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Revision 0

Business Systems Planning Project, Systems Requirements Specification

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Hanford Group, Inc.

Richland, Washington

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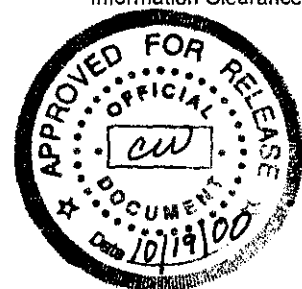
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Business Systems Planning Project

System Requirements Specification

Prepared for

CH2M HILL Hanford Group, Inc.

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**Manager, Information Resource Management /Chief Information Officer,
CH2M HILL Hanford Group, Inc.**

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Prepared by

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1.0 INTRODUCTION

CH2M HILL Hanford Group, Inc. (CHG) is currently performing many core business functions including, but not limited to, work control, planning, scheduling, cost estimating, procurement, training, and human resources. Other core business functions are managed by or dependent on Project Hanford Management Contractors including, but not limited to, payroll, benefits and pension administration, inventory control, accounts payable, and records management. In addition, CHG has business relationships with its parent company CH2M HILL, U.S. Department of Energy, Office of River Protection and other River Protection Project contractors, government agencies, and vendors.

The Business Systems Planning Project, under the sponsorship of the CHG Chief Information Officer, will use the requirements as the basis for evaluating opportunities for improvement and/or independence by identifying alternative solutions that may reduce CHG dependencies on systems managed by other prime contractor's.

1.1 PURPOSE

The purpose of the Business Systems Planning Project System Requirements Specification (SRS) is to provide the outline and contents of the requirements for the CHG integrated business and technical information systems. The SRS will translate proposed objectives into the statement of the functions that are to be performed and data and information flows that they require. The requirements gathering methodology will use 1) facilitated group requirement sessions; 2) individual interviews; 3) surveys; and 4) document reviews. The requirements will be verified and validated through coordination of the technical requirement team and CHG Managers. The SRS document used the content and format specified in Lockheed Martin Services, Inc. Organization Standard Software Practices in conjunction with the Institute of Electrical and Electronics Engineers Standard 8340-1984 for Systems Requirements Documents.

1.2 SCOPE

This SRS defines and documents functional requirements for an integrated Project Control, Work Management and Business Management system. This document is limited to the basic functional requirements for the Business Systems Planning Project to perform software alternative analysis and develop a preliminary systems design. It does not address system solutions approval, or systems implementation.

1.3 DEFINITIONS

The following acronyms, terms and earned value calculations are referenced throughout the document.

1.3.1 Acronyms

Acronyms	Definition
ACWP	Actual Cost of Work Performed
BAC	Budget at Completion
BCR	Baseline Change Request
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Scheduled
CACN	Cost Account Charge Number
CAPN	Cost Account Plan Number
CHG	CH2M HILL Hanford Group, Inc.
CMMS	Computerized Maintenance Management System
COTS	Commercial-Off-The-Shelf
CPI	Cost Performance Indicator
CUM	Cumulative
CV	Cost Variance
EAC	Estimate at Completion
IEAC	Independent Estimate at Complete
LMSI	Lockheed Martin Service, Inc.
LRE	Latest Revised Estimate
MS	Microsoft
OBS	Organization Breakdown Structure
P3	Primavera Project Planner
PM	Preventative Maintenance
PMIS	Project Management Information System
SPI	Schedule Performance Indicator
SRS	System Requirements Specification
SV	Scheduling Variance
TBR	Technical Baseline Review
TCPI	To Complete Performance Index
WBS	Work Breakdown Structure

1.3.2 Terms

Mandatory	Standard functionality that is required to meet business mandates and commitments.
Essential	Standard functionality that is deemed necessary for business efficiency purposes.
Desirable	Not mandatory or essential, but adds value to support business processes.

1.3.3 Earned Value Calculations

Schedule Variance (SV)	$SV = BCWP - BCWS$
Cost Variance (CV)	$CV = BCWP - ACWP$
Schedule Variance in Percent (SV%)	$SV\% = (SV / BCWS) * 100$

Cost Variance in Percent (CV%)	$CV\% = (CV / BCWP) * 100$
Cost Performance Index (CPI)	$CPI = (CUM BCWP) / (CUM ACWP)$
Schedule Performance Index (SPI)	$SPI = (CUM BCWP) / (CUM BCWS)$
To Complete Performance Index (TCPI)	$TCPI = (BAC - CUM BCWP) / (LRE - CUM ACWP)$
Percent Spent1 (%Spent1)	$\%Spent1 = [(CUM ACWP) / BAC] * 100$
Percent Spent2 (%Spent2)	$\%Spent2 = [(CUM ACWP) / LRE] * 100$
Percent Complete (% Complete)	$\%Complete = [(CUM BCWP) / BAC] * 100$
Best Case Independent Estimate at Complete (IEAC)	$IEAC = BAC / CPI$
Most Likely Case Independent Estimate at Completion (EAC ₂)	$EAC_2 = ACWP + [(BAC - BCWP) / (CPI * SPI)]$
Return on Investment of a Risk Mitigation	Return on Investment of a Risk Mitigation = Unmitigated Risk (Probability * Consequences) - Mitigated Risk (Probability * Consequences)/Invested Dollars

1.4 REFERENCES

- American National Standard/Electronic Industries Alliance-748, Earned Value Management Systems, June 1998.
- Lockheed Martin Services, Inc. Organization Standard Software Practices, Version 3.2.
- Institute of Electrical and Electronics Engineers Standard 8340-1984.

