



THE FEDERAL BUREAU OF INVESTIGATION'S IMPLEMENTATION OF THE LABORATORY INFORMATION MANAGEMENT SYSTEM

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EXECUTIVE SUMMARY

The Federal Bureau of Investigation's (FBI) laboratory is one of the largest and most comprehensive forensic laboratories in the world. The laboratory, which conducts over one million examinations of physical evidence annually, supports FBI investigations and provides forensic and technical services to other federal, state, and local law enforcement agencies. The FBI manages the flow of evidence through the laboratory in a largely paper-based process, with a limited "in-and-out" database that shows when an item enters the laboratory for testing, when analyses are performed, and when the item leaves the laboratory. However, the FBI cannot readily determine where the evidence is during the examination process and what work remains to be completed. The FBI also does not have the capability to generate statistical reports to help manage laboratory operations, such as how long it takes to examine evidence or where delays might occur.

To provide a modern information system that would allow the FBI to better track and manage evidence as it passes through the laboratory, the FBI's Laboratory Division awarded a \$1.6 million contract, with 4 additional option years for a total of \$4.3 million, to JusticeTrax, Inc. in September 2003. The contract was to provide the FBI with JusticeTrax's commercial off-the-shelf (COTS) Laboratory Information Management System (LIMS).¹ The JusticeTrax LIMS was intended to allow the tracing and tracking of evidence using bar-code technology and provide a variety of reporting capabilities.

However, after many delays and extensive customization of the COTS LIMS, the system was unable to meet the FBI's security requirements. In January 2006, the FBI notified JusticeTrax that the FBI had terminated the LIMS contract. In March 2006, the FBI and JusticeTrax agreed to a settlement that terminated the LIMS contract, resulting in an overall loss to the FBI of \$1,175,015.

¹ The JusticeTrax product is known as LIMS-plus, but we refer to the system as LIMS throughout this report.

The OIG performed this audit to determine the status of the LIMS project, assess the Information Technology Investment Management (ITIM) processes and other management controls over the project, and determine the overall project costs. We found that the LIMS project was poorly managed. In addition, JusticeTrax was unable to meet the FBI's more rigorous requirements implemented as a result of information technology (IT) system security breaches. With LIMS not able to obtain security certification and accreditation, coupled with other disadvantages such as the delayed implementation of a web-browser interface, the FBI terminated the contract. Although the FBI has now improved ITIM processes through its Life Cycle Management Directive (LCMD) and has established other improved controls, the failure of the system results in the FBI laboratory continuing to operate without an effective information system to adequately trace the flow of evidence through the laboratory.

Background

To track evidence arriving and leaving the laboratory, the FBI continues to use the Evidence Control System (ECS) that was created in 1978 and converted into a database in 1998. The FBI uses the ECS to record when an item of evidence is received by the laboratory for analysis, when analyses are performed, and when the item is released by the laboratory back to its originator. In comparison to the ECS's limited database, a modern laboratory information system can provide a much greater level of functionality, including: the ability to trace evidence throughout the analysis process; Internet capabilities that allow external agencies to review and request information about evidence they have submitted; extensive reporting, workload analysis, and responses to ad-hoc querying; and data searching regarding the disposition of evidence.

FBI's LIMS Project

In 1998, the FBI's Laboratory Division hired a contractor to develop requirements for a more functional information system. However, the implementation of such a system was not fully funded until the Laboratory Division reprogrammed money from its own projects to fund the development in 2002. By this time, the system requirements needed to be upgraded. In February 2003, the FBI issued a Request for Proposal (RFP) for a laboratory information management system.

The FBI received six responses to the RFP. Cost and technical committees comprised of personnel from the FBI's Finance and Laboratory Divisions evaluated the proposals. In September 2003, the FBI awarded JusticeTrax, Inc., of Mesa, Arizona, a \$4.3 million firm-fixed-price contract to provide its LIMS product to the FBI.² The FBI selected JusticeTrax because it submitted the lowest cost bid and had an exceptional technical evaluation. According to JusticeTrax's proposed project plan, LIMS installation, training, and roll-out would be completed in December 2003, 90 days from the contract award.

Schedule Delays

Although JusticeTrax planned to install the LIMS software within 90 days of the September 2003 contract award, a number of problems arose: (1) JusticeTrax's president was a foreign national and thus not eligible to be involved in the development of the software for the FBI; (2) all JusticeTrax personnel lacked security clearances; and (3) although extensive software customization was required to meet FBI requirements, the LIMS used an outdated programming language that made modifying the software difficult and time-consuming.

The RFP for the information system stated that non-U.S. citizens may not have access to or be involved in the development of any Department of Justice IT system. By signing the contract or commitment document, the contractor agreed to this condition, even though the JusticeTrax president was not a U.S. citizen. However, after a security assessment, the FBI determined the risk was low and decided to continue with JusticeTrax. In April 2004, the JusticeTrax president signed a non-disclosure agreement to not access or assist in the development, operation, management, or maintenance of the FBI's LIMS. In September 2004, 1 year after the contract was signed, the JusticeTrax president became a U.S. citizen and the non-disclosure agreement was rescinded.

Another obstacle to the timely implementation of the LIMS system was the lack of security clearances for JusticeTrax employees. The background investigations to obtain security clearances took from 3 to 8 months.

² The contract included a base year award of \$1.6 million and four additional 1-year option contracts. The base year was September 2003 to September 2004. The contract also included cost-reimbursable delivery orders to convert the legacy ECS data to the new LIMS-plus system.

The third problem was the FBI's numerous customization requests to tailor LIMS to the FBI's specific needs. The customization was a slow process because the JusticeTrax LIMS relies on an aging code format, Visual FoxPro.³ While Visual FoxPro is outdated, it is still compatible with today's technology. However, according to FBI personnel, Visual FoxPro is difficult and slow to customize compared to newer programming languages. While the extent of customization was the main obstacle, having to use the old code increased the delays.

FBI's Project Controls

The FBI had no management control structure in place for LIMS such as establishing firm cost, schedule, technical, and performance benchmarks. The FBI also did not have a specific IT project manager for the LIMS project. Instead, the FBI relied on two contracting personnel to oversee the project as part of their contract-related duties. However, about 4 months after the FBI awarded the LIMS contract, there was turnover in these two key positions.

The FBI awarded the LIMS contract prior to the development and implementation of the FBI's Life Cycle Management Directive. However, upon the LCMD's implementation in November 2004, the FBI required all IT projects to follow the LCMD and meet the requirements for the stage of development the project had achieved. In May 2005, over a year after the LIMS was to be implemented, the FBI's Information Management Project Review Board (IMPRB), one of the FBI's IT investment boards, reviewed the LIMS project. During this review, Laboratory officials explained that although there were delays in implementing LIMS, the system could function and JusticeTrax had completed training the system's users. However, LIMS had not yet achieved all of the FBI's requirements, such as being a web-based system, and it was unlikely that the project would pass the FBI's certification and accreditation (C&A) testing to ensure the security of the system. FBI officials agreed that if the project could not pass C&A, then the project should be cancelled. An IMPRB member recommended that a Red Team be assembled to review the procurement and consider alternatives.⁴

³ Visual FoxPro, first developed by Fox Software in 1984, is a programming language used to develop database applications.

⁴ Red Teams review and advise on FBI IT projects that miss cost, schedule, or performance thresholds.

The Red Team included members from the FBI's Laboratory Division, Office of General Counsel, Office of the Chief Information Officer (CIO), Finance Division, and ITOD. The Red Team review began in July 2005, and the team presented its findings, conclusions, and recommendations to the FBI's CIO in October 2005. The Red Team recommended terminating the JusticeTrax contract because the LIMS system could not pass C&A, and additional work would not rectify the security weaknesses. In addition to the lack of a web-browser interface, identified deficiencies included several security vulnerabilities related to the lack of auditable records, insecure transmission between client and server, and a technical architecture that did not meet chain-of-custody requirements. In lieu of LIMS, the Red Team suggested the FBI use a standard COTS workflow software package already licensed to the FBI.

The FBI's CIO stated the LIMS contract was awarded before the FBI's IT investment management controls were implemented, and that LIMS is an example of the success of the FBI's new ITIM processes because the problems with the project were quickly identified for resolution based on the IMPRB review.

Certification and Accreditation

The C&A program is the FBI's management control for ensuring the adequacy of computer system security. The FBI's Security Division tests the security of all new IT systems and approves the C&A if it deems a system secure. The testing ensures that the FBI's IT systems have an approved baseline security configuration and that the systems present little or no risk to FBI systems or data. The FBI required the C&A process to be completed and approval to operate the system be obtained from the Security Division before the LIMS system could be made operational. Although the RFP included the requirement for security to be part of the system, specific guidance on the LCMD C&A requirements had yet to be established at the time the contract was awarded and was not provided to JusticeTrax until August 2005 when the FBI provided the results of the FBI Security Division's LIMS Certification Test Report to JusticeTrax. The C&A testing delayed and then prevented the implementation of LIMS, and it ultimately led to the termination of the contract.

In September 2005, the Security Division began system testing, which resulted in a Certification Test Report identifying 14 security vulnerabilities in the LIMS system. In October 2005, the Security

Division recommended against accrediting the system based on these high-risk vulnerabilities, which could not be mitigated due to the inherent design of the system. One weakness cited by the Security Division was the inability of LIMS to meet the confidentiality and integrity requirements for protecting evidentiary or grand jury data. The certifier recommended against granting an approval to operate. Because of these critical security flaws, the FBI determined that LIMS could not be used.

Contract Termination

The FBI became aware of delays and deficiencies with developing the LIMS system early in the contract period. While the LIMS software is functional, it has major deficiencies for FBI use, including the lack of a web-browser interface and numerous security vulnerabilities. Although the FBI and JusticeTrax signed the contract in September 2003, with the project to be implemented in 90 days, delays resulted in no-cost extensions through December 2005.

