in P. L. 100-235) that requires cryptographic protection.

Activity	Description
Houlton Tactical Communications Modernization	Completes radio frequency (RF) site infrastructure upgrades, National Environmental Protection Act evaluations, communications equipment purchase and installation, testing, and training on the modernized Houlton system.
El Paso Tactical Communications Modernization	Purchases a portion of the civil infrastructure equipment needed to modernize the focus area.
Internet Protocol (IP) Communications Console Upgrades	Transitions dispatch operator equipment to an IP-based functional and capability that will position CBP tactical communications systems to transition to the DHS OneNet. (The DHS OneNet is a single network that will support a global communications environment for information sharing and collaboration among DHS components.)
IP Infrastructure Upgrades	Upgrades radio hub in preparation for IP based technology enhancements that will position CBP for DHS OneNet on ramp.

CBP Tactical Communications modernizations were underway prior to the availability of ARRA funding and the project is in direct alignment with the general provisions of the ARRA specific to infrastructure investments, deployment of tactical communications equipment, and expedient benefits to CBP officers and agents and the general public.



Tactical Communications Modernization Program

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I. Legislative Requirement

This document responds to the requirements of the American Recovery and Reinvestment Act (“ARRA,” P.L. 111-5), which includes the following provision:

For an additional amount for “Salaries and Expenses”, \$160,000,000, of which \$100,000,000 shall be for the procurement and deployment of non-intrusive inspection systems; and of which \$60,000,000 shall be for procurement and deployment of tactical communications equipment and radios: Provided, That no later than 45 days after the date of enactment of this Act, the Secretary of Homeland Security shall submit to the Committees on Appropriations of the Senate and the House of Representatives a plan for expenditure of these funds.

This document also responds to the requirements set forth in the Office of Management and Budget Memorandum M-09-15, *Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009*.

II. Funding

The tables below reflect estimated monthly obligations and outlays.

TAFS	Appropriated to TAFS (\$000)	Program Allocations				Planned Obligations and Gross Outlays (000s)						
		BA Allocation (\$000)	Program Name	Funding Type	Funding Year	FY09						
						Apr	May	Jun	Jul	Aug	Sep	
Customs and Border Protection 70 9/10 0556	\$ 60,000	\$ 60,000	Tactical Communications	Obligation	2009			\$ 19,977	\$ 12,170	\$ 4,743		
				Outlay	2009						\$ 3,730	

TAFS	Appropriated to TAFS (\$000)	Program Allocations				Planned Obligations and Gross Outlays (000s)											
		BA Allocation (\$000)	Program Name	Funding Type	Funding Year	FY10											
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Customs and Border Protection 70 9/10 0556	\$ 60,000	\$ 60,000	Tactical Communications	Obligation	2009	\$ 20,500		\$ 2,610									
				Outlay	2009			\$ 7,829			\$ 6,085			\$ 12,171			\$ 9,561

TAFS	Appropriated to TAFS (\$000)	Program Allocations				Planned Obligations and Gross Outlays (000s)											
		BA Allocation (\$000)	Program Name	Funding Type	Funding Year	FY11											
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Customs and Border Protection 70 9/10 0556	\$ 60,000	\$ 60,000	Tactical Communications	Obligation	2009												
				Outlay	2009			\$ 1,744			\$ 1,744			\$ 9,561			\$ 7,575

III. Objectives

The goal of the CBP Tactical Communications Modernization project is to provide CBP personnel agencies (Office of Border Patrol [OBP], Office of Field Operations [OFO]), and CBP Air and Marine [A&M]) with an upgraded Land Mobile Radio (LMR) communications system, while complying with the Federal mandates of the Project 25 (P25) standards. These LMR systems are a primary communications lifeline, and critical to mission execution and officer safety.

Nearly 40,000 law enforcement agents and officers use LMR systems in the course of their duty to protect the Nation's borders. Many agents and officers work in remote areas where commercial communications do not exist, and their radios are their only connection to colleagues and Headquarters (HQ). However, Agency mission is currently challenged by existing LMR systems that are antiquated and fail to meet CBP operational and functional requirements. As a result, they leave critical coverage gaps, lack Advanced Encryption Standard (AES) encryption, and must accept interference from other systems because they are not compliant with the National Telecommunications and Information Administration (NTIA) narrowband mandates. In addition, the existing infrastructure lacks the capacity to accommodate the large influx of new agents and officers expected on the southwest border and elsewhere.