1.5 OVERVIEW

The specific requirement categories are defined as imbedded requirements for the specific section and business areas. For example, performance requirements may be in all three requirements sections to address the global and specific business area/function performance needs. The following briefly describes the content of each section.

- Section 2.0, Common Requirements
Set of common requirements, which span Project Controls, Work Management, and Business Management.
- Section 3.0, Functional Requirements
Functional requirements with sufficient detail to identify, measure, and recommend alternative software solutions for Section 3.1, Project Controls; Section 3.2, Work Management; and Section 3.3, Business Management. Specific functions are associated with the appropriate sections.
- Section 4.0, Technical System Operational Requirements
Technical System Operational Requirements identifies compatibility, configuration management, reliability and stability, system operation security, data archiving, and open architecture.

Priorities have been given to each requirement to ensure follow-on analysis considers the importance of each specific requirement for the selection of potential solutions. The priorities, defined in Terms, are mandatory, essential and desirable.

1.6 CONTRIBUTORS

The CHG CIO has a core team that gathered and documented the requirements for the Business Systems Planning Project. CHG management provided primary Subject Matter Experts for definition of their specific business area requirements. Many other individuals, not listed, contributed also.

1.6.1 Team Members

Team Member	Business Area	Company
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1.6.2 Business Area Subject Matter Experts

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Cathy S. Spears
Diane M. Wicks

2.0 COMMON REQUIREMENTS

The following are requirements that are common to all business areas.

2.1 GENERAL

The following are the general and standard requirements common to all business areas.

2.1.1 Documentation

- | | | |
|----------------|--|-----------|
| 2.1.1.1 | Provide on-line help capabilities, updated with each version. | Mandatory |
| 2.1.1.2 | Provide a comprehensive set of user documentation, available electronically, including general system features, screens, fields, reports, and other related information. | Essential |
| 2.1.1.3 | Provide self-paced user training materials, computer based is preferred. | Desirable |

2.1.2 Standards

- | | | |
|----------------|--|-----------|
| 2.1.2.1 | All software shall reflect industry standards and generally accepted business practices. | Mandatory |
|----------------|--|-----------|

2.2 CAPABILITY

The following are the functional and reporting requirements common to all business areas.

2.2.1 Functional

- | | | |
|----------------|---|-----------|
| 2.2.1.1 | Provide support for a multiple company environment, with ability to separate and/or access data at a company level. | Mandatory |
| 2.2.1.2 | Ability to "Drill Down" to allow the user to navigate from a summary level to a detail level of data. | Mandatory |
| 2.2.1.3 | Ability to allow multiple windows to be opened simultaneously. | Essential |
| 2.2.1.4 | Ability to perform edit checking to validate entries, ensuring data integrity is maintained. | Essential |
| 2.2.1.5 | Provide error messages in easily understood language and displayed immediately upon error detection. | Desirable |

2.2.2 Reporting

- | | | |
|----------------|---|-----------|
| 2.2.2.1 | Provide standard and ad-hoc query/report capabilities. | Mandatory |
| 2.2.2.2 | Ability to have all reports easily accessible electronically. | Essential |
| 2.2.2.3 | Allow the user to save and reuse multiple sets of the user-defined criteria used to generate and format reports. | Essential |
| 2.2.2.4 | Provide for requesting reports on standard periodic time periods, such as daily, weekly, monthly, etc. | Essential |
| 2.2.2.5 | Ability to print items, including multiple page items, report printouts, and query results. | Essential |
| 2.2.2.6 | Provide the user options of producing hard copy reports or exporting the report results into a comma-separated text file, tab-separated text file, Rich Text Format (*.rtf), ASCII, MS Excel file or MS Access file format. | Essential |

2.2.2.7 Provide a report library in which the user has the ability to add, copy and/or modify based on access level permissions.

Essential

3.0 FUNCTIONAL REQUIREMENTS

The functional requirements establish the baseline for the general, reporting, data, interface, security, performance, and audit functions for each business area. Each business area has requirements to meet their specific needs, while the Common and Technical Requirements encompass all the business areas. There are three business areas covered, Project Controls, Work Management and Business Management, with business functions underneath those, which are further broken down into business tasks.

3.1 PROJECT CONTROLS

The primary business function of Project Controls is to enable project managers the ability to establish methods to 1) define technical scope, cost, and schedule for work scope in proposals, estimates, and budgets, as well as 2) measure project performance on a frequent basis utilizing a variety of reports.