In December 2004, the FBI issued a Show Cause Notice to JusticeTrax stating that it failed to meet the deadline for the initial implementation of the system.⁵ JusticeTrax responded that the delays resulted from requirements not immediately apparent in the contract and that it did not have detailed information regarding the C&A process and what would be tested. Early in 2005, the FBI issued a letter to JusticeTrax stating the results of the initial security review of the LIMS system during the C&A testing process and identifying security risks that had to be corrected before further certification testing could proceed.

In October 2005, the FBI issued a Cure Notice to Justice Trax stating that the LIMS system was not able to successfully pass the FBI's Security C&A Testing.⁶ In the Cure Notice the FBI identified two outstanding concerns, the lack of auditable records (known as administrative shares) and the lack of a fully functional web-browser interface. JusticeTrax tried to resolve the security concerns, including

⁵ A contracting agency sends a Show Cause Notice to the contractor when problems occur. The notice includes a description of the problems and a timeframe for resolving the problems.

⁶ A cure notice specifies to the contractor the problems requiring correction and establishes a timeframe for doing so.

the lack of auditable records, but the FBI's Security Division found that the actions taken did not adequately resolve the concerns. JusticeTrax intended to work on the web-browser interface at a later date. However, in its response to the RFP, JusticeTrax had committed to providing the web-browser interface by early 2004.

At the end of October 2005, the FBI issued a Stop-work Order to JusticeTrax, and in January 2006 issued a contract termination letter.⁷ In March 2006, the FBI and JusticeTrax agreed to terminate the contract for the convenience of the government. The FBI agreed to pay JusticeTrax an additional \$523,932, and the contractor waived any claims arising from the contract.

In addition to considering other COTS workflow management systems to meet its information management needs, we recommend that the FBI consider systems being developed by other Department of Justice components. For example, we found that the Drug Enforcement Administration (DEA) and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) are both working on laboratory information systems.

Costs

The base-year budget beginning September 2003 for the JusticeTrax contract was \$1.6 million, with a total contract budget of \$4.3 million including four additional 1-year contract options. Prior to the Red Team's decision to recommend terminating the LIMS contract, the FBI paid JusticeTrax a total of \$856,219. We reviewed and verified that all expenses were supported by invoices. Consistent with the contract, the FBI Laboratory Division purchased hardware from JusticeTrax, including bar-coding equipment, totaling \$205,136. The equipment purchased can be used within the laboratory separate from the LIMS system.

In January 2006, the FBI ended the LIMS project, and in March 2006 the FBI and JusticeTrax agreed to terminate the contract for the

⁷ According to the Federal Acquisition Regulation, situations may occur during contract performance that cause the government to order a suspension of work, or a work stoppage. A Stop-work Order may be issued in any negotiated fixed-price or cost-reimbursement supply, research and development, or service contract due to advancement in the state-of-the-art, production or engineering breakthroughs, or realignment of programs.

convenience of the government. The FBI agreed to pay a settlement of \$523,932 to the company in addition to the money already spent on developing the system and obtaining hardware. Therefore, the FBI spent a total of \$1,380,151 on the project. With only the hardware usable, the FBI lost \$1,175,015 on the unsuccessful LIMS project.

JusticeTrax's Observations

During our fieldwork, we met with JusticeTrax officials to discuss their perspective on the LIMS contract. In the opinion of the officials, the failure of the LIMS project was due to the FBI's lack of communication, information sharing, and resources. Also, JusticeTrax said the FBI should have provided a champion, or advocate, to ensure the success of the project. Finally, JusticeTrax stated that the FBI held JusticeTrax to requirements that were not in the contract. JusticeTrax acknowledged the contract included a provision for security but said it had no details about the C&A requirements. We agree with JusticeTrax that the FBI did not include specific details in the contract on how to meet the C&A requirements.

Conclusion

The failure to implement the LIMS system and the resulting loss of nearly \$1.2 million in the attempt should be attributed to both the FBI and JusticeTrax. The project began before the FBI had established its ITIM processes, and those subsequent processes helped identify problems with the project that ultimately led to terminating the contract before losing additional money. The FBI did not do its homework before awarding the contract, including adequately identifying and assessing the risks in selecting JusticeTrax when the company's COTS LIMS product had to be vastly modified. The FBI had a responsibility to not only ensure that JusticeTrax understood the system requirements, but also that JusticeTrax had the technical capacity to fulfill the requirements. The FBI did not adequately document for JusticeTrax the security requirements for certification and accreditation of the LIMS software and, to the extent security requirements evolved, did not clarify those changes through contract modifications.

The FBI should have assessed the problems and delays inherent in requiring major modifications to tailor a COTS system, especially one based on an outdated code. Firmly managed schedule, cost, technical, and performance benchmarks would have raised warning

signs earlier in the project and perhaps led to resolution much more rapidly. Among the FBI's weaknesses was the lack of established IT management processes when the project began and the failure to designate a LIMS project manager to oversee the implementation of the project. Also, two key contracting positions experienced turnover within months after the contract award.

Because JusticeTrax did not provide cleared personnel to work on the system and its president was not a U.S. citizen, JusticeTrax contributed to the early delays in getting the project started. It was incumbent upon JusticeTrax to meet all FBI requirements for the system, including mandatory security protections and a web-browser capability. However, JusticeTrax is correct in that some requirements were unknown at the start of the project. JusticeTrax's use of outdated code also made modifications difficult and time-consuming. JusticeTrax did not properly assess its ability to perform the work required to adapt its system to operate in the FBI environment. In addition, while JusticeTrax intended to make its system web-based, the delays in the project prevented that before the contract was terminated.

Because JusticeTrax was unable to address unacceptable security vulnerabilities, the FBI terminated the LIMS contract. The FBI's Laboratory Division continues to lack a modern system to track evidence through the laboratory and otherwise manage its laboratory operations. It remains difficult to determine the location and status of evidence at any given point in time or to determine how long the process is taking. We believe the FBI should consider adopting a COTS workflow system for its laboratory information system or an acceptably secure system used by another federal law enforcement entity, such as the Drug Enforcement Administration or Bureau of Alcohol, Tobacco, Firearms and Explosives, if it meets the FBI's needs.

We agree with FBI officials who stated that the FBI's LCMD should prevent problems such as those encountered with LIMS if the processes are applied as intended with detailed requirements for the contracting process, management oversight boards, and other controls to ensure troubled projects are identified sooner and remedied.

OIG Recommendations

We make three recommendations for the FBI to help ensure the FBI's laboratory meets its need for an information management system. The recommendations are summarized below.

- Consider whether a COTS workflow system or laboratory information management system currently in use or under development within the federal government will meet the needs of the FBI laboratory.
- Ensure that any future laboratory information management system follows the FBI's LCMD and is overseen by an experienced IT project manager.
- Establish cost controls to ensure that training or other expenses are not incurred prematurely in the development of a successor to the LIMS project.

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INTRODUCTION

Background

The collection, preservation, and forensic analysis of physical evidence are often crucial to the successful investigation and prosecution of crimes. The Federal Bureau of Investigation's (FBI) laboratory, located in Quantico, Virginia, is one of the largest and most comprehensive forensic laboratories in the world. The laboratory not only supports FBI investigations, but also provides forensic and technical services to federal, state, local, and foreign law enforcement agencies. The FBI's laboratory annually conducts over one million examinations involving analyses of physical evidence ranging from blood and other biological materials to explosives, drugs, and firearms. Laboratory examiners also provide expert witness testimony on the results of forensic examinations.

To keep a record of evidence provided to the laboratory for analysis, the FBI uses the Evidence Control System (ECS), created in 1978. The Laboratory Division converted this antiquated system to a database in 1998, but the ECS still has limited functionality. One FBI programmer developed the current version of ECS, and as new releases of database software become available, the database has been upgraded. The FBI currently uses Microsoft's Access 2002 as the ECS database software.

The ECS system represents an "in and out" tracking system. Evidence is entered into the system when it arrives at the laboratory, and the system documents: (1) the control number for the evidence, (2) when an analysis has been performed on the evidence, and (3) when the evidence leaves the laboratory. Except for this information in the ECS, the laboratory relies completely on paper documentation that follows a piece of evidence as it passes through the laboratory's various sections. Each section of the laboratory enters data into its own computers. However, these files are immediately printed out and paper copies, rather than an electronic file, are relied on to track the evidence and the work performed. In addition, the data entered into a section's individual computers are not linked to provide an overall management view of where the evidence is located, what analyses have been completed, or how long each step of the process is taking.

One laboratory official described the current system as very limited, and stated that when evidence is returned to the originator, its departure from the laboratory is not always entered into the ECS. As a result, FBI managers are unable to identify with certainty the evidence contained in the laboratory at any point in time or its progress in being examined and analyzed. Moreover, another laboratory official stated that only one person is familiar with the ECS database, a programmer from the FBI's Information Technology Operations Division (ITOD). The laboratory employee who created the original system has retired. The official also pointed out that despite available technology, the FBI continues to use a labor-intensive manual system. Each laboratory unit enters the same routine information, such as case number, date collected, and the submitting agency, for each item of evidence as it passes from one unit to another for continued processing.

In comparison to the laboratory's limited database, modern commercial-off-the-shelf (COTS) laboratory information systems can provide many useful functions, including: the ability to track evidence throughout the analysis process; Internet capabilities that allow external agencies to review and request information about evidence they have submitted; extensive reporting, workload analysis, and responses to ad-hoc querying; on-line help; and data searching.

Pre-acquisition Activities

The FBI's laboratory hired a contractor in 1998 to assist in the development of requirements for an information management system to replace the ECS. The contractor also evaluated COTS systems. However, the FBI's Laboratory Division was unable to fund the project at that time.

