

Project Name:	Department of Energy BMIS-FM
Project Number:	BMIS-FM Phase I
DOE Proj Mgr:	Michael Fraser
IBM Proj Mgr:	Don A. Cox, PMP



QUALITY MANAGEMENT PLAN for *Department of Energy BMIS-FM Project*

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Approvals

The following people have approved this document. (Sign below name)

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Michael Fraser	DOE Program Manager
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Don A. Cox	Team IBM Program Manager
Signature:	Date:

Distribution

This document has been distributed to:

Name	Function

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Quality Management Plan

1. Objectives

- 1.1. The purpose of the Quality Management Plan is to document the Project Quality System which includes the organizational structure, responsibilities, procedures, processes, and resources needed to implement quality management for the BMIS-FM Project. In addition, this document defines how relevant quality standards will be established for this project and how they are expected to be satisfied.
- 1.2. As stated in the DOE Statement of Work (SOW), the implementation of the Business Management Information System – Financial Management (BMIS-FM) is part of a larger “integrating vision of systems that will bridge the Department’s business processes, including planning, budgeting, finance and accounting, procurement and financial assistance, human resources, asset management, and logistics”¹. BMIS-FM is the second project in support of this vision, the first being the Corporate Human Resource Information System (CHRIS) which is now operational. The complexity and scope of a major project of this sort requires a firm commitment to careful project quality planning, quality assurance and quality control.

2. Expected Stability of Project Quality

- 2.1. Project Quality
 - 2.1.1. The project scope has been clearly defined in Task Order issued, with specific references to other documents including DOE’s SOW, amendments, the Team IBM Proposal and amendments, and other attachments and appendices.. Any change to project scope will be handled through the standard change control process. Scope verification processes are incorporated throughout the project plans, with reference to the Initial Verification of Project Scope as the controlling document. Any corrective actions taken will be documented and approved per the change management plan.
 - 2.1.2. Project schedules for the Prepare, Focus and Design phases have been developed using MS Project 98, and will be baselined upon review and approval by the DOE and Team IBM project managers. Processes have been implemented to ensure the project team will meet target dates, or as necessary, revised dates are established. Earned value analysis will be used to identify and isolate schedule variances. Variances outside

¹ Request for Quotes for BMIS-FM, May 7, 2000.

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established limits will be subjected to variance analysis and depending on the degree of impact, handled through the standard change control process. Variance tolerance threshold levels have been identified in the Project Schedule Management Plan. Any corrective actions taken will be documented and approved per change management processes established in the schedule management plan.

- 2.1.3. A project budget was developed as part of the Team IBM Proposal, with several performance objectives defined as firm fixed price. As previously stated, project plans were created using MS Project, and will be baselined upon review and approval by the DOE and Team IBM project managers. Earned value analysis will be conducted on a regular basis to identify and isolate cost variances. Variances outside established limits will be subjected to variance analysis and depending on the degree of impact, handled through the standard change control process. Variance tolerance threshold levels have been identified in the Project Cost Management Plan. Any corrective actions taken will be documented and approved per change management processes established in the cost management plan.
- 2.1.4. Ongoing regularly scheduled status meetings will be held by the DOE and Team IBM project managers to discuss project progress, milestones, deliverable completions, costs, staffing, earned value reporting, issues and risk factors. These meetings are held weekly, with more frequent, informal meetings held as necessary.
- 2.1.5. The Team IBM project manager holds project team status meetings with project team leads weekly, with more frequent, informal meetings held as necessary. Each team lead is responsible for meeting with their reports on a frequency established at their discretion, but not less than once weekly.
- 2.1.6. Monthly meetings are held with the entire project staff invited as a means to discuss project progress, answer questions, identify issues and concerns.
- 2.1.7. Quarterly meetings are held with the CMIP program leader (CIO) to discuss project progress, answer questions, identify issues and concerns. Semi-annual meetings with the Executive Review Board are planned as well.
- 2.1.8. Quality will be a primary consideration during each meeting. The project team believes that the stability of project quality will remain constant.

2.2. Product Quality

- 2.2.1. Quality has been identified as a set of processes that occur throughout the project. The project management team will continue to emphasize the importance of quality as a consistent activity rather than a final check. It



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is expected that product quality will be built in from the beginning rather than as an afterthought.

