U.S. GOVERNMENT PRINTING OFFICE
OFFICE OF INSPECTOR GENERAL

ASSESSMENT REPORT
10-01

FEDERAL DIGITAL SYSTEM (FDSYS) INDEPENDENT VERIFICATION AND VALIDATION – NINTH QUARTER REPORT ON RISK MANAGEMENT, ISSUES, AND TRACEABILITY

December 2, 2009

MEMORANDUM

U.S. GOVERNMENT PRINTING OFFICE

OFFICE OF INSPECTOR GENERAL

Date

December 2, 2009

To

Chief Information Officer

From

Assistant Inspector General for Audits and Inspections

Subject

Federal Digital System (FDsys) Independent Verification and Validation (IV&V) – Ninth Quarter Report on Risk Management, Issues, and Traceability
Report Number 10-01

The Government Printing Office (GPO) Office of Inspector General (OIG) is conducting independent verification and validation (IV&V) of GPO's Federal Digital System (FDsys)[1] implementation. The OIG contracted with American Systems[2] to conduct IV&V for the public release of FDsys.[3] As part of its contract with the OIG, American Systems is assessing the state of program management, technical and testing plans and other efforts related to the rollout of Release 1 (formerly R1C2). American Systems is required by the contract to issue to the OIG a quarterly Risk Management, Issues, and Traceability Report, providing observations and recommendations on the program's technical, schedule, and cost risks as well as requirements traceability of those risks and the effectiveness of the program management processes in controlling risk avoidance. Additionally, at the end of each FDsys release phase, American Systems is required to issue a release phase summary program management report that addresses delivery of the technical baseline per the FDsys Master Program Schedule and the risks that affect the schedule's critical path to the next phase.

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[1]The FDsys program is a multimillion dollar effort that GPO is funding and managing to modernize the GPO information collection, processing, and dissemination capabilities it performs for the three branches of the Federal Government.
[2]American Systems, located in Chantilly, Virginia, is a large information technology company with significant experience in the realm of IV&V for Federal civilian and Defense agencies, including the Department of State, the Navy, and the U.S. Agency for International Development.
[3]American Systems IV&V methodology is referenced to the framework established by the Institute of Electrical and Electronic Engineers (IEEE) Standard 1012-2004, the IEEE Standard for Software Verification and Validation.

The enclosed report is American Systems' quarterly report for the period July 1, 2009 to September 30, 2009. During this quarter, American Systems identified a number of technical risks associated with FDsys configuration management and risk management activities. Section 6 of the report contains eleven recommendations designed to strengthen these activities. Management concurred with ten of the recommendations, and partially concurred with one recommendation. We consider the actions taken or proposed by management responsive to each of the eleven recommendations, including the recommendation management partially concurred with.

Nine recommendations are resolved and will remain open until corrective actions have been taken and IV&V has verified the actions. We are closing two recommendations (numbers 2 and 10) upon issuance of this report. The status of each recommendation upon issuance of this report is included in Appendix B. The final report distribution is in Appendix C.

If you have questions concerning this report or the IV&V process, please contact Mr. Brent Melson, Deputy Assistant Inspector General for Audits and Inspections at (202) 512-2037, or me at (202) 512-2009.

Kevin J. Carson

Kevin J. Carson
Assistant Inspector General for Audits and Inspections

Enclosure

cc:
Deputy Public Printer
Acting Chief of Staff
Chief Acquisition Officer
Chief Management Officer
Chief Technology Officer

Enclosure

IV&V RISK MANAGEMENT, ISSUES, AND TRACEABILITY REPORT	
TO:	Brent Melson
FROM:	David Harold
IV&V OF:	Quarterly Report (Final – Document Number 02-007)
SUBJECT:	July 01, 2009 – September 30, 2009 Quarterly Report
DATE:	October 21, 2009
CC:	Dan Rose, Jon Valett, John Best, Shawn O'Rourke

Background:

This report presents the critical technical, schedule, and cost risks identified for the Government Printing Office (GPO) Federal Digital System (FDsys) Program. Specifically, it provides a high-level overview of the key risks and issues that Independent Verification & Validation (IV&V) has identified during the quarter ending September 2009.