CBP will be able to accomplish its Tactical Communications goal by utilizing ARRA funds to modernize existing LMR systems with state-of-the-art digital technology that complies with Project 25 (P25) standards, and provides for narrowband, AES encryption, and Global Positioning System (GPS)-supported Blue Force Tracking. CBP also seeks to expand coverage to minimize the risk of agents operating without tactical voice communications. The modernization effort will result in a robust, secure communications system that will allow CBP to interoperate with public sectors of law enforcement to ensure day-to-day operational missions are achieved. This upgrade benefits the American public through its support of DHS Strategic Goal 2.1: Secure borders against terrorists, means of terrorism, illegal drugs, and violations of trade and immigration laws.

IV. Activities

Below are the specific activities that will be engaged using ARRA funding.

Activity	Description	Performance Measures
Houlton Tactical Communications Modernization	Completes RF site infrastructure upgrades, National Environmental Protection Act evaluations, communications equipment purchase and installation, testing, and training on the modernized Houlton system.	<ul style="list-style-type: none"> ▪ 100% of coverage requirements met, as designated by agent and officer requirements ▪ 100% of agents operating with narrowband, digital P25 radios ▪ 100% of agents able to use AES encryption to protect their voice communications
El Paso Tactical Communications Modernization	Purchases a portion of the civil infrastructure equipment needed to modernize the focus area.	<ul style="list-style-type: none"> ▪ 20% of civil infrastructure purchased
Internet Protocol (IP) Communications Console Upgrades	Transitions CBP Tactical Communications hub dispatch operator equipment to an IP-based functional and capability that will position CBP tactical communications systems to transition to the DHS OneNet	<ul style="list-style-type: none"> ▪ 100% dispatch operator equipment installed
IP Infrastructure Upgrades	Upgrades CBP Tactical Communications hub in preparation for IP based technology enhancements that will position CBP tactical communications systems to transition to the DHS OneNet.	<ul style="list-style-type: none"> ▪ 100% of equipment and circuits that are IP enable

V. Characteristics

The Table below shows estimated costs for the financial resource allocation of the \$60M ARRA funds for Customs and Border Protection Tactical Communication Program.

Source of Funds Summary		Previous	Type of Financial
		Direct ARRA Funding	Award
Funding Sources		(\$Ms)	
Direct ARRA		\$ 60.00	
Total Available Funds		\$ 60.00	
Estimated Uses of Funds		(\$Ms)	
Houlton	Complete RF site infrastructure upgrades, National Environmental Protection Act (NEPA) evaluations, communications equipment purchase and installation, testing, and training on the modernized Houlton system.	\$ 45.22	Contract
El Paso	Purchase a portion of the civil infrastructure equipment	\$ 2.61	Contract
IP Communications Console Upgrades	Transitions dispatch operator equipment to an IP-based functionality and capability. Positions for DHS OneNet on-ramp.	\$ 6.98	Contract
IP Infrastructure Upgrade	IP Infrastructure Upgrade: Requirement to upgrade radio hub in preparation for IP based technology enhances. Positions for DHS OneNet on-ramp.	\$ 5.19	Contract
Total Uses of Funds		\$ 60.00	
Remaining Funds		\$ -	

VI. Delivery Schedule

Milestone	Planned Date	Notes
P-25 Tactical Communications Construction and Deployment (Houlton)		
Obtain DHS approval of the FY09 Acquisition Plan and Acquisition Decision Memorandum	Est. Sept-09	Critical Milestone
Obtain FONSI	June-09	Critical Milestone
Complete site lease negotiations for 2009 construction season sites	Sept-09	Critical Milestone
Complete civil infrastructure build-out on 2009 construction season sites	Nov-09	
Complete site lease negotiations for 2010 construction season sites (all remaining sites)	Mar-10	Critical Milestone
Complete civil infrastructure build-out on 2010 construction season sites	Aug-10	
Complete systems implementation, testing, and acceptance	Mar-11	(Estimated)

The Houlton Modernization project is already underway, with system design completed and an initial \$15 million available to execute the detailed engineering surveys needed to schedule the civil infrastructure build-out of the initial batch of RF sites in the Houlton system design, as well as to conduct requisite National Environmental Protection Act (NEPA) analysis. The ARRA funding will be obligated to cover the civil infrastructure work that remains unaddressed by the initial \$15 million, as well as to purchase, implement, optimize, and test the communications infrastructure equipment and to train users. CBP will be able to obligate ARRA funding for these purposes once its Acquisition Plan is approved. At that time, CBP will be able to construct a complete WBS and schedule to cover the remainder of the Houlton project.