- 2.2.2. A separate performance objective (A3) has been funded to establish, among other things, metrics for product quality, process quality, and system performance quality. In addition, the Deputy Program Manager has been designated as the Test and Quality Assurance lead, underlining the critical nature of quality management.
- 2.2.3. The *product* of this project will be the successful implementation of business processes, functions and the production implementation of the Oracle Financial Applications to meet business objectives. The product quality is expected to remain stable if the project team and DOE organization adhere to the established quality standards.

3. Implementation of Quality Policy

- 3.1. It is the project manager's responsibility to ensure quality activities are scheduled, budgeted and planned from the inception of the project. Quality is a top priority for this project and it will be managed as such.
- 3.2. The project team will implement quality policies by conducting quality assurance and quality control activities as outlined below.
- 3.3. Quality assurance and quality control are two separate but related processes:
 - 3.3.1. Quality assurance is all the planned and systematic activities implemented within the quality system to provide confidence that the project will satisfy the relevant quality standards. To facilitate quality assurance, it is necessary to:
 - 3.3.1.1. Verify that the factors to be measured have quality standards in place, and processes to satisfy the standards.
 - 3.3.1.2. Verify that the processes are being followed, and non-conformances identified, evaluated, and documented.
 - 3.3.2. Quality control involves monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory results. To facilitate quality control, it is necessary to:
 - 3.3.2.1. Monitor the results of project activities and compare against expected results.
 - 3.3.2.2. Document the results of the comparison and when unsatisfactory, research and identify the causes for non-conformances.



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- 3.3.2.3. Based on the findings of the previous step, identify ways to eliminate the *cause(s)* of non-conformances.
- 3.4. Upon completion of a quality assurance or quality control review, the results will be documented and filed in the appropriate electronic and physical folders.

4. Quality Assurance Process – Project

- 4.1. Project Quality Assurance activities will be included in the project schedule as separate, identifiable tasks. The frequency and duration of quality assurance processes will be up to the discretion of the Team IBM project manager with the approval of the DOE project manager.
- 4.2. To facilitate the process of Project Quality Assurance, the project manager and team will review the following on a regular basis through the duration of this project:
 - 4.2.1. Scope – the project scope will be clearly defined by the Statement of Scope. Scope quality assurance will be completed as part of the Scope Verification activities.
 - 4.2.2. Schedule – schedule quality assurance will include walkthrough and Quality Assurance activities through all phases of the project lifecycle. Schedule quality assurance will consist of:
 - 4.2.2.1. Verification that a formal project schedule is in place for all project phases.
 - 4.2.2.2. Verification that the project schedule for all project phases has been baselined once schedules are approved.
 - 4.2.2.3. Verification that actual work, start and finish dates are being entered against the baselined project schedule for all project phases.
 - 4.2.2.4. Verification that earned value analysis reports are being created and reviewed according to the Project Schedule Management Plan.
 - 4.2.2.5. Verification that any schedule variances that exceed limits as established by the Project Schedule Management Plan are handled according to the plan.
 - 4.2.3. Budget - cost quality assurance will include walkthrough and Quality Assurance activities through all phases of the project lifecycle. Cost quality assurance will consist of:

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- 4.2.3.1. Verification that a formal project budget developed in conjunction with the project schedule is in place for all project phases.
- 4.2.3.2. Verification that the project budget for all project phases has been baselined once budgets are approved.
- 4.2.3.3. Verification that actual work, start and finish dates are being entered against the baselined project schedule for all project activities and phases, and the actual costs are then available.
- 4.2.3.4. Verification that earned value analysis reports are being created and reviewed according to the Project Cost Management Plan.
- 4.2.3.5. Verification that any cost variances that exceed limits as established by the Project Cost Management Plan are handled according to the plan.
- 4.2.4. Quality – demonstrated by completion of other Quality Assurance processes.
- 4.2.5. Human Resources – HR quality assurance will include processes through all phases of the project lifecycle and consists of:
 - 4.2.5.1. Verification that the Staffing Management Plan is completed and being followed.
 - 4.2.5.2. Verification that the project structure chart is up to date and accurate.
 - 4.2.5.3. Verification that the project contact lists are up to date and accurate.
 - 4.2.5.4. Verification that the project team charter document has been completed and is updated as necessary throughout the project.
- 4.2.6. Communications – Communications quality assurance will include processes through all phases of the project lifecycle and consists of:
 - 4.2.6.1. Verification that the Project Communications Management Plan is completed and being followed.
 - 4.2.6.2. Verification that the project document network directory structure is in place and hardcopy and softcopy documents are properly filed.
 - 4.2.6.3. Verification that project reports are being properly created and distributed according to the reports distribution matrix.