In 2002, the Laboratory Division reprogrammed funds to replace the ECS with a modern information system. The system requirements developed by the contractor in 1998 were updated and validated through Joint Application Development (JAD) sessions.⁸ JAD session participants included FBI personnel from the laboratory and other divisions. A contractor assisted with IT support and administrative tasks related to the proposed project, including facilitating and documenting the JAD sessions. The requirements resulting from the

⁸ JAD sessions, attended by system users and others interested in developing information technology (IT) solutions, help evaluate system requirements.

JAD sessions were then used in developing a Request for Proposal (RFP), issued in February 2003 to solicit bids for developing the new system.

A firm-fixed-price contract with a base year and four additional 1-year option contracts was to provide the laboratory with:⁹

- a customized COTS information management system;
- bar-code peripheral devices and software, used to label and track evidence as it enters the laboratory;
- training;
- help desk services, maintenance, and operational support; and
- technical enhancements and upgrades to the application software.

The statement of work explained that the new system would:

- streamline the examination process,
- track evidence through the examination process,
- provide quality and inventory control, and
- provide management information relating to efficiency measures.

For example, if another laboratory needed any information on an item of evidence, FBI management would be able to log into the system, easily locate the evidence, and determine where the evidence was in the laboratory examination process and what needed to be completed. Laboratory managers would also be able to determine the length of time the evidence was at each stage of the testing and analysis.

⁹ A firm-fixed-price contract provides for a price that is not subject to adjustments for the actual costs in performing work under the contract. The contract for the information system also provided for cost-reimbursable delivery orders to migrate the ECS data into the new system. Cost-reimbursable contracts pay allowable incurred costs to the extent prescribed in the contract.

The FBI also required bidders' products to support the many responsibilities associated with the operation of a large and modern forensic laboratory by providing a repository for laboratory data as well as tools for accessing, processing, analyzing (providing performance metrics), and reporting the data. The RFP included 200 requirements in 7 categories: (1) functional requirements, (2) external interface requirements, (3) performance requirements, (4) design constraints, (5) security and legality, (6) data base requirements, and (7) system support and maintenance. Examples of the RFP requirements include the identification and tracking of evidence, a web-browser interface, and full-time user support.

The FBI received and began evaluating six responses to the RFP in early 2003. The Laboratory Division formed cost and technical committees to evaluate the proposals. The cost committee was comprised of personnel from the FBI's Finance Division, and the technical committee was comprised of personnel from the Laboratory Division. The evaluations included an examination of each bidder's costs based on the requirements listed in the RFP. The FBI's technical review committee completed its evaluation of the bidders' responses to the RFP in June 2003.

The FBI rated JusticeTrax, Inc., of Mesa, Arizona, as the lowest cost, qualified bidder for its Laboratory Information Management System (LIMS).¹⁰ The technical committee rated JusticeTrax as follows.

AREA	RATING
Technical – Functional Requirements	Acceptable
Technical – Performance Plan	Exceptional
Past Performance	Exceptional
Management	Exceptional

The FBI's evaluation of the JusticeTrax proposal cited some strengths but also areas of risk. Examples of JusticeTrax's strengths were: (1) It had a mature COTS system used by organizations with missions similar to the FBI's, including the Royal Canadian Mounted Police Forensic Services Laboratory; and (2) LIMS was already integrated with bar-code scanner and printers that could be provided

¹⁰ The JusticeTrax product is called the Laboratory Information Management System-plus. We refer to the system as LIMS throughout this report.

for testing within 15 days and for implementation within 45. Although the committee assessed LIMS as meeting the laboratory's mission-critical needs, the evaluation also identified two key risks in addition to an ambitious delivery schedule: (1) because JusticeTrax is based in Arizona, it needed to hire employees to work on the project in Virginia, train them, and have them obtain security clearances within the timeframe proposed; and (2) the JusticeTrax product required significant customization of its software to meet the FBI's requirements such as security standards, migrating data from the ECS, and providing the capability to issue alerts and notices. Another concern was that JusticeTrax did not have the capability to provide web-browser connectivity immediately, but instead proposed converting its LIMS product to a web-based application in early 2004.

JusticeTrax LIMS Product Selected

Based on its evaluation of the six proposals received in response to its RFP, the FBI awarded JusticeTrax a \$4.3 million contract in September 2003 to customize its LIMS product for the FBI's laboratory.¹¹ The award included a base year of \$1.6 million and 4 additional 1-year option contracts. The base year was September 2003 to September 2004. Rather than developing a separate contract document that included all of the RFP requirements for the information system, the FBI adopted JusticeTrax's response to the RFP as the contract by attaching a signature page to the proposal. This proposal covered all the FBI's LIMS requirements, which included weak and generally worded security requirements. According to JusticeTrax's proposed project plan, the basic LIMS installation, training, and deployment were to be completed in December 2003, or 90 days after the contract award. The full LIMS implementation — including customization, enhancements, and testing — was to be completed in February 2004, or 5 months after the contract award. The additional option year contracts were to provide future enhancements such as software updates and maintenance of the LIMS product.

¹¹ The JusticeTrax website, www.justicetrax.com, states that it has experience in software development, customization, integration, testing, and training. Additional services include data migration, custom report development, training, and enhanced network support.

Prior Reports

The Office of the Inspector General (OIG) and the Government Accountability Office (GAO) each issued reports in 2002 recommending that the FBI establish an Information Technology Investment Management (ITIM) process to guide the development of its IT investments and avoid investing in IT that does not support its mission (see Appendix 3 for a listing of the reports related to the FBI's IT management.)¹² In response to these recommendations, the FBI established a Life Cycle Management Directive (LCMD) in 2004, the year after the FBI awarded the LIMS contract. The LCMD established policies and guidance applicable to all FBI IT programs and projects covering all elements of an IT system's life cycle including planning, acquisition, development, testing, and operations and maintenance. Using the LCMD in the development of IT projects should enhance the FBI's ability to manage IT programs and projects, leverage technology, build institutional knowledge, and ensure development is based on industry and government best practices. The LCMD also included certification and accreditation testing to ensure adequacy of IT systems security. (The LCMD is further explained in Appendix 4.) In addition to an ITIM process, the FBI continues to work on an Enterprise Architecture to further ensure that investments are made in an enterprise-wide decision.¹³

In May 2004, the OIG issued a report entitled *The FBI DNA Laboratory: A Review of Protocol and Practice Vulnerabilities*. This report discussed certain vulnerabilities in the FBI's DNA laboratory. One of the vulnerabilities led to a recommendation for an information management system. Given the benefits of evidence tracking and chain-of-custody documentation, the report noted that successful implementation of such a system should be one of the laboratory's top administrative priorities.

¹² The Department of Justice, Office of the Inspector General. *The Federal Bureau of Investigation's Management of Information Technology Investments*, Audit Report Number 03-09, December 2002. The Government Accountability Office. *Campaign Finance Task Force Problems and Disagreements Initially Hampered Justice's Investigation*, Report Number GAO/GGD-00-101BR, May 2002.

¹³ According to the GAO, an Enterprise Architecture is a set of descriptive models such as diagrams and tables that define, in business and technology terms, how an organization operates today, how it intends to operate in the future, and how it intends to invest in technology to transition from today's operational environment to tomorrow's.

FINDINGS AND RECOMMENDATIONS

Inadequate Management of the Laboratory Information Management System Project

The FBI wasted \$1,175,015 in attempting to implement the long-delayed LIMS project, which failed primarily due to uncorrectable security flaws. The LIMS project suffered from a series of delays, in part due to the extent of customization required to adapt JusticeTrax's commercially available system to meet the FBI's requirements. The LIMS project was unsuccessful because the FBI did not apply rigorous IT investment management processes, including strong and consistent IT project management, and inadequately considered the risks inherent in JusticeTrax's ability to modify its LIMS software to meet the FBI's particular needs. The FBI terminated the LIMS contract in January 2006 after 28 months. The basic system had intended to be delivered within 90 days of the September 2003 contract award.

Project Delays

JusticeTrax proposed installing its LIMS software within 90 days of the September 2003 contract award. However, a series of delays began soon after the contract was awarded. One of the reasons for the delays was that JusticeTrax's president and chief shareholder was a foreign national, which created security concerns requiring an evaluation. Also, the firm lacked IT personnel in Quantico, Virginia with security clearances to work on the project. Moreover, extensive customization of JusticeTrax's off-the-shelf system was needed to meet the FBI's requirements, but the LIMS software used an outdated programming language that made customization difficult and slow.

In January 2004, 4 months after the LIMS contract was awarded, the FBI's contracting officer, who is responsible for the overall implementation of the contract, and the contracting officer's technical representative (COTR), who directly monitors the contract, were both replaced due to personnel changes in the FBI's Laboratory Division. Both of the individuals replaced were involved in the initial development of the information management project, including the

system requirements. Shortly afterward, a series of problems arose in the implementation of the LIMS project.

In March 2004, the president of JusticeTrax informed the new COTR that he was a foreign national. While the former COTR was aware of the president's status prior to awarding the contract, he did not view the lack of U.S. citizenship as a problem because he believed the president was not going to be involved in the coding of the system. Additionally, the contract did not specify work to be performed at the classified level, even though the LIMS database was to include classified and other sensitive information such as grand jury data. The newly appointed COTR stated that she believed a risk existed with the project because the LIMS would include sensitive information and the JusticeTrax president might be directly involved in the LIMS development. Additionally, the RFP included a Department of Justice mandated provision prohibiting non-U.S. citizens from having access to or being involved in the development of any Department IT system. After evaluating the security risk, the Laboratory Division, the Security Division, the Financial Division, and the Office of General Counsel agreed that the JusticeTrax president being a foreign national was a low risk; therefore the FBI decided to continue the contract. In our view, it was predictable that because JusticeTrax is a small organization of about 20 employees, the president would need to be involved in managing the project. The FBI's security concerns led the JusticeTrax president to sign an agreement in April 2004 not to be involved in the development, operation, management, or maintenance of LIMS.