A Project Controls system should be able to support the functional areas of Planning, Estimating, Scheduling, Reporting and Risk Analysis. The system should provide a common repository for a Work Breakdown Structure (WBS), resource/pricing budget information, project performance, earned value analysis, and expected planning information such as budget, life cycle cost, actual and performance at the enterprise level. Detailed working schedules, Baseline Change Requests (BCR), variance reporting, logics and project interdependencies should also be accommodated.

The Project Controls system should also provide for a reporting method that allows for analyzing project performance data, cost and schedule, in a variety of views available on a desktop or a web interface. It is anticipated to also interface with the site's scheduling tool.

The Risk Management process is a management tool used to identify, assess, mitigate, and manage the programmatic and technical risks associated with project execution. Successful risk management will lead to on time completion of the project within budget and with expected performance realized. The Risk Management process provides a method for individual risks to be mitigated and tracked at the program or project level, as well as a methodology for analyzing the cost and schedule uncertainty associated with the aggregated impact of those risks and for providing the basis for cost and schedule contingency. The Risk Management process will be supported by a data system that is capable of providing the necessary data inputs. The risk data system should also be capable of generating customized reports, displaying risk results in Pareto diagrams, and providing a common repository for risk data and its associated data elements. The risk data system must also be able to support Monte Carlo modeling, and to perform action tracking of risk mitigation activities.

3.1.1 General

- | | | |
|----------------|---|-----------|
| 3.1.1.1 | Must support, at a minimum, 60 concurrent users. | Mandatory |
| 3.1.1.2 | Must have word processing capabilities. | Mandatory |
| 3.1.1.3 | Ability to retain various global file scenarios. | Mandatory |
| 3.1.1.4 | Ability to retrieve and receive actual cost, as well as accruals. | Mandatory |
| 3.1.1.5 | Ability to retrieve and receive BCRs including cost and schedule changes. | Mandatory |
| 3.1.1.6 | Ability to retrieve and receive BCWP and BCWS for discrete work from scheduling tool. | Mandatory |
| 3.1.1.7 | Ability to retrieve and receive Common Occupational Classification System codes. | Mandatory |
| 3.1.1.8 | Ability to retrieve and receive historical costs. | Mandatory |

3.1.1.9	Ability to retrieve and receive Organizational Breakdown Structure (OBS) and WBS down to at least 20 levels.	Mandatory
3.1.1.10	Ability to retrieve and receive performing organization and responsible organization.	Mandatory
3.1.1.11	Ability to retrieve and receive planning, escalation and actual rates.	Mandatory
3.1.1.12	Ability to use WBS as a primary index or key.	Mandatory
3.1.1.13	Must be compatible with operational field work schedules.	Mandatory
3.1.1.14	Ability to plan and schedule by full time equivalents, based on productive hours per year.	Mandatory
3.1.1.15	All project control components must be able to interface with each other.	Mandatory
3.1.1.16	Must have a P3 interface.	Mandatory
3.1.1.17	Ability to access actuals for work performed by others on a weekly basis.	Essential
3.1.1.18	Provide an intuitive format to allow users to move through problems rather than call for help.	Essential
3.1.1.19	Ability to retrieve and receive all associated actual costs, such as material, equipment and labor.	Essential
3.1.1.20	Ability to have internal scheduling capability excluding logic.	Desirable
3.1.1.21	Ability to retrieve and receive legal drivers information.	Desirable
3.1.2 Estimating		
3.1.2.1	Ability to retain various accounting, fiscal, work, shift, etc. calendars.	Mandatory
3.1.2.2	Ability to retain pricing data and manage multiple pricing files.	Mandatory
3.1.2.3	Must have the ability to build to work package planning level.	Mandatory
3.1.2.4	Ability to capture cost element and Common Occupational Classification System resources by multiple companies and performing organizations.	Mandatory
3.1.2.5	Ability to provide an Integrated Site Baseline on an annual basis or as needed.	Mandatory
3.1.2.6	Ability to print a series of cost validation reports.	Mandatory
3.1.2.7	Ability for estimates to report/display direct and indirect cost, rates, escalation, contingency, elements and class of cost.	Mandatory
3.1.2.8	Ability to report/display changes in estimates and the sources of the variance.	Mandatory
3.1.2.9	Ability to drag and drop with mouse or keystrokes.	Essential
3.1.2.10	Ability to create an estimate that is not part of the baseline by conducting "what-if" scenarios.	Essential
3.1.2.11	Ability to manage level of effort work without having to schedule and coding activities as level of effort and system automatically computes BCWP.	Essential
3.1.2.12	Ability to code for various types of data such as regular plan hours or standard hours.	Essential
3.1.2.13	Ability to identify and report on recurring and non-recurring costs.	Essential
3.1.3 Planning		
3.1.3.1	Ability to rollup costs.	Mandatory
3.1.3.2	Ability to use extensive coding schemes to select, sort, order and summarize data.	Mandatory
3.1.3.3	Ability to develop and use a WBS down to at least 20 levels.	Mandatory
3.1.3.4	Ability to contain a Code of Account, Charge Codes and Description, and	Mandatory

