

**ADVISORY MEMORANDUM REPORT  
ON DEVELOPMENT OF THE  
LOAN MONITORING SYSTEM**

**ADVISORY REPORT NUMBER A1-03**

**FEBRUARY 23, 2001**

This report may contain proprietary information subject to the provisions of 18 USC 1905 and must not be released to the public or another agency without permission of the Office of Inspector General



**U.S. Small Business Administration  
Office of Inspector General  
Washington, DC 20416**

<b>Advisory Memorandum Report</b>
<b>Issue Date: February 23, 2001</b>
<b>Report Number: A1-03</b>

TO: Kris Marcy, Chief Operating Officer

*Robert G. Seabrooks*

FROM: Robert G. Seabrooks, Assistant Inspector General for Auditing

SUBJECT: Development of the Loan Monitoring System

The Office of Inspector General, Auditing Division, is conducting an ongoing evaluation of the development of SBA's Loan Monitoring System (LMS). We are conducting this evaluation because of the importance of LMS to SBA's strategic goals and because of the complexities and risks associated with large system development projects like LMS. This is the first of a series of reports we plan to issue as project milestones are reached or significant concerns arise.

LMS is an integral part of SBA's Systems Modernization Initiative (SMI) – a multi-year, multi-million dollar effort to overhaul the Agency's information systems and processes. LMS is intended to provide the information and tools needed to enable the Agency to more effectively and efficiently manage risk, perform lender oversight, manage the loan portfolio and collect data for subsidy rate calculations.

### **OBJECTIVE AND SCOPE**

The objective of our ongoing evaluation is to determine the LMS project's adherence to SBA's recently adopted System Development Methodology (SDM).<sup>1</sup> The LMS project recently reached a major milestone when the first SDM phase, "Initiate Project," was completed. This report provides the results of our review of two "Initiate Project" phase deliverables: (1) the "LMS Project Plan" dated May 2000 and (2) the "LMS Security Risk Analysis" dated September 2000. The report also provides our findings regarding project management documentation, the quality assurance function, and

---

<sup>1</sup> The SDM is a set of management controls intended to ensure the success of information system development projects. It describes activities and deliverables to be completed in the following phases: Initiate Project, Define System, Design System, Build System, Evaluate System, and Operate System.

acquisition planning. Our evaluation is based on review of documents, attendance at meetings, and interviews with people involved with the LMS development project.

## RESULTS

This report addresses the need to: (1) update the LMS Project Plan, (2) expand the LMS Security Risk Assessment as systems assets are defined, (3) document and distribute project status reports and the results of meetings and reviews, (4) strengthen the quality assurance function, and (5) strengthen acquisition planning.

### **Finding 1: The LMS Project Plan Needs to be Updated.**

Development of a project plan is one of the SDM requirements in the “Initiate Project” phase. In May 2000, SBA completed the “LMS Project Plan” to “identify the essential steps needed to serve as a basis for the acquisition or development and implementation LMS.” The plan is not current. The plan should be updated to reflect system acquisition decisions and other accomplishments. Updating is required by the following sections of the LMS Project Plan:

*Section 3.2.2, LMS Milestones: It is only after collecting market survey data collected from the Request for Information (RFI) process that the project team will have enough information to fully identify, document and solidify the acquisition strategy. At this point in the project, a decision is made whether to proceed with the COTS/GOTS<sup>2</sup> and/or development approach. **The project plan will be revised to reflect the choice.** A large systems integration effort that combines COTS/GOTS approaches with software development is viewed as the most cost effective and least risky. [emphasis added]*

*Section 3.2.3 Updating the LMS Plan: As called for in the SDM, the Project Plan and System Decision Paper will be updated to reflect the results of decisions made.*

### **Recommendation**

1. We recommend that the LMS Project Plan be updated to reflect recent system acquisition decisions, and a process be developed to ensure the project plan is updated periodically in accordance with SDM requirements.

---

<sup>2</sup> Commercial off-the-shelf / Government off-the-shelf

## **SBA Management's Response**

Agree. The LMS Project Plan is currently being revised to reflect the change in acquisition strategy. The revised plan also will reflect that the OCIO considers itself to be a software acquisition group not a system development group. There is a significant difference between these as identified by the Software Engineering Institute's (SEI) Capability Maturity Models. The revised project plan will be ready for review in early March. The LMS project manager will continue to update the project plan as required.

In addition, the SMI team has developed a draft project management methodology that provides more detailed guidance on project management than SDM does.

## **OIG Evaluation of Management's Response**

The reply is responsive to the recommendation.