Since June 30, 2009, several significant events occurred within the FDsys Program. The FDsys Program Management Office (PMO) completed a number of post-Release 1 production deployments during the reporting period. These deployments consisted of Program Tracking Report (PTR) fixes; redesign of the Documentum internal system in order to process granules[1] for Collections; development of a metadata editing tool; conversion of the Federal Register Standardized General Markup Language (SGML) to Extensible Markup Language (XML) in order to publish the XML data to data.gov for bulk download by the general public; and an emergency production build to fix a FAST indexing issue. These events are summarized below.

Release 1.5.0.372 Highlights:

- The deployment of the Documentum redesign was completed. The update included processing large collections outside Documentum due to memory overflow problems that were encountered during ingest processing. Rather than generating a large number of granules for larger collections, e.g., History

[1]Depending on the specific Collection, a document may contain one or more granules. A granule is a defined segment within the document. For example, the Federal Register is divided into granules. Each granule represents an individual rule, proposed rule, notice, correction, or presidential document.

of Bills, a single, zipped file was generated. This file would be ingested to the repository and then allocated/assigned to a dedicated processor. Also included in this deployment were Program Tracking Report (PTR) fixes, and development of a Metadata Editing Tool.

- Eight (8) additional Collections were deployed within the Release 1 production environment: Congressional Record Index (CRI), History of Bills (HOB), Statutes at Large (STAT), Congressional Record Bound (CRECB), Economic Report of the President (ERP), Congressional Directory (CDIR), Government Manual (GMAN), and GAO Reports and Comptroller Decisions (GAO). With this deployment, twenty-two (22) of the fifty-five (55) Collections contained in the existing GPO Access system are now available to the public via FDsys.

Release 1.6.0.373 Highlights:

- Federal Register Standard Generalized Markup Language (SGML) to Extensible Markup Language (XML) Conversion for the Data.gov effort; digitally signing of PDF documents; and work to fix open Program Tracking Reports (PTRs).

Release 1.6.1.374 Highlights:

- A FAST bug was discovered on 29 September 2009, during beta testing by Integration Technology and Support (IT&S) personnel, that was linked to the re-indexing process. This resulted in indices that were corrupt because they were unable to be refreshed or rebuilt. The affect of this error was that users could not locate documents through FDsys search queries as well as blocking the publishing process of any new or updated content to the public facing site.

Other Quarterly Highlights:

- Work on the development of the Continuity of Operations Plan (COOP) capability for FDsys continued. An initial COOP design meeting was held on 1 September 2009 to discuss the PMO's planned functionality and configuration for the COOP capability. As a result of this meeting, a Bill of Material (BOM) was produced and estimates/quotes were received for the hardware.

- Formal documentation to incorporate IV&V findings from previous Task Reports and to support the completion of the outstanding Release 1 activities is continuing. Data Management Documents (DMDs) for eight (8) additional Collections have been developed; a System Design Document (SDD) for the Federal Register SGML to XML conversion was completed; and, updates to

the Risk Management Plan and Configuration Management Plan are in-process.

IV&V Reports:

At the PMO's request, IV&V provided comments to the new System Design documentation (File Processor Architecture SDD). Two (2) IV&V Task Reports were submitted to the OIG during the timeframe covered by this quarterly report. These tasks reports evaluated the Configuration Management and Risk Management implementations.

IV&V Task Report	IV&V Submittal to the OIG	Submitted to CIO / PMO	Responses Due Date	Responses Received Date
FDsys Configuration Management – Draft	March 19, 2009	September 16, 2009	September 30, 2009	October 16, 2009
FDsys Risk Management Implementation - Draft	October 2, 2009	October 6, 2009	October 21, 2009	October 16, 2009

1. Technical Risks Identified

During the last quarter, a number of technical risks were identified as a result of IV&V Task Reports. These technical risks, as excerpted from those reports, are provided below.