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- 4.2.6.4. Verification that project team members have sufficient access to necessary information to successfully discharge their assignments.
- 4.2.6.5. Verification that project team members have tools for collaboration in a virtual teaming environment, including network access, e-mail, teleconferencing and video conferencing when necessary.
- 4.2.6.6. Verification that all formal project documents are fully archived with standard backup and recovery tools and processes in place.
- 4.2.6.7. Verification that administrative closure involves archive of all project documents, final walkthrough and formal acceptance, and completion of meaningful lessons learned documentation.
- 4.2.7. Risk – Risk quality assurance will include processes through all phases of the project lifecycle and consists of:
 - 4.2.7.1. Verification that the Risk Management Plan is completed and being followed.
 - 4.2.7.2. Verification that risk assessments are scheduled and conducted at times appropriate to the criticality of the project.
 - 4.2.7.3. Verification that risk factors discovered outside of regularly scheduled risk assessments are immediately evaluated and documented and brought to the attention of the project team.
 - 4.2.7.4. Verification that risk factors and events identified through risk assessments are properly evaluated and documented.
 - 4.2.7.5. Verification that risk response plans, risk mitigation, and corrective actions are documented and properly completed.
- 4.2.8. Procurement – Procurement quality assurance will include processes through all phases of the project lifecycle and consists of:
 - 4.2.8.1. This project was initiated as a joint effort of several different business partners. Given this relationship, the potential for friction between business partners related to contractual and/or financial matters is a risk factor that must be proactively addressed by the project team. The Team IBM business manager has overall responsibility for establishing the policies and procedure under which sub-contracts, billing and payment schedules are established and observed.

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- 4.2.8.2. Verification that the Team IBM project and business manager's are focused on early detection of any problems with sub-contractors, and have a clearly defined escalation process.
- 4.2.8.3. Verification that the Procurement Management Plan is completed and being followed.
- 4.2.8.4. Verification that contracts are developed, administered and closed properly.
- 4.2.8.5. Verification that a review of small business sub-contracting targets are carefully conducted, and corrective actions taken as necessary.
- 4.2.8.6. Verification that contractor payments are requested, approved, and paid according to contractual documents.
- 4.2.9. Configuration – Configuration quality assurance will include processes through all phases of the project lifecycle and consists of:
 - 4.2.9.1. Verification that the Configuration Management Plan is completed and being followed.
 - 4.2.9.2. Verification that system, software and documentation configuration standards as established by the organization are followed.
- 4.3. Project Quality Auditing
 - 4.3.1. Internal Auditing – the original Team IBM proposal allowed for staff not on the project team to perform separate Project Quality Assurance auditing in the following areas:
 - 4.3.1.1. Process – Policies and procedures. Verify that the policies and procedures are accurate, practical, and followed.
 - 4.3.1.2. Compliance to overall organizational standards, as appropriate.
 - 4.3.2. Quality audits will be documented using the template “Quality Assurance-Control Acceptance Form”. This document will be completed prior to signoff.

5. Quality Assurance Process –Product

- 5.1. Baseline Product Quality Assurance activities will be included in the project schedule as separate, identifiable tasks. The frequency and duration of quality assurance processes will be up to the discretion of the Team IBM project manager with the approval of the DOE project manager.

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5.2. Quality Assurance will be both internal and external to this project. To facilitate the process of Quality Assurance, the Team IBM project manager will schedule activities and verify that a review/audit of the following occurs on a regular basis through the duration of this project:

5.2.1. Satisfaction – ultimately, the level of stakeholder satisfaction with the product will be the determining factor. Therefore, it is imperative that stakeholder satisfaction be addressed informally during scope verification, and interim administrative closure signoffs. How stakeholder satisfaction is measured is highly subjective. Detailed metrics for stakeholder satisfaction will be defined in accordance with performance objective A3.

5.2.2. Functional Requirements – quality assurance will include walkthrough and Quality Assurance activities through selected phases of the project lifecycle, and at a minimum will consist of:

5.2.2.1. Verification that a functional requirements / fit-gap analysis has been conducted analysts' focus on whether the baseline version of the Oracle Applications will fulfill functional requirements.