## **Finding 2: The LMS Security Risk Analysis Should be Expanded as System Assets are Identified.**

The SDM also requires completion of a risk analysis for system security in the "Initiate Project" phase. Accordingly, in September 2000, SBA completed the "LMS Security Risk Analysis." We previously provided comments and recommendations on this analysis, and all of our recommendations were incorporated into the final document. To the extent possible, the analysis was developed in accordance with the SDM. It does not, however, include a vulnerability assessment for LMS assets, because, as pointed out in the Scope (Section 1.1) of the risk analysis, LMS assets have not yet been defined:

*The assets that comprise the LMS system have not yet been defined, and therefore the asset definition sections of this document are yet to be developed.*

The assets that have not yet been defined include hardware (and its location), software, and information assets.

## **Recommendation**

2. We recommend the Security Risk Analysis be expanded as system assets are identified.

## SBA Management's Response

Agree. The assets that comprise the LMS have not yet been fully defined; therefore, the asset definition and risk analysis can not be completed. Assets can not be defined until the successful completion of the competitive procurement for system design and systems integration services. At the appropriate time, the Security Risk Analysis will be revised.

## OIG Evaluation

The reply is responsive to the recommendation.

### **Finding 3: The LMS Project has not Fully Complied with SDM Project Control and LMS Project Plan Requirements.**

One of the "Project Control" requirements in the SDM is reporting project status. The LMS project has not generated project status reports in accordance with this requirement. The objectives of tracking and formally reporting project status are to:

- *Provide a consistent technique for monitoring progress against plan.*
- *Identify problems quickly to allow maximum time for corrections.*
- *Provide an objective rather than subjective evaluation of status.*
- *Give the project sponsor, users, support organizations, senior management, and other reporting levels timely information.*
- *Provide a managerial evaluation rather than just raw facts.*

Section 3.5 of the LMS Project Plan, "*Project Review and Document Approval Process,*" provides:

*Project milestone reviews will be conducted by the LMS Project Team members, facilitated by the LMS QA function, and the **results presented to Senior SBA Executives via a QA report.*** [emphasis added]

Results of the first project milestone review were not presented to Senior SBA Executives via a QA (Quality Assurance) report.

Section 3.5 of the LMS Project Plan, Project Review and Document Approval Processes, further provides:

*The project review process is an integral component of project meetings that are scheduled and conducted regularly (weekly, bi-weekly). The Project Manager will conduct these meetings where activities are reviewed and discussed. In the*

*weekly team meeting, project decisions are made, communicated and documented. **The content of the discussion will be documented as meeting minutes and distributed to team members and appropriate stakeholders.** The meeting minutes will also be stored in the LMS Project Library, which houses all project artifacts. The review and approval processes continue throughout the life cycle of the LMS project and involve the CM Manager who places appropriate artifacts under CM control. [emphasis added]*

LMS and SMI meetings are regularly held, and because LMS is a major component of SMI, decisions affecting LMS development are made at SMI meetings. Minutes of LMS and SMI meetings have not always been taken and distributed to team members and appropriate stakeholders. The distribution of a summary of topics discussed at each regularly scheduled LMS and SMI team meeting along with decisions reached and specific actions to be taken – by whom and when – would enhance communications and help avoid misunderstandings.

### **Recommendation**

3. We recommend compliance with SDM Project Control and LMS Project Plan requirements for reporting status and communicating the results of project meetings and reviews.

### **SBA Management's Response**

Agree. The SMI Project Director recently established monthly status reporting for all SMI projects. The LMS Project Manager submits monthly status reports to the SMI Project Director. In addition, all SMI projects, including the LMS project, have improved project communications through the use of meeting minutes that are distributed via e-mail or web-site. SMI project managers will continue to improve their status reporting and project communication skills.

### **OIG Evaluation of Management's Response**

The reply is responsive to the recommendation.

### **Finding 4: A More Formal and Larger Quality Assurance (QA) Group Is Needed**

According to Quality Assurance Guidelines in SDM:

*The key activities of a QA program are:*

- *To provide SBA management visibility into the software development and maintenance process.*
- *To perform reviews and audits of software products being built (software and documentation).*
- *To review adherence to established processes, standards, and procedures for development and maintenance. [emphasis added]*

*The project QA group provides the project and appropriate managers with the results of these reviews and audits.*

*. . . The QA group continuously reviews project activities and audits software work products throughout the lifecycle. [emphasis added]*

*QA must be part of every project, although the formality and size of the QA function will vary from project to project. For example, rigid system requirements, large project teams, and systems with increasing complexity may require a more formal, larger QA function than would a smaller, less complex project consisting of only two or three developers. As a result, one project with one or two developers may have a QA staff member assigned to that project part time only, while another project of 20 developers may have a QA staff member assigned to that project full-time. Typically, the QA staffing level would be approximately 3 to 5 percent of the total project staffing level. [emphasis added]*

A Quality Assurance Manager has been designated for LMS to perform these functions. This person is also the LMS Configuration Manager, the LMS Information Security Specialist, and has various other responsibilities. In our opinion, part time staffing for the LMS quality assurance function is insufficient considering the size and complexity of the LMS project.