Configuration Management (CM):

While the FDsys CM continues to mature and program Configuration Control Board (CCB) meetings continue to occur on a regular basis, this review uncovered a number of weaknesses in both the documentation and the execution of CM processes. Not addressing these weaknesses could have consequences that manifest themselves as risks to deployment.

- High-level, non-specific, non-referenced, non-controlled, and outdated documentation of the CM processes, especially the build process, could result in deployment of builds that contain errors.
- Reuse of PTR numbers could result in confusion as to which problem(s) are being addressed by the build.

- Currently, only one CM Team Member has experience performing the entire build process. With the process being documented at a high level, if that individual is unavailable, delays in deployment of builds could result.
- The lack of a formal checkout procedure to ensure that the build was successful could result in a build being deployed with errors, missing collections, etc.
- Lack of CM control on FDsys documents stored on the share drive makes them subject to loss or change without proper CCB review.

Risk Management (RM):

The IV&V findings in this report indicate that the tenets of the risk management program are being implemented as documented in the Risk Management Plan (RMP). IV&V is aware that it is impossible for any program to mitigate each and every risk and this is why it is essential that the program continue to prioritize all risks brought before the Risk Review Board (RRB). Many of the risks reviewed by IV&V contain well written descriptions and root cause analyses (the only exception was Risk R082 which did not contain a root cause analysis); however, the results of the evaluation also found that the Risk Handling Plans are not applied or documented in a consistent manner. In addition, entries in the Risk Database often contradict the information contained in the Risk Handling Plans. The effects of these conditions manifest themselves as the following potential risks:

- Failure to identify risk triggers and management actions (in response to those triggers) leaves the program vulnerable and ill-prepared to act should risks be realized sooner than anticipated.
- Failure to include an analysis of the program cost, schedule, and technical performance impact of each risk, to include adjusting those impacts (cost, schedule, and technical performance) based on successful mitigations, leaves the FDsys Program vulnerable to potential schedule delays, cost overruns (associated with schedule delays), and performance impacts that require redesign due to inadequate testing, lack of resources, or some other reason.
- Risks that are closed because they have a low probability of occurrence, are associated with deployment, or will impact the program at the future date, e.g., an announced software upgrade by a Commercial Off The Shelf vendor that will occur on some future date, leaves the program unaware and vulnerable should that risk be realized.
- Failure to conduct more frequent risk analysis (via the RRB) increases the likelihood of risks being realized due to the lack of review and required revision of the mitigations.

2. Schedule Risks Identified

There is the potential for schedule risks associated with IV&V's Configuration Management and Risk Management evaluation findings. The FDsys program could

incur a schedule delay if a CM build was deployed with errors. This would result in additional rework and delays to other activities as resources are diverted. Additionally, implementing a more rigorous risk management process has the potential to lessen the impact of risks that are realized; one of those risks being schedule impact. However, failure to adopt this approach could result in schedule impacts.

Of more concern to IV&V is the lack of an integrated master schedule that addresses the completion activities related to Release 1 (i.e., items not included with its initial deployment) and the development of Release 2. Because of this, the basis for determining overall schedule risk is not available. Without a master schedule, it is difficult for the PMO to coordinate work efforts of the various contractors and establish milestones. The capability to measure progress is compromised.

Also note that problems continue to be found with the deployed FDsys that have required significant rework, e.g., the redesign of the internal Documentum system, and the close to three hundred (300) PTRs that have been generated since the deployment in March 2009. These problems have required the PMO to divert resources away from Release 2 tasks and activities resulting in schedule delays.

3. Cost Risks Identified

There are cost risks inherent with the technical issues identified during the July to September timeframe. Deployment delays due to incorrect CM builds as well as risks that are not properly mitigated, have the potential to incur additional cost.