5.2.2.2. Verification that a representative sampling of personnel were interviewed, and sufficient data was available as part of the functional requirements / fit-gap analysis.

5.2.2.3. Verification that a structured review process was utilized during conference room pilot activities, consisting of test scripts with conformance criteria, expected and actual results.

5.2.2.4. Verification that an unbiased evaluation of the results of the functional requirements / fit-gap analysis and conference room pilot activities was conducted and documented.

5.2.2.5. Verification that any business / functional requirements not met by the baseline Oracle Applications are distilled into a written technical / functional design documents that must then be approved by the designated representatives of DOE. These become the basis for defining the level of effort, schedule and budget during the configure / build and deployment phases of the project.

5.2.3. User Documentation

5.2.3.1. Verification that the vendor has supplied user documentation that is accurate and reasonably easy to follow. The affected user staff will be surveyed to establish this measure.

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5.2.3.2. Verification that custom documentation created specific to the needs and requirements of DOE is accurate and reasonably easy to follow. The affected user staff will be surveyed to establish this measure.

5.2.3.3. Verification that the software performs substantially according to the documentation. The user staff will keep a log of system activities to during functional review of the upgrade to verify that vendor supplied documentation accurately reflects system usage, and any errors or deficiencies will be logged.

5.3. Quality Auditing

5.3.1. The Team IBM proposal called for staff not on the project team to perform separate and Quality Assurance auditing.

5.3.1.1. The Team IBM project manager is responsible for coordinating the schedule and frequency of these activities

5.3.1.2. The QA/QC lead is responsible for direct administration of these activities, and verification that they are completed according to plan.

5.3.2. The individuals who conduct the audits will document quality audits. The QA/QC lead will ensure that this document will be completed, reviewed, and necessary corrective actions identified prior to signoff.

6. Quality Assurance Process – Custom Reports, Modifications or Extensions

6.1. Quality Assurance activities related to custom reports, modifications or extensions will be included in the project schedule as separate, identifiable tasks. The frequency and duration of quality assurance processes will be up to the discretion of the project manager with the approval of the project sponsors.

6.2. Quality Assurance will be internal to this project. To facilitate the process of Quality Assurance, the Team IBM project manager and QA/QC lead will review/audit the following on a regular basis through the duration of this project.

6.2.1. Verification that each custom report, modification or extension has a design specification document that outlines the function, form, data access parameters, and any exceptional logic requirements. The design specification document must conform to the project team's and organization's design standards. The programmer is responsible for development of the design specification, scheduling a walkthrough with the appropriate end-users, and signoff prior to any coding.

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- 6.2.2. Verification that each design specification can be traced back to the original approved request for system modification created as a result of the functional requirements / fit-gap analysis.
- 6.2.3. Verification that the programmer is using the design specification document in creating the custom report, modification or extension.
- 6.2.4. Verification that each set of code conforms to the project team's coding and naming standards and can be specifically tied back to the original approved request for system modification created as a result of the functional requirements / fit-gap analysis.
- 6.2.5. Verification that each custom report, modification or extension has a test script to verify functionality, conformance to specifications, data integrity, suitability for use, and performance. The programmer is responsible for development of the test script, scheduling a walkthrough with the appropriate end-users, and signoff prior to any testing beyond the programmer's own unit testing.
- 6.3. Custom Reports, Modifications or Extensions Quality Auditing
 - 6.3.1. The Team IBM proposal called for staff not on the project team to perform separate and Quality Assurance auditing.
 - 6.3.1.1. The Team IBM project manager is responsible for coordinating the schedule and frequency of these activities
 - 6.3.1.2. The QA/QC lead is responsible for direct administration of these activities, and verification that they are completed according to plan.
 - 6.3.2. The individuals who conduct the audits will document quality audits. The QA/QC lead will ensure that this document will be completed, reviewed, and necessary corrective actions identified prior to signoff.

7. Quality Control Process – Project

- 7.1. The Project Schedule will include walkthrough and Project Quality Control activities through all phases of the project lifecycle. The following activities will have various levels of team participation as indicated in the QC Responsibilities Matrix below.
- 7.2. Quality control metrics for processes, application and system performance will be developed as part of performance objective A3.