The COTR followed up on her concerns, believing that the sensitivity of the LIMS and the data it would hold required additional assurances. As a result, the FBI performed a Community Acquisition Risk Center (CARC) threat analysis. In August 2004, the FBI's Counterintelligence Division issued a CARC Company Threat Analysis memorandum stating JusticeTrax was eligible to perform the contract. Finally, in September 2004, 1 year after the contract was signed, the JusticeTrax president became a U.S. citizen, and the recusal agreement was rescinded.

The foreign ownership issue should have been addressed by the FBI during the pre-acquisition phase of the project. Because of the secure nature of the LIMS system, the FBI should have taken steps to ensure that all of the potential contractors were familiar with the security requirements of the system and of the Department of Justice's

mandate prohibiting non-U.S. citizens from being involved in the development of a Department system. As a result of not taking measures to ensure that the potential contractors for the project met these requirements, the COTR had to take actions that delayed the project's implementation after the contract had been awarded.

Another obstacle to the implementation of the LIMS was a lack of personnel with security clearances at JusticeTrax to work on the project in Quantico, Virginia. JusticeTrax did not provide the FBI with security clearance information on its personnel until almost 2 months after the contract award, and the security clearance process took an additional 3 to 8 months. This meant that JusticeTrax could not begin implementing LIMS until early 2004, after the basic product was to have been deployed in accordance with JusticeTrax's schedule.

A third problem required the basic LIMS product to have extensive customization to meet the FBI's requirements, resulting in further delays. According to an FBI official in May 2005, the COTS product was 95-percent customized. In essence, the FBI's LIMS would no longer be a COTS product but an FBI-unique system. This process was slow because the LIMS software relies on a dated code format, Visual FoxPro, requiring more intensive coding than more modern formats.¹⁴ Visual FoxPro is considered an outdated form of code, but it is still compatible with today's technology. While the FBI's requests for a customized system caused delays, the old code used in the LIMS software exacerbated these delays.

FBI Attempts to Correct Project Delays

The FBI became aware of the delays and deficiencies with LIMS early in the project. While the LIMS software was functional, it had security vulnerabilities and did not yet meet the FBI's requirement for a web-browser interface. Although the basic LIMS was to be implemented in 90 days (December 2003), the delays in the project resulted in two no-cost extensions, with the base year slipping 15 months. In 2004, it became increasingly apparent to the FBI that full implementation of LIMS appeared unlikely, even though JusticeTrax had already trained laboratory personnel in operating the system.

¹⁴ Visual FoxPro, developed by Fox Software beginning in 1984, is a programming language used to develop database applications.

On December 6, 2004, the FBI issued a Show Cause Notice to JusticeTrax stating that JusticeTrax failed to meet the deadline for implementation.¹⁵ The notice also provided JusticeTrax with a list of failed tasks including: (1) ensuring system security, (2) migrating legacy ECS data to LIMS, and (3) passing acceptance testing of the system. The Show Cause Notice stated that although the LIMS was delivered, the system had to pass security testing as well as acceptance testing. On December 9, 2004, JusticeTrax responded that the delays the FBI detailed in the Show Cause Notice were requirements not immediately apparent in the contract. JusticeTrax also stated that neither it nor FBI staff had any detailed information regarding the process and what was to be tested. We also noted that the FBI did not provide JusticeTrax with specifics of how to meet the certification and accreditation (C&A) requirements.

On February 11, 2005, the FBI issued a letter to JusticeTrax stating the initial security review of LIMS during the security testing process identified risks that had to be corrected before further testing could proceed.

LCMD Review Board

The FBI awarded the LIMS contract 14 months prior to the implementation of its LCMD, a critical initiative that provided the FBI with sound and structured IT investment management processes to help ensure successful IT projects. Once the LCMD was implemented, the FBI required all ongoing IT projects to follow the LCMD processes for the projects' current stages of development. The FBI's Chief Information Officer (CIO) stated the FBI's IT investment review boards began reviewing ongoing projects that predated the LCMD. The review boards examined high-dollar, high-risk projects first, concentrating on the top 30 to 40 projects. LIMS was not reviewed for about 6 months because the project did not meet the criteria for priority review.

On May 20, 2005, the FBI's Information Management Project Review Board (IMPRB), one of the review boards established in the LCMD, reviewed the LIMS project. During the review, laboratory officials described the history of LIMS, including the laboratory's need for an information management system and the delays experienced in

¹⁵ A contracting agency sends a Show Cause Notice to the contractor stating the delinquencies and timeframe to resolve the problems.

trying to implement the LIMS project. At the time of the review, JusticeTrax had already trained the FBI's would-be LIMS users. Although LIMS was functional, it had not yet been brought online because it did not meet all of the FBI's security requirements. The review board also learned that although JusticeTrax's basic LIMS was a COTS system, the software had undergone extensive modification so that about 95 percent of the FBI's version of LIMS was based on custom code. A member of the IMPRB doubted the project would pass the FBI's security certification and accreditation testing. The FBI's Security Division provides C&A, authorizing the deployment and operation of a system, only if it deems a system secure based on its testing and evaluation. FBI officials agreed that if LIMS could not pass C&A, then the project should be cancelled. The IMPRB expressed additional concerns about project risks, including the fact that the Visual FoxPro code used for JusticeTrax's LIMS is old technology and whether the small firm could adequately support the system into the future. The IMPRB recommended that a Red Team be assembled to review the LIMS project and consider alternative approaches.¹⁶

The FBI formed a LIMS Red Team in July 2005 with representatives of the Laboratory Division, the Office of General Counsel, the Office of the CIO, the Finance Division, and the ITOD. The team held meetings from July through October 2005 and presented its findings, conclusions, and recommendations to the FBI's CIO in October. From the beginning of its review, the Red Team identified serious technical deficiencies with LIMS, which included:

- The requirement for a web-browser interface had not been satisfied;
- There were security vulnerabilities associated with administrative shares (auditable records);
- The transmission between client and server interface was inherently insecure; and
- The technical architecture was not suitable to ensure chain of custody requirements.

¹⁶ Red Teams review and advise on FBI IT projects that miss cost, schedule, or performance thresholds.

The Red Team recommended terminating the JusticeTrax LIMS contract because the system could not pass C&A. The team also suggested that BizFlow, a product the FBI is licensed to use, might be a suitable alternative.¹⁷ According to the Red Team, BizFlow has the capability to integrate workflows with information management, create and replicate forms, provide formatted and customizable reports, and handle bar-coding equipment.

Certification and Accreditation

As the IT review board predicted, C&A testing led to the termination of the LIMS contract. As part of the LCMD, C&A is the FBI's management control for ensuring the adequacy of computer systems' security. The C&A testing and evaluation process is designed to ensure the FBI's systems are designed securely and remain secure throughout their life cycle. If the Security Division's testing and evaluation determine that a new system is secure, the Security Division provides accreditation and approves the system to enter into operations within the FBI's IT architecture.

The LIMS RFP required security to be part of the system. However, due to several high-profile espionage-related security breaches within the FBI, the FBI strengthened C&A requirements after the September 2003 award of the LIMS contract. The specifics were not available to JusticeTrax until the FBI provided the results of the FBI's Security Division's Certification Test Report to JusticeTrax in August 2005. The report stated that LIMS failed testing in four key areas: (1) password storage, (2) auditing capability, (3) control of grand jury evidence, and (4) shared directory (information sharing outside the laboratory).

In September 2005, the Security Division began testing for a second Certification Test Report after JusticeTrax provided patches to the LIMS software based on the first report. The FBI performed tests to ensure that the system was at an approved baseline security configuration and that the system presented little or no risk to FBI systems or data. However, the Security Division identified 14 vulnerabilities according to the ease of exploiting the system. The 14 findings ranged from "requires expert-level knowledge to exploit the vulnerability to gain access to the system" to "does not require tools or expert-knowledge to exploit and gain access to the system." The

¹⁷ BizFlow is a workflow and information management system.

significance level, meaning impact if exploited, for all 14 vulnerabilities was rated high.¹⁸

Termination of the Project

By October 2005, it became clear to the FBI that LIMS would not meet the FBI's security and other requirements. The FBI gave JusticeTrax an opportunity to correct the system's deficiencies, but those efforts were unsuccessful. Eventually, after 28 months of effort, the FBI terminated the LIMS contract.

On October 4, 2005, the FBI issued a Cure Notice to Justice Trax stating that the LIMS software application was not able to successfully pass the FBI's Security C&A Testing.¹⁹ In the Cure Notice, the FBI identified two outstanding concerns: (1) system security, and (2) the lack of a fully functional web-browser interface. JusticeTrax attempted to correct the security flaws, but the FBI's Security Division did not accept the corrections. JusticeTrax planned to provide the web browser at a later date.

Based on the Certification Test Report and its finding that LIMS posed a very high security risk, the Security Division recommended on October 17, 2005, that LIMS not be accredited. The C&A process found that the system's vulnerabilities could not be mitigated due to the inherent design of the software. Therefore, the certifier recommended against granting an approval to operate the system.²⁰

At the end of October 2005, the FBI issued a Stop-work Order to JusticeTrax. According to the Federal Acquisition Regulation, situations may occur during contract performance that cause the government to order a suspension of work, or a work stoppage. A Stop-work Order may be issued in any negotiated fixed-price or cost-reimbursement supply, research and development, or service contract

¹⁸ In the Certification Test Report, the Security Division explained the high significance level as extensive damage due to loss, corruption, or compromise of National Security Information; prolonged denial of service of data; endangerment of life; loss of integrity mechanisms; or corruption of security policies and rules.