The lack of an approved master schedule for the current FDsys activities is the most significant cost risk. Without a master schedule, there are no established milestones and specified deliverables. Work continues and tasks are completed without a concrete measure of the cost to complete a specified amount of work within an allotted timeframe.

4. Evaluate FDsys Configuration Management

During this quarter, IV&V performed a Task Report documenting findings from an analysis of the GPO FDsys CM activities and processes as delineated in the PMO *FDsys Configuration Management Plan (CMP)*, to determine if they were being implemented as written. This Plan, describes the controls that are to be implemented to ensure preserving the integrity of the system baseline; ensuring that changes are performed in a controlled manner.

5. Evaluate FDsys Risk Management Implementation

During this quarter, IV&V performed a Task Report documenting findings from the review of forty (40) closed risks to determine whether the risks contained a risk

handling plan, application of those mitigation steps (in the Risk Handling Plans) was effective in reducing the impact to the FDsys Program, and if documentation/ annotations were provided justifying the approval, rejection, or closure of the risks.

The focus of this evaluation was to determine the efficacy of the risk handling plans, i.e., do the mitigation steps contained therein provide the necessary rigor to either eliminate the risk or reduce the impacts to cost, schedule, technical performance, and impact to other organizations. Additionally, IV&V wanted to verify if the handling plans indicated how effective the mitigation steps were once they had been implemented. IV&V also reviewed the risk handling plans and entries in the risk database to determine if documentation was provided to justify the approval, rejection, or closure of risks.

6. Recommendations

The IV&V recommendations and the CIO/PMO response are provided below. These encompass the recommendations previously included in the IV&V Task Reports discussed in this document.

1. Update CM documentation:
   - Update the *FDsys CMP*, including documenting and adding more formality to the interaction between FDsys program-level CCB and the GPO agency-level CCB.
     - IV&V recommends using the information provided in the *Change Management Plan*, *Configuration Management Process* training document and *Program Directive PD01-002: PTRSW Process* to complete this task. This documentation describes how to complete the fields on the PTR, the change process and interaction between various configuration control boards, i.e., PCCB, ERB, and OCCB.
   - Add references in the *FDsys CMP* to the *Instruction Sheet*.
   - Generate an FDsys CCB Charter as directed by *GPO Instruction 705.30: Information and Technology Systems (IT&S) Configuration Management Policy Statement.*

   Management's Response. Concur. The CM plan is in the process of being updated and will be made available to IV&V upon completion (30 October 2009).

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation; however, the FDsys Program is also responsible for developing an FDsys CCB Charter. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and verified by IV&V.

2. Use of PTRs:
   - Update ClearQuest so that it contains traceability between a PTR, the test build, and the Production Build Number.

- Discontinue the reuse of PTR numbers in ClearQuest. Each PTR number, regardless of having the Program Name field, should be unique.
- Provide more detailed explanations in PTRs that adequately describe the problem and the changes that have been made to correct the problem.

Management's Response. Partially concur. The FDsys team believes there is sufficient traceability between a PTR, the test build, and the Production Build Number demonstrated within ClearQuest using the current process.

The team disagrees with the recommendation to discontinue the reuse of PTR numbers in ClearQuest. The way in which ClearQuest is employed is consistent with industry best practice of having a unique identifier for each issue discovered and being tracked on a project. The team believes using the program name field to differentiate between projects creates a partition that is no different than creating a separate database for each type of PTR.

The team agrees it is important to provide detailed explanations within PTRs and will continue to work with PTR submitters to ensure this is performed.

Evaluation of Management's Response. IV&V disagrees with the re-use of PTR numbers, but accepts this policy based upon the PMO's stated rationale. Because the IV&V team and the FDsys management team agree in principle, we are closing this recommendation upon issuance of the final report.