The following notes are particularly cogent to the project schedule:

- CBP is working with external stakeholders and the CBP Environmental Division to complete the NEPA analysis required for the system, and hopes to achieve a Finding of No Significant Impact (FONSI) statement by June 30, 2009. The FONSI is a requirement for CBP to enter into lease agreements, and thus to begin site development activities.
- Site lease negotiation is a separate external dependency that can impact project schedule. CBP is currently engaging site owners to begin lease negotiations in order to expedite lease signing once the FONSI is complete.
- Limited construction season. Seasonal conditions in Houlton limit CBP's ability to plan construction between October and March; delays in either the FONSI approval or site leases that move into this period can therefore affect the overall project schedule by several months. CBP will use the non-construction period to continue site lease negotiations for sites planned for the 2010 construction season.
- CBP is still in the preliminary stages of determining its plan for the IP Console and Infrastructure Modernization. It is gathering quotes from vendors and evaluating options. Once an award decision is made, CBP will acquire a project plan from the vendor and provide to the overall project plan.

VII. Environmental Review Compliance and Federal Infrastructure Investments

Environmental Review Compliance:

CBP's TacCom program will comply with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), and related statutes for the proposed modernization to the LMR systems.

NEPA and Council on Environmental Quality regulations implementing NEPA direct CBP to fully understand, and consider during decision making, the environmental consequences of proposed federal actions (projects). CBP policies related to environmental planning and historic preservation require compliance with all federal, state, and local laws and regulations, Executive Orders and DHS directives for the protection of the human and natural environment. In accordance with these requirements, CBP will comply with all environmental planning and historic preservation requirements associated with the modernization of LMR systems.

CBP is currently in the process of preparing an Environmental Assessment (EA) for LMR systems upgrades within the Houlton Sector to analyze potential impacts to the human and natural environments associated with the proposed infrastructure modernization within Houlton Sector. In compliance with NEPA and NHPA, CBP will conduct architectural and archeological surveys to identify cultural and historical resources of significance. CBP will consult with State Historic Preservation Offices, coordinate potentially impacted federally recognized tribal nations, and engage local stakeholder groups to determine impacts to sites that are listed on, or potentially eligible for listing on, the National Register of Historic Places. Similarly each site will be surveyed for the presence of threatened or endangered species and will consult with the U.S. Fish and Wildlife Service in accordance with the ESA. Potential impacts to these sensitive resources will be analyzed in the EA.

If during the course of installation or operations of the systems CBP discovers that sensitive historical, archeological, or biological resources could be impacted, project operations will be suspended and the appropriate authorities consulted.

In addition to complying with environmental regulations, CBP will work with vendors to ensure that the project is executed in an environmentally friendly and sustainable fashion. This will include compiling data on such factors as the purchase of energy efficient products, alternative energy sources, and other data needed to complete the DHS environmental sustainability matrix, shown below.

ARRA ENVIRONMENTAL COMPLIANCE

	<i>Project Data</i>				
	1	2	3	4	5
PROJECT NAME					
ARRA Unique ID Number					
Project Objective					
Project Description					
ELECTRONIC PRODUCT ENVIRONMENTAL ASSESSMENT TOOL (EPEAT)					
Bronze					
Silver					
Gold					
Non EPEAT purchases where EPEAT products were available					
ENERGY STAR PRODUCTS					
Quantity					
Costs					
Non Energy Star purchases where Energy Star products were available (Quantity)					
Non Energy Star purchases where Energy Star products were available (Costs)					
FEMP LABELED/APPROVED PRODUCTS					
Quantity					
Costs					
Non FEMP purchases where FEMP products were available (Quantity)					
Non FEMP purchases where FEMP products were available (Costs)					
GREEN PURCHASING					
Recycled content products					
USDA designated biobased products					

Metering					
Solar Hot Water					
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)					
Registration goal					
Registration attained					
LEED POINTS EARNED					
LEED points goal					
LEED points attained					
Site credits					
Indoor Air Quality					
Materials					
Water					
Energy					
Innovation					

VIII. Measures

Performance measures for the Houlton modernization are based on the improvements based on the system – increased coverage, narrowband compliance, AES encryption, and GPS tracking capability. The nature of a tactical communications system modernization is such that the benefits are realized once the modernization project is complete; they are not realized in increments that can be measured in periodic intervals. Measures for tactical communications modernization include:

- 100 percent of coverage requirements met, as designed by the Requirements Traceability Matrix
- 100 percent of agents operating with narrowband, digital P25 radios
- 100 percent of agents able to use AES encryption to protect their voice communications.