¹⁹ A Cure Notice notifies the contractor of specific problems requiring corrective action and establishes a 10-day time period to provide corrections.

²⁰ One security flaw was the inability of LIMS to meet the confidentiality and integrity requirements for the protection of evidentiary or grand jury data.

due to advancement in the state-of-the-art, production or engineering breakthroughs, or realignment of programs.

In January 2006, the FBI issued a contract termination letter to JusticeTrax. In March 2006, the FBI and JusticeTrax agreed to terminate the contract. The FBI agreed to pay JusticeTrax an additional \$523,932, and the contractor waived any claims arising from the contract.

CIO's Observations

The FBI's CIO noted to the OIG that the LIMS contract was awarded before the FBI's IT investment management controls were implemented through the LCMD. He stated that in his opinion, the LIMS project demonstrates the success of the FBI's LCMD because the FBI terminated the project after the IMPRB review and the C&A process showed that the LIMS system's serious deficiencies could not be corrected. The CIO noted that the LCMD process now requires project managers to come before review boards so that the FBI's divisions no longer manage IT projects in isolation. The CIO stated that the controls provided by the LCMD help to detect problems earlier in a project's life cycle.

JusticeTrax's Observations

JusticeTrax officials stated that in their opinion, the failure of the LIMS project was due to the FBI's lack of communication, information sharing, and resources. They also stated that the FBI did not provide a "champion," that is, an FBI official who would work to ensure the success of the project. Finally, JusticeTrax officials said that the FBI insisted on requirements, especially regarding system security, that were not specified in the contract. Although the contract included a provision for security, JusticeTrax officials stated that details for the C&A requirements were never provided. After reviewing the requirements in the contract, we agree that the security requirements were too general to provide enough detail on how to meet the requirements.

Laboratory Division's New Review Process

In addition to the FBI's LCMD, the Laboratory Division had established in October 2005 a division-wide Major Acquisition Review Committee (MARC) to strengthen the oversight of the Laboratory

Division's acquisitions, including IT investments. The MARC will assist Laboratory managers to ensure that Laboratory projects adhere to all Department of Justice and FBI requirements for sound project and financial management. The MARC mirrors the LCMD, but covers all projects rather than only the IT projects covered by the LCMD. The purpose of the MARC is to:

- review and approve Laboratory Division investments that meet the following thresholds: acquisition requests totaling \$250,000 or more, IT requests totaling \$50,000 or more, and all projects totaling \$100,000 or more;
- ensure that the requests are aligned with the Laboratory Division Strategic and Program Plans;
- ensure that the requests have been included in the Laboratory Division's Fiscal Year Spend Plan;
- ensure that acquisition rules, regulations, and requirements have been appropriately adhered to;
- ensure that project management standards and practices are being implemented and appropriately reviewed;
- ensure that all IT requests are properly prepared and are aligned with the FBI's Enterprise Architecture, and adhere to the Office of the CIO's requirements; and
- ensure resolution of concerns affecting the acquisition project (e.g., mission alignment, requirements, technology, security, information sharing, funding, and risks).

Project Costs

The base year of the LIMS contract was September 2003 to September 2004, with a \$1.6 million budget. The base year could be extended by four 1-year contract options, bringing the total contract budget to \$4.3 million.

Prior to the Red Team's decision to recommend termination, the FBI paid JusticeTrax a total of \$856,219 in personnel, training, and equipment costs. This included \$205,136 in hardware that the Laboratory Division purchased from JusticeTrax that can be used by

the FBI laboratory separate from LIMS.²¹ During our audit, we reviewed and verified that all expenses were supported by invoices.

When the FBI terminated the LIMS contract, the FBI and JusticeTrax agreed to a settlement of \$523,932. Therefore, the FBI spent a total of \$1,380,151 on the LIMS contract as shown in the table below.

FBI Payments to JusticeTrax

Personnel and training	\$651,083
Equipment	\$205,136
Termination agreement	\$523,932
Total	\$1,380,151

Source: FBI data

The FBI wasted \$1,175,015 on the LIMS project: \$1,380,151 paid to JusticeTrax less the reusable equipment totaling \$205,136.²²

LIMS Alternatives

The FBI Laboratory Division's need for an information management system remains. To fulfill the need, the FBI is considering other COTS systems. For example, the Red Team that evaluated JusticeTrax's LIMS recommended Bizflow software, which is used for workflow and information management. The FBI purchased Bizflow to use within the FBI in general, but the software has not yet gone through C&A testing or other LCMD processes. Alternative solutions might also be found in other Department of Justice components' or other federal agencies' laboratory information systems. For example, the FBI has obtained information from the Drug Enforcement Administration on its ongoing project to acquire a system for managing evidence. The Bureau of Alcohol, Tobacco, Firearms and Explosives is also expected to deploy a new laboratory information system in the spring of 2006 that has been under development for over 5 years.

²¹ Of the \$205,136 of equipment purchased, \$144,070 was purchased with reprogrammed, non-project laboratory funds. The laboratory purchased 50 printers and 50 scanners for \$61,066. Then, in expectation of implementing the project, the laboratory purchased additional bar-coding equipment with the \$144,070 in reprogrammed funds.

²² The equipment was purchased from JusticeTrax as part of the contract agreement.

Conclusion

We concluded that the FBI's inability to implement the LIMS system and its loss of nearly \$1.2 million in the attempt was a shared responsibility between the FBI and JusticeTrax. The project began before the FBI had established its ITIM processes. When those processes were implemented, they helped identify problems with the project that ultimately led to terminating the contract before losing additional money. Still, the FBI did not do its homework before awarding the contract, including adequately identifying and assessing the risks in selecting JusticeTrax, and in vastly modifying the company's COTS LIMS product. The FBI had a responsibility to not only ensure that JusticeTrax understood the system requirements, but that JusticeTrax also had the technical capacity to fulfill the requirements.

In addition, the FBI did not adequately document for JusticeTrax the security requirements for certification and accreditation of the LIMS software. To the extent security requirements evolved, those changes should have been made clear through contract modifications, if necessary. The FBI also should have identified the citizenship problem of the JusticeTrax president, foreseen the security clearance requirements for JusticeTrax personnel, and assessed the problems and delays inherent in requiring major modifications to tailor a COTS system — especially one based on an outdated code. A firmly managed schedule, and cost, technical, and performance benchmarks, would have raised danger signs early in the project and perhaps led to resolution much more rapidly. Among the FBI's weaknesses were: (1) the lack of established IT management processes to ensure a sound project and identify problems early, and (2) not designating a project manager to oversee the project. Also, two key contracting personnel, both of whom were involved in the development of the LIMS requirements, left the project only 4 months after the contract was awarded. This lack of continuity and institutional knowledge likely contributed to the poor outcome of the LIMS project.

Because JusticeTrax did not provide personnel with security clearances to work on the system, and its president was not a U.S. citizen, JusticeTrax contributed to the early delays in starting the project. It was incumbent upon JusticeTrax to meet all FBI requirements for the system, including mandatory security protections. However, JusticeTrax has a legitimate point that some details of the requirements were unknown at the start of the project.

JusticeTrax's use of outdated code made modifications difficult and time-consuming, and JusticeTrax did not properly assess its ability to perform the work required to adapt its system to operate in the FBI environment. Also, while JusticeTrax intended to make its system web-based, the delays in the project prevented that before the contract was terminated.

Because JusticeTrax was unable to mitigate unacceptable security vulnerabilities, the FBI had no choice but to terminate the LIMS contract. As a result, the FBI's Laboratory Division continues to lack a modern system to track evidence through the laboratory and otherwise manage its laboratory operations because it is difficult to determine the location and status of evidence at any given point in time or to determine how long the process is taking. We believe the FBI should consider adopting a COTS workflow system for its laboratory information system or an acceptably secure information management system used by another federal law enforcement entity.

We agree with FBI officials who stated that the FBI's LCMD should prevent problems such as those encountered with LIMS if the processes are applied as intended with detailed requirements for the contracting process, management oversight boards, and other controls to ensure troubled projects are identified sooner and can be remedied.

Recommendations

We recommend that the FBI:

1. Consider whether a COTS workflow system or laboratory information management systems in use or under development within the federal government will meet the needs of the FBI laboratory.
2. Ensure that any project to provide a laboratory information management system not only follows the FBI's LCMD but is overseen by an experienced IT project manager.
3. Establish cost controls to ensure that training or other expenses are not incurred prematurely in the development of a successor to the LIMS project.

STATEMENT ON COMPLIANCE WITH LAWS AND REGULATIONS

This audit assessed the status of the FBI's Laboratory Information Management System (LIMS) project. In connection with the audit, we reviewed management processes and records to obtain reasonable assurance that the FBI's compliance with laws and regulations that, if not complied with, in our judgment, could have a material effect on FBI operations. Compliance with laws and regulations applicable to the FBI's LIMS project is the responsibility of the FBI's management.

Our audit included examining, on a test basis, evidence about laws and regulations. The specific laws and regulations against which we conducted our tests are contained in the relevant portions of the Federal Acquisition Regulation.

Our audit identified no areas where the FBI was not in compliance with the laws and regulations referred to above. With respect to transactions that were not tested, nothing came to our attention that caused us to believe that FBI management was not in compliance with the laws and regulations cited above.

STATEMENT ON INTERNAL CONTROLS

In planning and performing our audit of the FBI's Laboratory Information Management System (LIMS) project, we considered the FBI's internal controls for the purpose of determining our audit procedures. This evaluation was not made for the purpose of providing assurance on the internal control structure as a whole. However, we noted certain matters that we consider to be reportable conditions under the *Government Auditing Standards*.

Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operation of the management control structure that, in our judgment, could adversely affect the FBI's ability to manage its LIMS project. During our audit, we identified the following management control concerns.

- The FBI's Laboratory Division remains without an information management system to aid laboratory managers in overseeing the operations of the laboratory.
- The FBI initially lacked an Information Technology Investment Management process, but has corrected that deficiency.

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

OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives

The primary objectives of the audit were to: (1) determine the status of the LIMS project; (2) assess the information technology investment management process used for LIMS; (3) assess project management and other management controls; and (4) determine project costs.

Scope and Methodology

The audit was performed in accordance with the *Government Auditing Standards* and included tests and procedures necessary to accomplish the audit objectives. We conducted work at the FBI Laboratory Division in Quantico, Virginia; FBI Headquarters in Washington, D.C.; and JusticeTrax corporate headquarters in Mesa, Arizona.

We interviewed officials from the FBI and JusticeTrax. The FBI officials interviewed were from the Laboratory Division, Office of the Chief Information Officer, Office of General Counsel, Finance Division, and Criminal Justice Information Services. Additionally, we reviewed FBI documents on the LIMS project and budget, and prior GAO and OIG reports.

To determine the current status of the LIMS project, the Information Technology Investment Management processes used, and the extent of project management and other management controls, we interviewed FBI personnel and reviewed correspondence between the FBI and JusticeTrax. To determine LIMS project costs, we examined the contract budget, cost spreadsheets, and product invoices.

ACRONYMS

ATF	Bureau of Alcohol, Tobacco, Firearms, and Explosives
CARC	Community Acquisition Risk Center
C&A	Certification and Accreditation
CIO	Chief Information Officer
COTS	Commercial Off-the-Shelf
DEA	Drug Enforcement Administration
ECS	Evidence Control System
FBI	Federal Bureau of Investigation
GAO	Government Accountability Office
IMPRB	Investment Management Project Review Board
IT	Information Technology
ITIM	Information Technology Investment Management
ITOD	Information Technology Operations Division
LCMD	Life Cycle Management Directive
LIMS	Laboratory Information Management System
JAD	Joint Application Development
MARC	Major Acquisition Review Committee
OIG	Office of the Inspector General
RFP	Request for Proposal

PRIOR REPORTS ON THE FBI'S INFORMATION TECHNOLOGY

Below is a listing of relevant reports concerning the FBI's information technology (IT) systems. These include reports issued by the Department of Justice Office of the Inspector General (OIG) and the Government Accountability Office (GAO).

OIG Reports on the FBI's IT

OIG reports issued over the past 15 years have highlighted issues concerning the FBI's utilization of IT, including its investigative systems. In 1990, the OIG issued *The FBI's Automatic Data Processing General Controls*, which found that:

- The FBI's phased implementation of its 10-year Long Range Automation Strategy, scheduled for completion in 1990, was severely behind schedule and may not be accomplished;
- The FBI's Information Resources Management program was fragmented and ineffective, and the FBI's Information Resources Management official did not have effective organization-wide authority;
- The FBI had not developed and implemented a data architecture; and
- The FBI's major mainframe investigative systems were labor intensive, complex, untimely, and non-user friendly, and few agents used them.

In December 2002, the OIG issued *The FBI's Management of Information Technology Investment*. The report made 30 recommendations and focused on the need to adopt sound investment management practices as recommended by the GAO. The report also stated that the FBI did not fully implement the management processes associated with successful IT investments. Specifically, the FBI had failed to implement the following critical processes:

- defining and developing IT investment boards,
- following a disciplined process of tracking and overseeing each project's cost and schedule milestones over time,
- identifying existing IT systems and projects,
- identifying the business needs for each IT project, and
- using defined processes to select new IT project proposals.

In September 2003, the OIG issued *The Federal Bureau of Investigation's Implementation of Information Technology Recommendation*, which outlined the FBI's continued need to address the recommendations made by oversight organizations concerning its IT strategies. The report stated that although OIG audits found repeated deficiencies in the FBI's IT control environment and lack of compliance with information security requirements, the FBI leadership appeared to be committed to enhancing controls to ensure that recommendations were implemented in a consistent and timely manner. Additionally, the report noted that the FBI established a system to facilitate the tracking and implementation of OIG recommendations.

In May 2004, the OIG issued *The FBI DNA Laboratory: A Review of Protocol and Practice Vulnerabilities*. In this report the OIG findings focused on two general types of vulnerabilities that became apparent during the review: (1) protocol vulnerabilities and practice, and (2) operational vulnerabilities. As a result of the vulnerabilities, one of the 35 OIG recommendations was that the FBI Laboratory Division implement an information management system. The OIG noted that laboratory management had begun to lay the groundwork for the implementation of a system in 2002. Given the benefits that such a system would bring to evidence tracking and chain-of-custody documentation, the OIG recommended the successful implementation of an information management system as one of the laboratory's top administrative priorities.

In February 2006, the OIG issued *The FBI's Pre-Acquisition Planning for and Controls over the Sentinel Case Management System*. Sentinel is part of the FBI's IT modernization project to replace the FBI's antiquated case management system. The report noted the FBI

has taken steps to address its past mistakes in IT investments and to adequately plan for the development of Sentinel.

External Reports on the FBI's IT

The GAO has issued several reports and related testimony that highlight deficiencies with the FBI's IT environment. In a review of the Department's Campaign Finance Task Force, the GAO reported in May 2000 that the FBI lacked an adequate information system that could manage and interrelate the evidence that had been gathered in relation to the Task Force's investigations. Also, as part of a government-wide assessment of federal agencies, the GAO reported in February 2002 that the FBI needed to fully establish the management foundation that was necessary to successfully develop, implement, and maintain an Enterprise Architecture.

In September 2003, the GAO issued *Information Technology: FBI Needs an Enterprise Architecture to Guide Its Modernization Activities*. This report reiterated the GAO's finding made in the May 2002 report on the Department's Campaign Finance Task Force that the FBI did not have an Enterprise Architecture, although it had begun efforts to develop one. Additionally, the GAO found that the FBI still did not have the processes in place to effectively develop, maintain, and implement an Enterprise Architecture.

In September 2004, the GAO issued *Information Technology: Foundational Steps Being Taken to Make Needed FBI Systems Modernization Management Improvements*. This report stated that although improvements were underway and more were planned, the FBI did not have an integrated plan for modernizing its IT systems. Each of the FBI's divisions and other organizational units that manage IT projects performed integrated planning for its respective IT projects. However, the plans did not provide a common, authoritative, and integrated view of how IT investments could help optimize mission performance, and they did not consistently contain the elements expected to be found in effective systems modernization plans. The GAO recommended that the FBI limit its near-term investments in IT systems until it developed an integrated systems and modernization plan and effective policies and procedures for systems acquisition and investment management. Additionally, the GAO recommended that the FBI's Chief Information Officer (CIO) be provided with the responsibility and authority to effectively manage information technology FBI-wide.

In September 2005, the GAO issued *Information Technology: FBI Is Taking Steps to Develop an Enterprise Architecture, but Much Remains to be Accomplished*. This report stated that the FBI managed its Enterprise Architecture program in accordance with many best practices, but other such practices had yet to be adopted. These best practices, which are described in GAO's Enterprise Architecture management maturity framework, are those necessary for an organization to have an effective architecture program. In addition, the FBI relied heavily on contractor support to develop its Enterprise Architecture. However, it did not employ effective contract management controls in doing so.

In September 2005, the GAO issued testimony entitled, *Information Technology: FBI is Building Management Capabilities Essential to Successful System Deployments, but Challenges Remain*. This testimony stated that the FBI had made important progress in establishing IT management controls and capabilities that GAO's research and experience show are key to exploiting technology to enable transformation. These included centralizing IT responsibility and authority under the CIO and establishing and beginning to implement management capabilities in the areas of enterprise architecture, IT investment management, systems development and acquisition life cycle management, and IT human capital. In addition:

- The FBI had developed an initial version of its enterprise architecture and is managing its architecture activities in accordance with many key practices, but it had yet to adopt others (such as ensuring that the program office has staff with appropriate architecture expertise).
- The FBI was in the process of defining and implementing investment management policies and procedures. For example, it was performing assessments of existing systems to determine if any could be better used, replaced, outsourced, or retired, but these assessments had yet to be completed.
- The FBI had issued an agency-wide standard life cycle management directive, but it had yet to fully implement this directive on all projects. Also, certain key practices, such as acquisition management, required further development.

- The FBI had taken various steps to bolster its IT workforce, but it had yet to create an integrated plan based on a comprehensive analysis of existing and needed knowledge, skills, and abilities. According to the CIO, the FBI intended to hire a contractor develop an implementation plan. The CIO also intended to establish a management structure to carry out the plan.
- The challenge for the FBI is to build on these foundational capabilities and implement them effectively on the program and project investments it has underway and planned.

THE FBI'S LIFE CYCLE MANAGEMENT DIRECTIVE

According to the FBI's Chief Information Officer (CIO), since the inception of the Life Cycle Management Directive (LCMD), all FBI information technology (IT) programs and projects have been reviewed and managed according to the processes described in the LCMD. New IT programs and projects have been managed according to this IT Systems Life Cycle from inception and will be managed through retirement or replacement, while existing IT programs and projects are reviewed and placed within an appropriate IT Systems Life Cycle phase according to their maturity and other factors.

Systems Life Cycle Phases

The LCMD has established nine phases that occur during the development, implementation, and retirement of IT projects. During these phases, specific requirements must be met for the project to obtain the necessary FBI management approvals to proceed to the next phase. The approvals occur through seven control gates, where management boards meet to discuss and approve or disapprove a project's progression to future phases of development, implementation, or retirement. The nine phases of development, implementation, and retirement are as follows:

Concept Exploration — Identifies the mission need, develops and evaluates alternate solutions, and develops the business plan.