3. Build Process:
   - Provide more specific instructions on how to execute a build to include performing a checkout procedure to ensure that the build and deployment were successful.
   - Provide training to additional members of the PMO in execution of the build process to avoid potential delays if the current CM Team Member, who currently performs these operations, is unavailable.
   - Fix or replace the faulty Oracle Applications server that caused problems with deployment of test build 3.66.

Management's Response. Concur. A Process Description is being developed to document the build procedures, to be completed 10/29. With regards to training to additional members of the PMO in execution of the build process, builds are solely the responsibility of the CM team. PMO will not be responsible for building and deploying the system. Additional training on build and deploy is underway for the CM team to ensure adequate coverage to support builds.
The team agrees with the recommendation to fix the Oracle Applications server.

Evaluation of Management's Response. Management's proposed actions for the 1st and 3rd bullets are responsive to the recommendation. Management's response to the 2nd bullet is unclear to the IV&V team. Based on IV&V's witness of the Build process, this process is not solely a CM function. When errors during

the Build process occur, CM contacts members of the PMO staff, and corrections are then made (by the PMO staff). CM then re-runs the Build. The CM Team is an integral part of the FDsys team and to consider them separate and solely responsible for the Build process is curious. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed.

4. Configuration Control:
   - Finalize configuration item documents which have been in draft status for extended periods of time.
   - Place all configuration items under configuration control (in ClearCase) in a timely manner and, publish/link them to SharePoint in a timely manner.
   - Production release information that is currently stored in a spreadsheet and published to the FDsys project team using SharePoint, should be placed under formal configuration control in ClearCase.
   - Place the *Instruction Sheet* under configuration control.

   Management's Response. Concur. The team agrees that configuration items should be placed under CM control on a timely basis. The Build Instruction Sheet is not a configuration item. However a formal PD and SOP are being developed and will be under CM control.

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and have been verified by IV&V.

5. Conduct of CCB Meetings:
   - CCB meetings should be conducted in a more formal manner, e.g., CCB meetings should begin on time; PTRs should not be approved, no matter what state they are in, unless board members are present.
   - PMO Staff assigned to PTRs that are on the CCB agenda to be discussed, should be required to attend the CCB meeting.
   - PMO Staff affected by PTRs that are on the CCB agenda to be discussed, should be required to attend the CCB meeting.

   Management's Response. Concur. The team concurs that PMO staff affected by PTRs on the agenda should attend CCB meetings, with the caveat that a qualified representative can represent someone in the meeting.

   Evaluation of Management's Response. Management's proposed actions are partially responsive to the recommendation. Management addressed the recommendation in the 3rd bullet only. Future IV&V reports will revisit the recommendations made in the remaining bullets if they are not addressed. The

recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and have been verified by IV&V.

6. Identify risk triggers and resultant management action for all high priority risks.

   Management's Response. Concur. Risk triggers will begin to be added to high priority risks once their process has been defined and added to the RMP.

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and have been verified by IV&V.

7. Assess and document the potential impacts to program cost, schedule, technical performance, and impacts to other organizations that may result if a risk is realized. Moreover, quantify these impacts where possible.

   Management's Response. Concur. Impact quantifications should be added to Impact definition and the periodic scoring of each risk, and will follow associated updates to the RMP.

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and have been verified by IV&V.

8. Improve the mitigation steps (that are contained in the Risk Handling Plans) by:
   - Clearly defining the risk;
   - Enhancing the description of the steps required for mitigation;
   - When mitigation steps are applied, adjust the impacts as required. This will enable the FDsys Program to determine the overall effectiveness of the risk management program; and
   - Ensuring the mitigation strategy eliminates the risk or reduces its impact should the risk become a problem.

   Management's Response. Concur. Additional rigor in documentation of the risks will be requested during the development and updates of the risk owners associated risks.

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions i.e., Risk Handling Plans are appropriately documented, are completed and have been verified by IV&V.

9. Not close risks prematurely. Risks that are associated with deployment, have a low probability of occurrence/impact, or are identified as future risks should remain open and subject to routine review and assessment, e.g., during monthly program reviews.