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8. Quality Control Process –Product

- 8.1. The Project Schedule will include walkthrough and Baseline Upgrade Product Quality Control activities through all phases of the project lifecycle. The following activities will have various levels of team participation as indicated in the QC Responsibilities Matrix below.
- 8.2. Quality control metrics for processes, application and system performance will be developed as part of performance objective A3.

9. Quality Control Process – Custom Reports, Modifications and Extensions

- 9.1. The Project Schedule will include walkthrough and Custom Reports, Modifications and Extensions Quality Control activities during the configure/build and deploy phases of the project lifecycle. The following activities will have various levels of team participation as indicated in the QC Responsibilities Matrix below.
- 9.2. Quality control for the custom modifications will be grouped into four categories: functionality, conformance to specifications, data integrity, suitability for use, and application / system performance.
- 9.3. Within each of these categories, testing will be conducted and non-conformances classified as acceptable, unsatisfactory, or critical.
- 9.4. Functionality. Basically, the custom reports, modifications or extensions should work. If not, deficiencies will be classified according to severity and impact.
- 9.5. Conformance to Specifications. The custom reports, modifications or extensions should conform to the design documents developed from the functional requirements / fit-gap analysis. If not, deficiencies will be classified according to severity and impact.
- 9.6. Data Integrity. The custom modifications or extensions should properly insert, update, and delete data elements on the database. If not, deficiencies will be classified according to severity and impact.
- 9.7. Suitability of Use. Once implemented, the custom reports, modifications or extensions should be intuitive and efficient. If not, deficiencies will be classified according to severity and impact.
- 9.8. Performance. Once implemented, the custom reports, modifications or extensions must achieve an acceptable level of performance. If not, deficiencies will be classified according to severity and impact.

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- 9.9. Quality control metrics for processes, application and system performance will be developed as part of performance objective A3.

10. Scope Verification

- 10.1. Scope verification is the process of formalizing acceptance of the project scope by stakeholders. It involves review of work products and results to ensure that all were completed correctly and satisfactorily.
- 10.2. The Team IBM project manager will assign responsibility for scope verification to a project team member, preferably a project team lead responsible for QA/QC/Scope Verification, and referred to as the QA lead.
- 10.3. The QA lead is responsible for scheduling time with the Team IBM and DOE project managers other interested stakeholders for purposes of scope verification. This should occur at least once per month or on a schedule that aligns with key milestones and deliverables, and will require presentation of the work results and product documentation for review, inspection and formal acceptance.
- 10.4. Scope verification is a formal approval process, and should be considered in that context. The reviewers will accept or reject specific items being reviewed, and will sign off on the Scope Verification Form. The signoff indicates that the process was conducted, not whether a specific item was verified.
- 10.5. The QA lead is responsible for coordinating resubmission of items not verified and will work with the Team IBM project manager to schedule rework, corrective action as required.

11. Quality Change Control Processes

- 11.1. The quality change control process is as follows:
- 11.1.1. Identify and assess the proposed quality change.
- 11.1.2. Fill out a “*Change Request Form*” and submit the “*Change Request Form*” along with required supporting documentation to the Team IBM project manager.
- 11.1.3. The Team IBM project manager will review the change request and may possibly request additional documentation prior to review with the DOE project manager.
- 11.1.4. The Team IBM and DOE project managers will determine if the change should be:
- 11.1.4.1. Approved, in which case both project managers will check the approved box, sign off on the change request and the Team

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IBM project manager will incorporate the change and adjust other project planning factors as necessary.

11.1.4.2. Approved pending additional supporting documentation, in which case both project managers will check the approved / pending box, sign off on the change request and the Team IBM project manager will specify the further required documentation, incorporate the change and adjust other project planning factors as necessary.

11.1.4.3. Denied, in which case both project managers will check the denied box, sign off on the change request and the Team IBM project manager will notify the requestor of the status and reason for denial.

11.1.5. The Team IBM project manager will document the Change Request outcome as necessary (update WBS, schedule and budget documentation if impacted).

12. Quality Improvement Process

- 12.1. The quality improvement process is very closely integrated with the quality review process for this project. Upon completion of any quality review process, the areas with failures/errors will be documented. The areas with the highest failures/errors will be addressed first. The DOE and Team IBM project managers will identify (or assign a project team member to identify) potential areas of improvement. In the event it is necessary to implement project management plan changes to address such failure/risk scenarios, the Change Control Process will be utilized.
- 12.2. Quality Improvements. By reviewing, auditing and analyzing the work results of the project, additional improvements may be discovered and implemented.
- 12.3. Acceptance Decisions. Inspected items may be approved which would constitute approval to proceed with the project as planned.
- 12.4. QA/QC Acceptance Forms will be generated to document inspected items rejected, which will constitute a re-work in some area(s) and may affect the schedule, budget, scope, quality assurance and quality control documents.
- 12.5. Process Adjustments. If corrective or preventative action is recognized and deemed necessary as a result of quality control measurements, then the overall change control process will be utilized to document and implement such changes.