	OBS.	
3.1.3.5	Ability to define multiple rate tables.	Mandatory
3.1.3.6	Ability to define resource templates.	Mandatory
3.1.3.7	Must have a planning rate table for planning purposes including raw rates and various adders such as benefits, departmental overhead, continuity of service, absence, general and administrative, etc.	Mandatory
3.1.3.8	Ability to differentiate planning rates vs. actual rates.	Mandatory
3.1.3.9	Ability to track and relate Performance Incentives to WBS and BCRs.	Mandatory
3.1.3.10	Ability to input, store and print WBS and dictionaries.	Mandatory
3.1.3.11	Ability to have read capability at the project level.	Mandatory
3.1.3.12	Ability to have write capability at any level of the WBS.	Mandatory
3.1.3.13	Ability to assign access to specific levels of the WBS and their children.	Mandatory
3.1.3.14	Ability to link to external documents, such as an Acquisition Plan.	Essential
3.1.3.15	Ability to copy, delete, move and add WBS data in total, by arms or individually, controlled by system security privileges.	Essential
3.1.3.16	Ability to accommodate common numbering for WBS, Cost Account Charge Number (CACN), Cost Account Plan Number (CAPN) and Technical Baseline Review (TBR).	Essential
3.1.3.17	Ability to have an Integrated Priority List (IPL) and correlate it to various levels of the WBS.	Essential
3.1.3.18	Ability to tie legal drivers, etc. to WBS at the various levels.	Essential
3.1.3.19	Ability to accommodate textual input such as descriptions or comments for a specific WBS.	Essential
3.1.3.20	Ability to calculate profit/fee.	Desirable
3.1.3.21	Ability to apply cost of money.	Desirable
3.1.3.22	Ability to merge TBR numbers and CAPN into WBS code.	Desirable
3.1.3.23	Ability to relate charge numbers to WBS for time recording and other purposes.	Desirable
3.1.4 Scheduling		
3.1.4.1	Provide a change log to track and report approved changes.	Mandatory
3.1.4.2	Ability to adapt to common scheduling specifications.	Mandatory
3.1.4.3	Ability to identify and report on Cost Account Packages, Work Packages and Planning Packages.	Mandatory
3.1.4.4	Ability to contain all milestones.	Mandatory
3.1.5 Reporting		
3.1.5.1	Ability to load actuals, performance, reconcile errors, run earned value and cost variance.	Mandatory
3.1.5.2	Ability to calculate Schedule Variance.	Mandatory
3.1.5.3	Ability to calculate Cost Variance.	Mandatory
3.1.5.4	Ability to calculate Percent of Schedule Variance.	Mandatory
3.1.5.5	Ability to calculate Percent of Cost Variance.	Mandatory
3.1.5.6	Ability to calculate Cost Performance Index.	Mandatory
3.1.5.7	Ability to calculate Schedule Performance Index.	Mandatory

3.1.5.8	Must have monthly performance data such as BCWP, BCWS, and ACWP.	Mandatory
3.1.5.9	Must have Estimate to Complete, Estimate at Completion, and Project to Date.	Mandatory
3.1.5.10	Ability to report Latest Revised Estimate at the work package level of the WBS.	Mandatory
3.1.5.11	Ability to accept data and report project lifecycle for a minimum of 60+ years.	Mandatory
3.1.5.12	Ability to perform "what-if" scenarios.	Mandatory
3.1.5.13	Ability to provide Site Performance Report on a monthly and quarterly basis.	Mandatory
3.1.5.14	Ability to provide integrated planning, accounting, and budgeting information on a monthly and quarterly basis.	Mandatory
3.1.5.15	Ability to provide contract funds status information on a monthly basis.	Mandatory
3.1.5.16	Ability to report by WBS, OBS, element of cost, labor type.	Mandatory
3.1.5.17	Provide earned value data electronically, in hard copy and in graphics including a narrative if possible.	Mandatory
3.1.5.18	Ability to produce Manpower reports.	Mandatory
3.1.5.19	Ability to select and display data for certain time frames.	Mandatory
3.1.5.20	Ability to report by fiscal year/month/qtr or calendar year.	Mandatory
3.1.5.21	Ability to collect costs at user definable account levels.	Mandatory
3.1.5.22	Ability to differentiate between cost estimates and actual budgets.	Mandatory
3.1.5.23	Ability to provide a standard Actual Cost of Work Performed Report (refer to detail in Appendix A).	Mandatory
3.1.5.24	Ability to provide a standard Budgeted Cost of Work Performed Report (refer to detail in Appendix A).	Mandatory
3.1.5.25	Ability to provide a standard Budget Cost of Work Scheduled Report (refer to detail in Appendix A).	Mandatory
3.1.5.26	Ability to provide a standard Cost Variance Report (refer to detail in Appendix A).	Mandatory
3.1.5.27	Ability to provide a standard Schedule Variance Report (refer to detail in Appendix A).	Mandatory
3.1.5.28	Ability to provide a standard Variance Analysis Report (refer to detail in Appendix A).	Mandatory
3.1.5.29	Ability to provide a standard Budget At Completion Report (refer to detail in Appendix A).	Mandatory
3.1.5.30	Ability to provide a standard Estimate at Completion Report (refer to detail in Appendix A).	Mandatory
3.1.5.31	Ability to provide a standard Estimate to Complete Report (refer to detail in Appendix A).	Mandatory
3.1.5.32	Ability to provide a standard Total Project Cost Report (refer to detail in Appendix A).	Mandatory
3.1.5.33	Ability to retain month end reports, by archival or storage, or the data to recreate reports, for prior years.	Mandatory
3.1.5.34	Ability to provide visibility of total project funds for project managers.	Mandatory
3.1.5.35	Ability to create auto-generated reports with real time information at user defined intervals.	Essential
3.1.5.36	Ability to update CHG Project Managers with labor, material, and schedule progress by close of business Friday.	Essential
3.1.5.37	Ability to link to an accurate commitment report of inactive invoices	Essential