   Management's Response. Concur. Our intention is not to close risks prematurely. The goal for the risk process is to have appropriate documentation within the risk handling plans, which includes the reason why the risk was closed. Risks tied to deployment are reevaluated to determine whether they are overcome by events, and whether the risk should continue to be monitored. Low scoring risks and future risks are monitored less frequently, but are still tracked by the risk management process and risk database.

   Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions i.e., until Risk Handling Plans are consistently documented including justification why risks are being closed, are completed and have been verified by IV&V.

10. Convene the RRB on a more frequent basis and/or allow for additional time to review all of the risks.

    Management's Response. Concur. Risks and problems are reviewed in order of risk score and last reviewed date, ensuring that the risks that have the highest impact to the program are addressed most frequently while making sure that low impact risks are still reviewed. In addition, risk owners are still required to update the status of their risk mitigation plans regardless of whether the risk is addressed in the Risk Review Board. Risk owners are also responsible for the application of their risk mitigation plans, and spend their time managing their implementation irrespective of the frequency of the RRB meetings. The program manager has determined that the level of effort being applied to the current risks and risk management process is at an appropriate level for the current status of the program. The frequency of RRB meetings will be reevaluated for Release 2 planning purposes.

    Evaluation of Management's Response. Management's actions and proposed actions are responsive to the recommendation. This recommendation will be closed upon issuance of the final report.

11. Provide more timely and informative updates to the risk documentation in the Risk Database, RRB Meeting Minutes, and the Risk Handling forms.

    Management's Response. Concur. Please see responses to IV&V Recommendations 3, 4, and 5 (*Note that these correspond to numbers 8, 9, and 10 above).*

Evaluation of Management's Response. Management's proposed actions are responsive to the recommendation. The recommendation is resolved but undispositioned, and will remain open for reporting purposes until corrective actions are completed and have been verified by IV&V.

U.S. GOVERNMENT PRINTING OFFICE
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MEMORANDUM

DATE: October 16, 2009

REPLY TO ATTN OF: Chief Information Officer

SUBJECT: Federal Digital System (FDsys) Independent Verification and Validation (IV&V) – FDsys Configuration Management (Final - Doc Number 02-005)

TO: Assistant Inspector General for Audits and Inspections

Thank you for the opportunity to respond to the report regarding Configuration Management (CM) for GPO's Federal Digital System (FDsys).

One important item of note with this report is that there were a number of comments and recommendations around incomplete documentation of the CM process. The version of the Configuration Management Plan (CMP) used in this review is in the process of being updated, and will include the Process Directives and Standard Operating Procedures that document the CM processes and procedures the FDsys program follows. A PTRDOC was created to allow us to document changes to plan and processes until we were ready to approve a new version. The updated plan will be completed and made available to IV&V on October 30th, 2009.

Recommendations:

Recommendation #1: Update CM documentation

- As mentioned above, the CM plan is in the process of being updated and will be made available to IV&V upon completion.

Recommendation #2: Use of PTRs

- The FDsys team believes there is sufficient traceability between a PTR, the test build, and the Production Build Number demonstrated within ClearQuest using the current process.

- The team disagrees with the recommendation to discontinue the reuse of PTR numbers in ClearQuest. The way in which ClearQuest is employed is consistent with industry best practice of having a unique identifier for each issue discovered and being tracked on a project. The team believes using the program name field to differentiate between projects creates a partition that is no different than creating a separate database for each type of PTR.

- The team agrees it is important to provide detailed explanations within PTRs and will continue to work with PTR submitters to ensure this is performed.

Recommendation #3: Build Process

- A Process Description is being developed to document the build procedures, to be completed 10/29.
- With regards to training to additional members of the PMO in execution of the build process, builds are solely the responsibility of the CM team. PMO will not be responsible for building and deploying the system. Additional training on build and deploy is underway for the CM team to ensure adequate coverage to support builds.
- The team agrees with the recommendation to fix the Oracle Applications server.