Requirements Development — Defines the operational, technical and test requirements, and initiates project planning.

Acquisition Planning — Allocates the requirements among the development segments, researches and applies lessons learned from previous projects, identifies potential product and service providers, and secures funding.

Source Selection — Solicits and evaluates proposals and selects the product and service providers.

Design — Creates detailed designs for system components, products, and interfaces and initiates test planning.

Development and Test — Produces and tests all system components, assembles and tests all products, and plans for system testing.

Implementation and Integration — Executes functional, interface, system, and integration testing, provides user training, and accepts and transitions the product to operations.

Operations and Maintenance — Maintains and supports the product, and manages and implements necessary modifications.

Disposal — Shuts down the system operations and arranges for the orderly disposition of system assets.

Control Gate Reviews

The seven control gate reviews provide management control and direction, decision-making, coordination, confirmation of successful performance of activities, and determination of a system's readiness to proceed to the next life cycle phase. Decisions made at each control gate review dictate the next step for the IT program or project and may include: allowing an IT program or project to proceed to the next segment or phase, directing rework before proceeding to the next segment or phase, or terminating the IT program or project. The FBI's Investment Project Review Board (IMPRB) — comprised of 12 representatives from each FBI division at the Assistant Director level and 4 representatives from the Office of the Chief Information Office, including the CIO — is responsible for approving an IT project's passing through each control gate. The seven control gate reviews that represent the approval of an IT project are as follows:

Gate 1 — System Concept Review approves the recommended system concept of operations.

Gate 2 — Acquisition Plan Review approves the Systems Specification and Interface Control documents and the approach and resources required to acquire the system as defined in the Acquisition Plan.

Gate 3 — Final Design Review approves the build-to and code-to documentation and associated draft verification procedures, ensures that the design presented can be produced and that when built is expected to meet its design-to specification at verification.

Gate 4 — Deployment Readiness Review approves the readiness of the system for deployment in the operational environment.

Gate 5 — System Test Readiness Review verifies readiness to perform official system-wide data gathering verification testing for either qualification or acceptance.

Gate 6 — Operational Acceptance Review approves overall system and product validation by obtaining customer acceptance and determining whether the Operations & Maintenance organization agrees to, and has the ability to, support continuous operations of the system.

Gate 7 — Disposal Review authorizes termination of the Operations and Maintenance Phase and disposes of system resources.

At each control gate, executive-level reviews determine system readiness to proceed to the next phase of the IT systems life cycle. Evidence of readiness is presented and discussed at each control gate review in the form of deliverables, checklists, and documented decisions. Regardless of the development model used for a particular program or project, all control gate reviews should be performed unless an agreement is made to skip or combine reviews. Depending upon the development model employed, programs or projects may pass through the control gates more than once.

The control gate reviews also provide executive-level controls to ensure that IT projects are adequately supported and reviewed before a project receives additional funding. Five executive-level review boards serve as the decision authority for the control gate reviews:

- Investment Management Project Review Board (IMPRB) leads the System Concept Review and the Acquisition Plan Review and ensures all IT acquisitions are aligned and comply with FBI policies, strategic plans, and investment management requirements.
- Technical Review Board leads the Final Design Review and ensures IT systems comply with technical requirements and meet FBI needs.
- Change Management Board leads the Deployment Readiness Review, System Test Readiness Review, Operational Acceptance Review, and the Disposal Review, and controls

and manages developmental and operational efforts that change the FBI's operational IT environment.

- Enterprise Architecture Board ensures IT systems comply with Enterprise Architecture requirements.
- IT Policy Review Board establishes, coordinates, maintains and oversees implementation of IT policies.

LCMD Project-Level Reviews

Project-level reviews help determine a project's readiness to proceed to the next phase of the project life cycle. Each project-level review provides information to the executive-level control gates as data is developed and milestones are completed. They include the following:

- Mission Needs Review is a technical progress review that approves the set of mission goals that will be satisfied throughout the project.
- System Specification Review is a technical progress review to approve the System Specification and External Interface Control Documents. The review is the decision point to proceed with the development of an Acquisition Plan, the allocation of system requirements to segment specifications, and the development of Project Plans that will execute the acquisition.

THE FBI'S RESPONSE TO THE DRAFT REPORT

Memorandum



To : Richard A. McGeary
Regional Audit Manager
Office of the Inspector
General

Date : 05/31/2006

From : Charlene B. Thornton *CBS/T*
Assistant Director
Inspection Division
Federal Bureau of
Investigation *[Signature]*

Subject : The Federal Bureau of Investigation's (FBI)
Response to the Office of the Inspector General's
(OIG) Draft Report on the Implementation of
the Laboratory Information Management System
(LIMS)

In response to the findings and recommendations set forth in the OIG draft report entitled, "*The Federal Bureau of Investigation's Implementation of the Laboratory Information Management System (LIMS)*," the FBI has prepared and enclosed the following:

- Formal responses to recommendations #1 - 3 (Enclosure 1); and
- Sensitivity review form prepared after review of the draft LIMS report (Enclosure 2).

In addition, this letter addresses concerns that the FBI has regarding assertions in the report that require clarification or requires additional information to place it in context. Accordingly, the FBI respectfully requests inclusion of this letter and the responses to the recommendations (Enclosure 1) in the final report prior to publication.

After reviewing the conclusions and recommendations provided by the OIG on how the FBI can strengthen the information management process within the laboratory, the FBI is confident that the substantial modifications that have already been implemented in the laboratory's processes, and the further developments that will occur, will significantly enhance the laboratory's operations. The FBI concurs with the OIG's conclusion that the inability to implement LIMS can be attributed to both the FBI and the third-party vendor. However, with the advent of the FBI's Life Cycle Management Directive (LCMD) and other improvements noted in the comments on the OIG's

Memorandum for Richard A. McGeary
Subject: The Federal Bureau of Investigation's (FBI)
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recommendations, the FBI has made considerable progress in ensuring that all FBI projects, including laboratory projects, strictly adhere to updated policies and procedures.

Overview

In order to improve the FBI's management of the flow of evidence throughout the laboratory, an improved information system that would allow better tracking and provide statistical reporting was sought. As a result, a contract was awarded to a third-party vendor to establish a commercial off-the-shelf LIMS for the FBI's laboratory, which would allow the tracing and tracking of evidence and provide a variety of reporting capabilities.

After several difficulties and delays encountered in the fulfillment of the contract, the FBI moved expeditiously to mitigate further costs associated with the contract for the LIMS. Accordingly, it was determined that the LIMS would not meet the FBI's requirements. The vendor was then notified and the contract was terminated. Pursuant to the terms of the contract, the FBI paid an additional sum of approximately \$520,000, in order to terminate the contract. This payment was in addition to payments previously made on the contract. It is important to note that the payment to terminate the contract was far less than the \$4.3 million total cost of the contract as awarded. In addition, FBI's expenditures on the LIMS prior to its termination included payment for equipment purchases which can be used by the lab separately from LIMS.

Comments on the Draft OIG Report

As previously noted, the FBI has concerns regarding various statements in the report that we believe require clarification or are inaccurate.

1. The OIG report indicates that by not implementing this system, "the FBI laboratory operates without an effective information system to adequately trace the flow of evidence through the laboratory." The purpose of LIMS was to enhance

Memorandum for Richard A. McGeary

Subject: The Federal Bureau of Investigation's (FBI)
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the processes and procedures currently in place in the laboratory by improving efficiencies and automation.

The implication of the statement in the report is that the laboratory's operations are not effective or adequate, which is not supported by the fact that it is one of the largest and most comprehensive forensic laboratories in the world. Indeed, the lab annually conducts over one million examinations of physical evidence. To continue to successfully accomplish work of this quantity and caliber, improvements to an effective system, not the establishment of one, is required.

2. The report states that the FBI lost "...nearly \$1.2 million..." "...did not do its homework before awarding the contract..." and did not adequately ensure that the third-party vendor 1) understood the system requirements, 2) had the technical capacity to fulfill them, or 3) possessed the requisite security requirements for certification and accreditation of the LIMS software.

The statements noted above imply that the FBI had singular control over the system development and process; however, the report acknowledges that the third-party vendor also bears a significant degree of responsibility for the project issues. As detailed in the recommendation responses and stated in other audits conducted by the OIG, the FBI has instituted practices to improve the process for and clarification of technical, contractual and/or security requirements for future system implementations.

In addition, it should be noted that the contract termination settlement is far less than the full contract amount. It also reflects mitigation of

Memorandum for Richard A. McGeary

Subject: The Federal Bureau of Investigation's (FBI)
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(LIMS)

the potential financial impact if further development had occurred on this system despite the technical and security requirements that were in place at that time.

3. Throughout the report, the third-party vendor's name is provided. Since this report will be available to the public and accessible via internet, the FBI requests redaction of the vendor's name and specific dollar amounts to protect the future business opportunities of the vendor and future requests for proposal issued by the FBI on similar projects.

The FBI Laboratory offers the following in response to the DOJ-OIG preliminary draft review of the Implementation of the Laboratory Information Management System (LIMS).

Recommendation #1:

Consider whether a COTS workflow system or laboratory information management system in use or under development within the federal government will meet the needs of the FBI laboratory.

Response:

The FBI Laboratory agrees with this recommendation and will continue to work with the FBI OCIO to ensure a laboratory management system is implemented.

In December 2005, the FBI Laboratory in conjunction with the FBI OCIO began a Business Process Management (BPM) initiative to focus on the development, improvement, and reengineering of processes that govern the way laboratory services are provided. The BPM is an application that contains workflow tools, event triggers, business logic, and process automation. BPM will integrate with the portal, Business Activity Monitoring (BAM), which provides real-time feedback of key business performance indicators for BPM. The FBI Laboratory recognizes how significant this initiative will be in improving the overall processes of the FBI Laboratory by identifying potential process waste and inefficiencies, and also serving as an evidence tracking system.