IX. Monitoring/Evaluation

The Tactical Communications modernization program will be monitored and evaluated by various internal and external evaluation teams. The objective of these efforts is to ensure the appropriate level of government oversight, risk identification and mitigation, and ensure accountability for decisions made by the program’s leadership. Monitoring and evaluation will be obtained through the following mechanisms:

- CBP Executive Steering Committee composed of senior executives representing the CBP Office of Information and Technology, Office of Border Patrol, Office of Field Operations, and Air and Marine. The ESC also includes Secure Border Initiative Program office representatives.

- CBP Wireless Steering Committee chartered to provide guidance and oversight on enterprise wide CBP tactical communications initiatives.
- CBP OIT program management reviews, held quarterly, that will gauge the scope, schedule, and performance of the progress made for the project.
- Regular focus area site visits by CBP project managers to validate the performance of the modernization efforts.

X. Transparency

CBP, through DHS, has a link at the www.recovery.gov web site that requires financial data related to ARRA funding to be submitted on a regular basis. CBP’s enterprise wide financial system, utilizing SAP software, integrates budget, accounting, procurement and property data. As a result we are in a strong position to quickly and accurately provide financial and performance data. The Tactical Communications program will provide its program cost and performance information through the Department. This program does not involve the utilization of grant processing.

XI. Accountability

CBP’s financial system and processes will provide a strong capability to measure performance against Recovery Act goals, in particular measures of obligated, expended and undelivered. Consequently we will be able to monitor our financial performance in an accurate and timely manner and identify any issues quickly. In addition, our system gives us the same ability to measure actual performance regarding competitive procurement activity.

XII. Barriers to Effective Implementation

CBP notes that there are several external dependencies that could impact the TacCom projected delivery schedule. The following lays out some of the particular schedule challenges inherent to an LMR modernization project, and the actions being taken to address them:

External Dependency	Explanation
Spectrum	Modernized systems require new frequency licenses. All requests for new frequencies must be approved by the Interdepartment Radio Advisory Committee (IRAC) at the National Telecommunications Information Administration (NTIA). Frequencies to be deployed in Houlton within 75 miles of the Canadian border require approval from the Canadian government. The project continues to work through appropriate channels to complete its Houlton spectrum acquisition.
Site leasing	Where possible, CBP tries to meet coverage requirements by renting space at existing RF sites. The schedule is then dependent on the site owners signing the lease agreement. Different lessor types (e.g., commercial, tribal, private citizen) require different types of expertise for lease negotiation, and some negotiations become protracted.

External Dependency	Explanation
	<p>CBP is also reaching out to State governments to establish partnerships for infrastructure sharing at State-owned RF sites. CBP does not have statutory authority to use Federal funds to improve State property; that can be done only through a grant process, which transfers the money directly to the State and thus removes it from the control of TacCom project management. CBP is currently pursuing site lease strategies to support its ability to enter into infrastructure sharing ability with State governments.</p> <p>CBP will build out new RF sites only as a last resort to meeting the operation needs of the law enforcement agents and officers. CBP will leverage all existing commercial, federal, state, local and tribal towers or will solicit bids to build and then lease towers, before making any decisions to construct new towers.</p>
NEPA	<p>CBP is committed to executing the TacComm in full compliance with NEPA and related statutes for protecting environmentally and historically sensitive areas. The NEPA process requires CBP to coordinate with outside agencies (e.g., Bureau of Land Management, U.S. Fish and Wildlife Service) as well as State Historic Preservation Offices, the public, and other organizations. This coordination introduces external dependencies that could impact our project schedule. TacCom work to select sites that have minimal environmental impact while meeting operational requirements, and proactively reach out to agencies that will be involved in the NEPA process.</p>
Seasonal constraints	<p>Many RF sites along the northern border are inaccessible for up to six months per year due to snow and ice conditions.</p>