## **Recommendation**

4. We recommend establishment of a more formal and larger LMS Quality Assurance group as called for in the SDM Quality Assurance Guidelines within SBA's Systems Development Methodology.

## **SBA Management's Response**

Agree. Quality Assurance resources are needed for both LMS and at the OCIO level to ensure adequate adherence to established processes, standards, and procedures for development and maintenance. Part time staffing for the LMS is insufficient. Currently, each statement of work for LMS prototyping requires quality assurance (QA) and configuration

management (CM) activities by the contractor. In addition to contractor efforts, the LMS team performs QA and CM.

Recruitment for a Quality Assurance Project Manager is in progress. The job has been advertised and has closed. Interviews are on hold until the hiring freeze is lifted. In addition, efforts to obtain contract QA and CM support are underway.

### **OIG Evaluation of Management's Response**

The reply is responsive to the recommendation.

### **Finding 5: Acquisition Planning Needs Improvement.**

The Federal Acquisition Regulation (FAR) requires agencies to perform acquisition planning and conduct market research for all acquisitions (see FAR 7.102(a)). Acquisition planning is defined at FAR 7.101 as a process:

*“Acquisition planning” means the process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition.*

General procedures for acquisition planning are provided at FAR 7.104:

- (a) *Acquisition planning should begin as soon as the agency need is identified, preferably well in advance of the fiscal year in which contract award is necessary. **In developing the plan, the planner shall form a team consisting of all those who will be responsible for significant aspects of the acquisition, such as contracting, fiscal, legal, and technical personnel.** The planner should review previous plans for similar acquisitions and discuss them with the key personnel involved in those acquisitions. At key dates specified in the plan or whenever significant changes occur, and no less often than annually, the planner shall review the plan and, if appropriate, revise it. [emphasis added]*
- (b) *Requirements and logistics personnel should avoid issuing requirements on an urgent basis or with unrealistic delivery or performance schedules, since it generally restricts competition and increases prices. Early in the planning process, the planner should consult requirements and logistics personnel who determine type, quality, quantity, and delivery requirements.*
- (c) *The planner shall coordinate with and secure the concurrence of the contracting officer in all acquisition planning. If the plan proposes using other than full and*



*open competition, the plan shall also be coordinated with the cognizant competition advocate.*

SBA has not followed all of these procedures. Although procurement of a COTS (commercial off-the-shelf) package was expected from the beginning of the project, an acquisition planning team has not been established, a written acquisition plan has not been developed, and there is no overall strategy for managing the acquisition.

### **Recommendation**

5. We recommend that an acquisition team be formed to conduct acquisition planning as described in the FAR. The team should consist of all those who will be responsible for significant aspects of the acquisition, such as contracting, fiscal, legal, and technical personnel. The team should be given adequate time to develop an acquisition strategy for LMS and develop a written acquisition plan.

### **SBA Management's Response**

The OIG findings are not totally correct. A formal LMS Acquisition Strategy was established in February 2000, has been revised as needed, and is currently under revision to reflect a new strategy.

Recently, an LMS acquisition team was formed at the request of the SMI Project Director. The team is composed of representatives from the offices of the Chief Information Officer, Chief Financial Officer, Capital Access, Procurement and Grants Management, and the General Counsel. Representatives from other programs will be added as needed. The Acquisition Team has been tasked with the responsibility to develop a written acquisition plan, finalizing the SOW [statement of work], and following through until a contract is successfully awarded.

### **OIG Evaluation of Management's Response**

Management's disagreement with our finding that there is no overall strategy for managing the acquisition of a COTS package for LMS is based on a document titled "Loan Monitoring System Acquisition Strategy." As pointed out in management's response, the document is not current.

Management's planned actions to update the LMS Acquisition Strategy and have the LMS Acquisition Team develop a written acquisition plan are responsive to the recommendation.

\* \* \* \* \*

The findings included in this report are the conclusions of the Office of Inspector General's Auditing Division. **The findings and recommendations are subject to review, management decision, and corrective action by your office in accordance with existing Agency procedures for audit follow-up and resolution.**

Please provide us your management decision for each recommendation within 30 days. Your management decisions should be recorded on the attached SBA Forms 1824, Recommendation Action Sheet, and show either your proposed corrective action and target date for completion, or explanation of your disagreement with our recommendations.

Should you or your staff have any questions, please contact Robert G. Hultberg, Director, Business Development Programs Group at (202) 205-7577.

Attachments

**REPORT DISTRIBUTION**

<b><u>Recipient</u></b>	<b><u>Number of Copies</u></b>
Associate Deputy Administrator for Management & Administration .....	1
Associate Deputy Administrator for Capital Access .....	1
Chief Information Officer .....	1
Chief Financial Officer .....	1
Attention: Jeff Brown	
General Counsel .....	2
General Accounting Office.....	1