	awaiting pricing audit.	
3.1.5.38	Ability to contain metrics to analyze effectiveness.	Essential
3.1.5.39	Ability to create and print graphical reports.	Essential
3.1.5.40	Ability to import P3 calendars and curves.	Essential
3.1.5.41	Ability to produce applicable Multiple Year Work Plan output reports.	Essential
3.1.5.42	Ability to calculate To Complete Performance Index.	Desirable
3.1.5.43	Ability to calculate percent Spent1.	Desirable
3.1.5.44	Ability to calculate percent Spent2.	Desirable
3.1.5.45	Ability to calculate Percent Complete.	Desirable
3.1.5.46	Ability to calculate Best Case Independent Estimate at Complete.	Desirable
3.1.5.47	Ability to calculate Most Likely Case Independent Estimate at Completion.	Desirable
3.1.5.48	Ability to automatically access procurement data to determine EAC and should be sorted for active vs. inactive awaiting closeout.	Desirable
3.1.5.49	Ability to convert prime dollars to labor hours.	Desirable

3.1.6 Risk Management

3.1.6.1	Ability to have data elements - Consequences, such as Cost and/or Schedule impact; Risk Statement, and When Risk Occurs accommodating date timeframe range.	Mandatory
3.1.6.2	Ability to status risk at summary levels periodically.	Mandatory
3.1.6.3	Ability to support risk data and its associated data elements.	Mandatory
3.1.6.4	Ability to accommodate the impacts of the risk events and estimating uncertainties associated with each activity both separately and as aggregate, such as in a memo field.	Essential
3.1.6.5	Ability to aggregate and analyze risk mitigation investments across program or project levels using Monte Carlo base modeling.	Essential
3.1.6.6	Ability to calculate return on investment of a risk mitigation activity.	Essential
3.1.6.7	Ability to calculate the change in probability and/or the change in consequence of a risk.	Essential
3.1.6.8	Ability to cross reference assumptions, decisions, and interfaces using risk as the primary index.	Essential
3.1.6.9	Ability to document risk information in one place.	Essential
3.1.6.10	Ability to generate performance indicator reports, showing status of risk vs. time.	Essential
3.1.6.11	Ability to capture, differentiate and total the probability, consequence and the uncertainty of cost and schedule estimates.	Essential
3.1.6.12	Ability to integrate risk-handling actions with the cost estimating process.	Essential
3.1.6.13	Ability to perform action tracking for risk mitigation activities.	Essential
3.1.6.14	Ability to provide to the BCR process probability and consequence data.	Essential
3.1.6.15	Ability to report on who owns and mitigates the risk.	Essential
3.1.6.16	Ability to support Pareto analysis, including graphics.	Essential
3.1.6.17	Provide common data, such as critical risks, to feed to Program Office.	Essential

3.2 WORK MANAGEMENT

The Work Management system shall provide users with the ability to identify work, plan jobs, allocate resources, conduct work, record results, and document completion. The primary focus of the Work Management system will be corrective and preventative maintenance. Additionally, project work, involving installation, upgrade, or removal of equipment will utilize work management. The Work Management system shall interface with external systems as noted below to increase the efficiency of performing work.