Recommendation #4: Configuration Control

- The team agrees that configuration items should be placed under CM control on a timely basis.
- The Build Instruction Sheet is not a configuration item. However a formal PD and SOP are being developed and will be under CM control.

Recommendation #5: Conduct of CCB Meetings

- The team concurs that PMO staff affected by PTRs on the agenda should attend CCB, with the caveat that a qualified representative can represent someone in the meeting.

MICHAEL L. WASH

Appendix A.

MEMORANDUM

DATE: October 16, 2009

REPLY TO ATTN OF: Chief Information Officer

SUBJECT: Federal Digital System (FDsys) IV&V - Draft Risk Management Implementation Report

TO: Office of the Inspector General

Thank you for the opportunity to respond to the report Risk Management for GPO's Federal Digital System (FDsys).

To improve the efficacy of the FDsys risk management program, IV&V recommends that the PMO:

1. Identify risk triggers and resultant management action for all high priority risks;

   Response: Agreed. Risk triggers will begin to be added to high priority risks once their process has been defined and added to the RMP.

2. Assess and document the potential impacts to program cost, schedule, technical performance, and impacts to other organizations that may result if a risk is realized. Moreover, quantify these impacts where possible;

   Response: Agreed. Impact quantifications should be added to Impact definition and the periodic scoring of each risk, and will follow associated updates to the RMP.

3. Improve the mitigation steps (that are contained in the Risk Handling Plans) by: clearly defining the risk; enhancing the description of the steps required for mitigation; when mitigation steps are applied, adjust the impacts as required. This will enable the FDsys Program to determine the overall effectiveness of the risk management program; and ensuring the mitigation strategy eliminates the risk or reduces its impact should the risk become a problem.

   Response: Agreed. Additional rigor in documentation of the risks will be requested during the development and updates of the risk owners associated risks.

4. Not close risks prematurely. Risks that are associated with deployment, have a low probability of occurrence/impact, or are identified as future risks should remain open and subject to routine review and assessment, e.g., during monthly program reviews;

   Response: Our intention is not to close risks prematurely. The goal for the risk process is have appropriate documentation within the risk handling plans, which includes the reason why the risk was closed. Risks tied to deployment are re-evaluated to determine whether they are overcome by events, and whether the risk should continue to be monitored. Low scoring risks and future risks are monitored less frequently, but are still tracked by the risk management process and risk database.

5. Convene the RRB on a more frequent basis and/or allow for additional time to review all of the risks; and

   Response: Risks and problems are reviewed in order of risk score and last reviewed date, ensuring that the risks that have the highest impact to the program are addressed most frequently while making sure that low impact risks are still reviewed. In addition, risk owners are still required to update the status of their risk mitigation plans regardless of whether the risk is addressed in the Risk Review Board. Risk owners are also responsible for the application of their risk mitigation plans, and spend their time managing their implementation irrespective of the frequency of the RRB meetings. The program manager has determined that the level of effort being applied to the current risks and risk management process is at an appropriate level for the current status of the program. The frequency of RRB meetings will be re-evaluated for Release 2 planning purposes.

6. Provide more timely and informative updates to the risk documentation in the Risk Database, RRB Meeting Minutes, and the Risk Handling forms.

   Response: Please see responses to IV&V Recommendation #3, #4, and #5.

MICHAEL L. WASH

Appendix B. Status of Recommendations

Recommendation No.	Resolved	Unresolved	Open/ECD*	Closed
1	X		10/30/09	
2				X
3	X		10/29/09	
4	X		TBD	
5	X		TBD	
6	X			
7	X		TBD	
8	X		TBD	
9	X		TBD	
10				X
11	X		TBD	

*Estimated Completion Date

Appendix C. Report Distribution

Deputy Public Printer
Acting Chief of Staff
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Chief Information Officer
Chief Management Officer
Chief Technology Officer