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13. Associated Documents

- 13.1. Quality Policies
- 13.2. Statement of Scope
- 13.3. Product Description
- 13.4. Requirements (Business and/or Technical)
- 13.5. Standards and Regulations
- 13.6. Checklists
- 13.7. Operational Definitions
- 13.8. Reviews/Walkthrough Documentation
- 13.9. Formal Test Plan and Test Case Documentation
- 13.10. Non-Conformance Reports

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Quality Control Walkthrough & Review Responsibility Matrix		Walkthrough & Review Participants					
		QA/QC Lead	Team IBM PM	DOE PM	Project Teams / Peers	Project Team Leads	External QA/QC Team
PRODUCT RESULTS:	Design Document	X		X	X	X	X
	Development Document	X		X	X	X	X
	Test Plans	X	X		X	X	X
	Product Documentation	X		X			X
PROJECT RESULTS:	Budget	X	X	X			X
	Schedule	X	X	X		X	X
INSPECTION RESULTS:	Requirements (Business/Tech.)	X	X	X	X	X	X
	Design Review	X	X		X	X	X
	Code Review	X			X	X	X
	Test Plan Review	X			X	X	X
	Test Results Review	X	X	X	X	X	X

The above illustration defines QC responsibilities for this project.



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Quality Management Plan – Appendix A

14. Examples of Operational Definitions for Quality Control (actual metrics to be established per completion of performance objective A3):

14.1. Project Quality

Item To Be Measured	Method Of Measurement	Acceptable Results
Scope	N/A – Part of Scope Verification	N/A
Schedule & Budget	Verify baselined schedule and budget in place by reviewing MS Project. Classify as acceptable, not acceptable, not found.	Accurate schedule & budget created, baselined in MS Project
Schedule & Budget	Verify actuals entered against schedule and budget by reviewing MS Project. Classify as acceptable, not acceptable, not found.	Accurate actuals entered against plan
Schedule & Budget	Verify earned value analysis reports created according to plans. Classify as acceptable, not acceptable, not found.	Verify reports by date, content accuracy
Schedule & Budget	Verify variance analysis conducted by locating variance analysis, corrective action, change request forms completed according to plans. Classify as acceptable, not acceptable, not found.	Verify completed forms, realistic and accurate information
Quality	N/A – Demonstrated by this document	N/A
HR	Verify Staffing Management Plan in place. Classify as acceptable, not acceptable, not found.	Plan reflects accurate project organization structure, project team entry / exit policies and procedures, contact lists available
Communications	Verify Communications Management Plan in place. Classify as acceptable, not	Plan identifies electronic and physical file structure, policies and procedures for document

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	acceptable, not found.	handling and retention, project reporting requirements including who creates reports, who receives reports, and the schedule.
Communications	Verify administrative closure processes. Classify as acceptable, not acceptable, not found.	Project archives created for each project phase, formal acceptance documents created and signed off with appropriate signatures, lessons learned documents created.
Risk	Verify Risk Management Plan in place. Classify as acceptable, not acceptable, not found.	Plan identifies risk identification, quantification and response processes.
Risk	Risk factors and events identified, evaluated, with risk response. Classify as acceptable, not acceptable, not found.	All factors properly and clearly documented..
Procurement	Verify Procurement Management Plan in place. Classify as acceptable, not acceptable, not found.	Plan identifies policies and procedures for procurement if different than organization's standards, else it simply points to organization's standard.
Procurement	Verify that contractors payment processing in place. Classify as acceptable, not acceptable, not found.	As with the previous item, if different than organization's standards.
Configuration	Verify Configuration Management Plan in place. Classify as acceptable, not acceptable, not found.	Plan should follow organization's standards.