3.2.1 Planning

3.2.1.1	Ability to link to lessons learned database.	Mandatory
3.2.1.2	Ability to correctly identify equipment item to be worked.	Mandatory
3.2.1.3	Ability to identify quality certified parts used in Work Order.	Mandatory
3.2.1.4	Ability to identify equipment related quality and safety designations.	Mandatory
3.2.1.5	Ability to identify work resources, quantities, and skill level required to complete the work.	Mandatory
3.2.1.6	Ability to include, or link to Unresolved Safety Question (USQ) information in work or safety plan.	Mandatory
3.2.1.7	Ability to identify and document environmental impacts in the work plan.	Mandatory
3.2.1.8	Ability to do periodic Preventative Maintenance (PM) based on calendar, hours of operation, or other periodic measures.	Mandatory
3.2.1.9	Ability to designate a grace period for PM's.	Mandatory
3.2.1.10	Ability to include safety related information in the Master Equipment List.	Mandatory
3.2.1.11	Ability to identify environmental information on equipment record.	Mandatory
3.2.1.12	Ability to identify special work approval requirements and/or work performance criteria related to specific equipment items.	Mandatory
3.2.1.13	Ability to tag equipment as safety related, including the appropriate safety designator.	Mandatory
3.2.1.14	Ability to group work packages to be worked during outages.	Mandatory
3.2.1.15	Ability to identify equipment related precautions, conditions, and limitations, either in the equipment database or through a linked document.	Essential
3.2.1.16	Ability to access training records and reference qualifications information.	Essential
3.2.1.17	Ability to track equipment history including PM, Predictive Maintenance, Mean Time Between Failure, downtime, and equipment breakdown data for trend analysis.	Essential
3.2.1.18	Ability to obtain information on rented equipment to identify responsible party for maintenance and inspection records.	Essential
3.2.1.19	Ability to handle alternate work flows such as routine work, planned work, enhanced work, planning work, etc.	Essential
3.2.1.20	Ability to include permit and safety information in the Work Order through a job hazard analysis, as a linked document, or part of the Work/Safety Plan	Essential
3.2.1.21	Ability to generate PMs to verify readiness for use on equipment that is used on an occasional basis.	Essential
3.2.1.22	Ability to track current equipment status.	Essential
3.2.1.23	Ability to track and analyze failures.	Essential
3.2.1.24	Ability to accept/create templates for work packages, such as standard requirements that end up in work documents.	Essential

3.2.1.25	Ability to link to other documents and print as part of the work package.	Essential
3.2.1.26	Ability to associate applicable versions of work plans to work orders.	Essential
3.2.1.27	Ability to identify, track, and status parts required to perform work.	Desirable
3.2.1.28	Ability to request or order parts required to perform work.	Desirable
3.2.1.29	Ability to associate Work Order with Purchase Order when parts are ordered from vendor.	Desirable
3.2.1.30	Ability to kit and/or stage materials for work, including location information.	Desirable
3.2.1.31	Ability to modify PM work plans, safety plans, frequency, etc. and have this require the PM to be pre-approved prior to work performance, without impacting work orders that have been previously generated.	Desirable
3.2.1.32	Ability to combine PMs with Corrective Maintenance.	Desirable
3.2.1.33	Ability to set a flag that indicates equipment can or can not be used when PMs are overdue	Desirable
3.2.1.34	Ability to document problems and resolutions encountered and relate them to failure codes, equipment types, package types, etc.	Desirable
3.2.1.35	Ability to access the chemical management systems and scanned Material Safety Data Sheets information.	Desirable
3.2.1.36	Ability to track approved Bill of Materials for an equipment item.	Desirable
3.2.1.37	Ability to associate inspection plan with catalog identifier and quality level.	Desirable
3.2.1.38	Ability to track costs associated with regulated units.	Desirable
3.2.1.39	Ability to collect condition based monitoring data for predictive and corrective maintenance.	Desirable

3.2.2 Scheduling

3.2.2.1	Ability to generate schedules or upload to P3.	Mandatory
3.2.2.2	Ability to receive or download resource loaded schedule from P3.	Mandatory
3.2.2.3	Ability to adjust schedule inside of CMMS or P3, based on resource-loaded schedule or current resource limitations and synchronize work control activities and schedules.	Mandatory
3.2.2.4	Ability to forecast PM's, minimum one month, prefer one year.	Mandatory
3.2.2.5	Ability to "schedule" equipment/system/facility outages within the CMMS.	Mandatory
3.2.2.6	Ability to verify next due date.	Mandatory
3.2.2.7	Ability to include lead time for PMs for scheduling purposes.	Mandatory
3.2.2.8	Ability to schedule forecasted PM activities without writing a work order.	Desirable
3.2.2.9	Ability to trigger PM based on automated or manual readings.	Desirable

3.2.3 Work Performance

3.2.3.1	Ability to track performance indicators such as costs, overdue work, plan vs. actual labor, numbers of packages performed for each type, and backlogs.	Mandatory
3.2.3.2	Ability to identify lock out conditions for equipment item worked on and other equipment that is part of the equipment train as part of the Work or Safety Plan.	Mandatory
3.2.3.3	Ability to generate tags for tag out.	Mandatory
3.2.3.4	Ability to notify operations that work has been completed so lock out can be lifted.	Mandatory

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| 3.2.3.5 | Ability to modify Work Plan while the work order is being worked. | Mandatory |
| 3.2.3.6 | Ability to return equipment operation after satisfactory operational test. | Mandatory |
| 3.2.3.7 | Ability to notify appropriate personnel of unsatisfactory test and track corrective work. | Mandatory |
| 3.2.3.8 | Ability to include or link to personnel training, employee qualification, and information systems as needed. | Desirable |
| 3.2.3.9 | Ability to link Occurrence Reports to equipment items and work orders by launching and retrieving lessons learned. | Desirable |