Recommendation #2:

Ensure that any project to provide a laboratory information management system not only follows the FBI's LCMD but is overseen by an experienced IT project manager.

Response:

The FBI Laboratory agrees with this recommendation and takes continuous action in this area.

The FBI Laboratory is committed to ensuring all current and future Laboratory Division (LD) Information Technology (IT) projects comply with the FBI OCIO IT Management Process which includes the Life Cycle Management Directive (LCMD), IT Metrics, Earned Value Management System (EVMS) and IT Governance Boards. The FBI Laboratory will continue to work closely with the OCIO to ensure projects are designed and developed within the IT Enterprise Architecture (EA). Any future Laboratory information management system will also be presented for approval to the OCIO Investment Management Project Review Board, as well as undergo all the rigors of the FBI-wide IT project management processes established by the OCIO to ensure proper expenditure of funding and execution of the information technology requirements.

In September 2004, a decision was made by FBI Laboratory Division senior management that standard Project Management (PM) practices would be implemented to consistently define, approve, plan, control, report, and archive a growing number of LD projects

The overall objectives of the LD PM initiatives are to:

- Provide a common infrastructure for implementing PM tools and techniques consistently, effectively, and efficiently
- Accommodate Project Leaders with varying levels of PM experience through centralized support and training
- Provide a standardized procedure for defining and approving proposed projects
- Provide a common process and suite of automated tools for managing and controlling projects once approved
- Provide a standardized methodology and automated vehicle for capturing, reporting, and archiving project information and performance data for management review, future reference, and audits

Consistent with this decision, the LD established a Project Management Office (PMO) to provide PM services and implement PM standards. The PMO is responsible for:

- Project Management (PM) Consultation
- Process, Procedure, Template Definition/Enhancement
- Automated Tool Development/Administration/Enhancement
- Project Performance Analysis and Report Generation
- Control Product Assessment and Preparation Assistance
- Management (Phase) Review Coordination
- PM Training

The PMO serves as the LD's focal point for defining, maintaining, and enhancing PM standards and tools. PM standards and tools are supported through the Project and Account Management System (PAMS). PAMS provides Laboratory managers and users with real-time, online financial information. PAMS is a centralized, remotely accessed, web-based system that captures, tracks and manages Laboratory investments.

Recommendation #3:

Establish cost controls to ensure that training or other expenses are not incurred prematurely in the development of a successor to the LIMS project.

Response:

The FBI Laboratory agrees with this recommendation and has implemented a process to ensure all FBI Laboratory projects are consistent with the Bureau's PM policies and procedures.

The FBI Laboratory is committed to ensuring all current and future Laboratory Division (LD) Information Technology (IT) projects comply with the FBI OCIO IT Management Process which includes the Life Cycle Management Directive (LCMD), IT Metrics, Earned Value Management System (EVMS) and IT Governance Boards. The FBI Laboratory will continue to work closely with the OCIO to ensure projects are designed and developed within the IT Enterprise Architecture (EA). Any future Laboratory information management system will also be presented for approval to the OCIO Investment Management Project Review Board, as well as undergo all the rigors of the FBI-wide IT project management processes established by the

OCIO to ensure proper expenditure of funding and execution of the information technology requirements.

In line with the Laboratory Division's Project Management Office (PMO), the LD established a Major Acquisition Review Committee (MARC). This committee serves as the review entity for the PM Life Cycle Phased Reviews. In addition the MARC will review all acquisition requests totaling \$250,000 or more, all Information Technology (IT) request totaling \$50,000 or more and all LD projects totaling \$100,000 or more. The MARC members include the LD's Deputy Assistant Directors, Section Chiefs, and the Unit Chief of the Planning and Budget Unit.

APPENDIX 6

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

The OIG provided a draft of this audit report to the FBI on April 28, 2006, for its review and comment. The FBI provided a written response, dated May 31, 2006, which we included as Appendix 5 of this final report. The FBI concurred with the three recommendations in the audit report and also provided comments regarding three general issues in the report. Our analysis of the FBI's response follows.

FBI's General Comments

1. In its response, the FBI states that the purpose of LIMS was to enhance the processes and procedures currently in place in the laboratory by improving efficiencies and automation. Although we agree with this statement, it does not reflect the full impact that the implementation of the LIMS project would have had on the laboratory. As noted in the report, laboratory officials stated that the paper-based system currently being used by the laboratory is very limited in what information it can provide to enhance the management of evidence as it passes through the laboratory. LIMS would have allowed the FBI to electronically trace evidence as it passes through the lab and provide workflow data needed to better manage the laboratory.

The FBI's response also states that our report implies the laboratory's operations are not effective or adequate and points out that the FBI's laboratory is one of the largest and most comprehensive forensic laboratories in the world. Our audit report recognizes the significant amount of work performed at the FBI laboratory and does not question the work that is performed on evidence within the laboratory. However, the size and scope of the laboratory do not demonstrate the effectiveness or adequacy of the management of the evidence held within the laboratory. Our audit concludes that the management of evidence as it passes through the laboratory would have been significantly enhanced had a laboratory information management system been fully and effectively implemented.

The FBI's response also states that improvements to the laboratory's information management system are required, rather than the establishment of a new system. The FBI is currently utilizing a

Microsoft Access database to document when a piece of evidence is received, when a test has been completed on the evidence, and when it is released from the laboratory. However as pointed out in the report, the release of a piece of evidence is not always documented adequately. As a result, laboratory management cannot determine what evidence is contained within the laboratory at any given point in time. Additionally, the database system utilized by the laboratory also cannot reasonably pinpoint where a piece of evidence is at any given point in time. While we agree that the laboratory has an information management system in place, the system has limited functionality. This limited functionality led the FBI to enter into the LIMS contract to acquire a more effective system. We believe that the FBI either needs to make significant improvements to the existing information management system or acquire a new system that provides laboratory management the ability to more effectively manage laboratory operations.

2. The FBI response states that our report implies the FBI had singular control over the system development and process, although the report acknowledges that the vendor also bears some responsibility for the project's difficulties. As the response suggests, our audit found that both the FBI and the contractor were responsible for the outcome of the LIMS project. However, the FBI was solely responsible for establishing the system requirements and ensuring that the contractor met those requirements. We noted in the report that the FBI has recently made significant strides in the development and management of information technology projects. However, the LIMS project did not benefit from these new management practices.

The FBI's response also notes that the contract termination settlement is far less than the full contract amount. We agree. However, the FBI incurred costs in addition to the settlement amount, such as the personnel involved in the development, management, and termination of the project. More important is the fact that despite having worked on the development of an information management system since 1998 and reprogramming funds from other Laboratory Division programs in order to pay for the project, the FBI's laboratory remains without a modern system.

3. The FBI requests that the vendor's name and specific dollar amounts of the project be redacted from the report to protect the future business opportunities of the vendor and future requests for proposal issued by the FBI on similar projects. After careful review

and consideration of the FBI's request, we have decided to not redact the information for the following reasons: (1) the contractor's name and the dollar amounts paid to JusticeTrax are public information; (2) the public has a right to know the name of the system contractor; and (3) our report is clear that both the FBI and JusticeTrax were responsible for contributing to LIMS' failed implementation. For example, we fault the FBI for not adequately documenting system security requirements and for its overall poor project management, and we fault JusticeTrax for not meeting the FBI's security requirements once they were established and for not providing the web-enablement capabilities for the LIMS software as required by the contract. Therefore, we believe that our report is accurate as to which party was responsible for the various system implementation failures. Finally, because the name of the contractor and the dollar amounts paid to it are public information, we do not agree that disclosing the information in this report is inappropriate or will have an effect on future FBI request for proposals.

Status of Recommendations

1. **Resolved.** The FBI agrees with this recommendation. In its response to the draft report, the FBI states that the Laboratory, in conjunction with the Office of the Chief Information Officer (OCIO) began a Business Process Management initiative to focus on the development, improvement, and reengineering of processes that govern the way laboratory services are provided. This recommendation can be closed when we receive documentation demonstrating that the FBI has considered whether a COTS workflow system or laboratory information management system in use or under development within the federal government will meet the needs of the FBI's laboratory.
2. **Resolved.** The FBI agrees with this recommendation. In its response to the draft report, the FBI states that it is committed to ensuring all current and future Laboratory Division information technology (IT) projects comply with OCIO IT management processes, including the Life Cycle Management Directive (LCMD). Additionally, the FBI Laboratory Division has established a Project and Account Management System (PAMS), which provides managers and users with real-time, online financial information. PAMS is a centralized, remotely accessed, web-based system that captures, tracks, and manages the laboratory's investments. This recommendation can be closed when we receive documentation demonstrating that any project to provide a

laboratory information management system not only follows the FBI's LCMD but is overseen by an experienced IT project manager.

3. **Resolved.** The FBI agrees with this recommendation. In its response to the draft report, the FBI states that the Laboratory Division is committed to ensuring that all current and future IT projects comply with the FBI's OCIO IT management processes, including the LCMD. Additionally, the Laboratory Division established a Major Acquisition Review Committee (MARC), comprised of the Division's Deputy Assistant Directors, Section Chiefs, and the Unit Chief of the Planning and Budget Unit. The MARC serves as the review entity for Live Cycle Phased Reviews, and reviews will be performed on all laboratory acquisition requests totaling \$250,000 or more, all IT requests totaling \$50,000 or more, and all Laboratory Division projects totaling \$100,000 or more. This recommendation can be closed when we receive documentation demonstrating that the FBI has established cost controls to ensure that training or other expenses are not incurred prematurely in the development of a successor to the LIMS project.