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14.2. Product Quality

Item To Be Measured	Method Of Measurement	Acceptable Results
Stakeholder Satisfaction	Survey of current user base to establish baseline, followup survey once new upgrade implemented.	Followup survey must reflect average of satisfied to very satisfied.
Functional Requirements / Fit-Gap Analysis	Completed Functional Review Scripts. Classify as acceptable, not acceptable, not found.	Verify that all items of the function review scripts were completed at least once, in the proper sequence.
Functional Requirements / Fit-Gap Analysis	Completed Functional Requirements / Fit-Gap Analysis Document. Classify as acceptable, not acceptable, not found.	Verify that a functional requirements / fit-gap analysis document was created upon completion of the functional requirements fit-gap analysis.
Baseline Version Install	Completed process logs. Classify as acceptable, not acceptable, not found.	Verify that the technical support staff created process logs that document the installation process flow. Logs must include timings, any issues that came up, and if possible, the responsible party for the issue (i.e. vendor documentation error, software bug, or support staff error).
Baseline Version Install	Review of Vendor Installation Documentation.	This will be determined based on the process logs. The documentation must be accurate and reasonably easy to follow.
Baseline Version Install	Review Install Process Reports (Install Statistics Record Count Summary, Upgrade Statistics Time Reports)	All processes must finish within three business days. Any other results are not acceptable, and must be evaluated for an appropriate risk response.
Baseline Version Install	Review User Documentation	Verify that the documentation is accurate and reasonably easy to follow.

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14.3. Custom Reports, Modifications or Extensions Quality

Item To Be Measured	Method Of Measurement	Acceptable Results
Design of Modifications	Verify that all modifications have a design document. Classify as acceptable, not acceptable, not found.	The design documents must be developed, reflect the appropriate naming and coding standards, identify any functional, form, data access, and exceptional logic requirements. Design documents must be reviewed and signed off by the project manager and appropriate end-user(s).
Design of Reports, Modifications or Extensions	Verify that the programming staff is using the design documents by conducting code walkthroughs. Classify as acceptable, not acceptable, not found.	Programming staff must be able to demonstrate that design specifications are being followed. Walkthrough documents must be complete, clear, and accurate.
Design of Reports, Modifications or Extensions	Verify that programming staff is conforming to organization's naming, coding standards by conducting code walkthroughs. Classify as acceptable, not acceptable, not found.	Programming staff must be able to demonstrate proper use of organization's naming, coding standards. Walkthrough documents must be complete, clear and accurate.
Design of Reports, Modifications or Extensions	Verify that comprehensive test scripts are available for each report, modification or extension by conducting code walkthroughs. Classify as acceptable, not acceptable, not found.	Programming staff must be able to demonstrate existence of comprehensive test scripts for each report, modification or extension.
Implementation of Report, Modification or Extension	End-users verify that modified system is functional. Locate completed test scripts. Classify as acceptable, not acceptable, not found.	Comprehensive test scripts are employed to verify functionality. Non-conformances will be classified as acceptable, unsatisfactory, or critical. All unsatisfactory or critical non-conformances should be corrected before the next test run.

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Implementation of Report, Modification or Extension	End-users verify that report, modification or extension work as designed by comparing test results to system design documents. Locate completed test scripts. Classify as acceptable, not acceptable, not found.	Comprehensive test scripts are employed to verify conformance to design. Non-conformances will be classified as acceptable, unsatisfactory, or critical. All unsatisfactory or critical non-conformances should be corrected before the next test run.
Implementation of Modifications or Extensions	End-users verify that data is properly inserted, updated or deleted by requesting standard system reports, running sample of ad-hoc queries.	Standard reports generated and reviewed. Ad-hoc queries run and reviewed. Non-conformances will be classified as acceptable, unsatisfactory, or critical. All unsatisfactory or critical non-conformances should be corrected before the next test run.
Implementation of Report, Modifications or Extension	End-users verify suitability for use. Locate completed test scripts. Classify as acceptable, not acceptable, not found.	Comprehensive test scripts are employed to verify suitability for use. Non-conformances will be classified as acceptable, unsatisfactory, or critical. All unsatisfactory or critical non-conformances should be corrected before the next test run.
Implementation of Report, Modification or Extension	End-users verify system performance, to include run-times for batch jobs and reports, screen response times. Locate completed test scripts. Classify as acceptable, not acceptable, not found.	Comprehensive test scripts are employed to verify performance. Non-conformances will be classified as acceptable, unsatisfactory, or critical. All unsatisfactory or critical non-conformances should be corrected before the next test run.