3.2.4 Work Control/Administration

- | | | |
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| 3.2.4.1 | Must support, at a minimum, 100 concurrent users. | Mandatory |
| 3.2.4.2 | Ability to document lessons learned references. | Mandatory |
| 3.2.4.3 | Ability to identify and reference hazards and safety plans including personal protective equipment by accessing job hazard system(s) or documenting in work plan. | Mandatory |
| 3.2.4.4 | Ability to identify work status, cause, and release authorization. | Mandatory |
| 3.2.4.5 | Ability to archive and retrieve work documents after they are closed. | Mandatory |
| 3.2.4.6 | Ability to link to or reference procedures in work plans. | Mandatory |
| 3.2.4.7 | Ability to build and maintain Master Equipment List including equipment hierarchy from structures, systems, and components to allow equipment relationships and associated attributes to be easily identified. | Mandatory |
| 3.2.4.8 | Ability to track maintenance backlog and performance metrics. | Mandatory |
| 3.2.4.9 | Ability to establish work flows that allow the user to establish the work processes. | Mandatory |
| 3.2.4.10 | Ability to screen work request for need, funding, duplication, priority, work type, facility mission, and resource availability. | Mandatory |
| 3.2.4.11 | Ability to assign priorities to work. | Mandatory |
| 3.2.4.12 | Ability to identify who has reviewed and approved each step in Work Flow requiring approval. | Mandatory |
| 3.2.4.13 | Ability to document work and test results. | Mandatory |
| 3.2.4.14 | Ability to track labor hours spent on all phases of the work order. | Mandatory |
| 3.2.4.15 | Ability to track non-labor and/or contract costs associated with work orders. | Mandatory |
| 3.2.4.16 | Ability to approve post maintenance tests. | Mandatory |
| 3.2.4.17 | Ability to document maintenance test results. | Mandatory |
| 3.2.4.18 | Ability to track repair/PM status. | Mandatory |
| 3.2.4.19 | Ability to track work packages as on time, within a grace period, or late. | Mandatory |
| 3.2.4.20 | Ability to document measuring and testing equipment used, including identification number, expiration dates, and tolerance. | Mandatory |
| 3.2.4.21 | Ability to interface with financial and budget systems. | Essential |
| 3.2.4.22 | Ability to relate Work Package to WBS element and associated accounting information. | Essential |
| 3.2.4.23 | Ability to allow non-CHG personnel access to the system to plan and document work. | Essential |
| 3.2.4.24 | Ability to access an unsecured version of the work request, preferably over the intranet. | Essential |
| 3.2.4.25 | Ability to enter required data, including description, identification of item | Essential |

- being reported, and background information.
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|-----------------|--|-----------|
| 3.2.4.26 | Ability to notify requestor if the request is cancelled or completed. | Essential |
| 3.2.4.27 | Ability to automatically record results, identifier, date, and time, at each step of the Work Flow. | Essential |
| 3.2.4.28 | Ability to partially release a work order by releasing individual tasks. | Essential |
| 3.2.4.29 | Ability to document previously unidentified hazards in the work order and flag if its been updated in job hazard system. | Desirable |
| 3.2.4.30 | Ability to document reasons for PM delinquency. | Desirable |

3.3 BUSINESS MANAGEMENT

The Business Management requirements cover the requirements necessary to support core business functions. Business Management functions include General User Action Tracking, Deficiency Tracking, Employee Suggestions, Financial Accounting, Time Recording, Payroll, Procurement of materials and services, Inventory, Human Resource Management and Training. The General Use Action Tracking requirements encompass common requirements for the General Use Action Tracking, Deficiency Tracking, and Employee Suggestions. Deficiency Tracking and Employee Suggestions have additional requirements specific to those business functions.

3.3.1 General Use Action Tracking

The General Use Action Tracking requirements globally apply to Section 3.3.1 General Use Action Tracking, 3.3.2 Deficiency Tracking and 3.3.3 Employee Suggestions.

3.3.1.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.1.2	Ability to apply dependencies on components within an action, such as an action cannot be closed until all assignments and sub-actions are complete.	Mandatory
3.3.1.3	Ability to archive completed Action Requests including cancelled or rejected.	Mandatory
3.3.1.4	Ability to split assignments into sub-actions.	Mandatory
3.3.1.5	Ability to automatically distribute reports.	Mandatory
3.3.1.6	Ability to tailor on-line forms to meet site standards.	Mandatory
3.3.1.7	Ability for the application to set and validate due dates for normal workdays, including working Fridays versus Fridays off, holidays, etc.	Essential
3.3.1.8	Ability to associate one to many documents to the action, assignment, or sub-action.	Essential
3.3.1.9	Ability to assign actions, assignments or sub-actions different due dates.	Essential
3.3.1.10	Ability to have indicator showing the last assignment has been completed for an action.	Essential
3.3.1.11	Ability to have unlimited text entry for text boxes/entries.	Essential
3.3.1.12	Ability to save a record even when the action is rejected.	Essential
3.3.1.13	Ability to select required fields for sub-actions.	Essential
3.3.1.14	Ability for the status date to be automatically assigned when the status changes.	Essential
3.3.1.15	Ability to tie actions to schedule activity or work package.	Desirable
3.3.1.16	Ability for text wrap.	Desirable
3.3.1.17	Ability to automate the approvals based on security level and authorization dependency, whether it is an individual or group.	Desirable
3.3.1.18	Ability to be launched from a web home page.	Desirable
3.3.1.19	Ability to clone or copy elements of an action, with modification capability.	Desirable
3.3.1.20	Ability to display retrieved data in an easy format for user selection such as drop-down lists.	Desirable
3.3.1.21	Ability to have recurrence feature for actions, assignments, approvals, etc., such as resending an action out for re-approval because of changes, or a 'completed' action is assigned again because the completion was not adequate.	Desirable
3.3.1.22	Ability to turn notification on/off.	Desirable
3.3.1.23	Ability to spell check text entries.	Desirable

3.3.2 Deficiency Tracking

Deficiency Tracking has many contractually required elements to ensure timely, appropriate and effective corrective actions are taken whenever a deficiency is identified. The functional requirements are defined in this section and the data requirements are in Appendix A.

3.3.2.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.2.2	Ability to input and/or retrieve, capture, display, record, modify, track, trend, query and report on the defined data in Appendix A, based on user security level and dependencies.	Mandatory
3.3.2.3	Ability for on-line tracking and/or auditing of Action Requests based on user-defined selection criteria with notification capability.	Mandatory
3.3.2.4	Ability to apply one to many Event Codes to an Action Request.	Mandatory
3.3.2.5	Ability to easily interface with other systems based on site standards.	Mandatory
3.3.2.6	Ability to keep complete history of data input and subsequent changes.	Mandatory
3.3.2.7	Ability to link to and print source documents for Action Requests, Assignments or Sub-Assignment.	Mandatory
3.3.2.8	Ability to perform on-line trend analysis.	Mandatory
3.3.2.9	Ability to provide an audit of changes, such as User Identifier of who made each change and what they changed.	Mandatory
3.3.2.10	Ability to associate deficiency/action request to other disciplines and/or activities in a facility and other facilities within the company.	Essential
3.3.2.11	Ability to automatically report and send notification for new deficiencies to appropriate groups or personnel within contractually defined time periods.	Essential
3.3.2.12	Ability to automatically set Date Due based on a defined time period as defined by Quality Assurance requirements and/or business rules.	Essential
3.3.2.13	Ability to modify the defined time period for Due Date based on QA requirements and/or business rule changes.	Essential
3.3.2.14	Ability to print on-line tracking and auditing results.	Essential
3.3.2.15	Ability to retrieve and display data wherever possible to assist in deficiency resolution, minimize duplicated entry and reduce human error.	Essential
3.3.2.16	Ability to create forms and save to the database.	Desirable
3.3.2.17	Ability to set user-defined parameters for tracking, auditing, querying and reporting functions.	Desirable

3.3.3 Employee Suggestions

Employee Suggestions allows individuals within CHG to submit process improvement opportunities. These are captured and routed through a formal approval and implementation process. The Employee Suggestion Program is currently undergoing a process improvement effort, which may result in modifications to the requirements defined in this document. The functional requirements are defined in this section and the data requirements are in Appendix A.

3.3.3.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.3.2	Ability to input and/or retrieve, capture, display, record, modify, track, trend, query and report on the defined data in Appendix A, based on user security level and dependencies.	Mandatory
3.3.3.3	Ability to identify CHG Employee Suggestions from other business functions if using a shared system.	Mandatory

3.3.3.4	Ability to archive implemented Employee Suggestions > 2 years old.	Essential
3.3.3.5	Ability for Administrator to add, modify or delete advocates, champions, organization names, organization codes, or status types.	Essential
3.3.3.6	Ability for Administrator to modify automatically assigned Due Date time period.	Essential
3.3.3.7	Ability to select or modify Disposition Employee Suggestion.	Essential
3.3.3.8	Ability for Advocates/Champions to make one to many Assignments with independent Status and Status Dates.	Essential
3.3.3.9	Provide email capability to submit, receipt, forward, notify, assign, review, appeal, track, etc.	Essential
3.3.3.10	Ability for Employee Suggestion to be Appealed.	Essential
3.3.3.11	Ability for Suggester to query status of Employee Suggestion(s) submitted.	Essential
3.3.3.12	Ability for Suggester, or for those individuals unable to electronically submit suggestions allow other designated personnel, to electronically enter and submit Employee Suggestion.	Essential
3.3.3.13	Ability for the Advocate to accept, reject or reassign an Employee Suggestion if it was assigned to the wrong advocate/organization.	Essential
3.3.3.14	Ability for the Advocate to modify the Due Date.	Essential
3.3.3.15	Ability for submitted Employee Suggestions to be automatically assigned a unique identifier and saved to the database.	Essential
3.3.3.16	Ability for the Advocate to validate or accept submitted Employee Suggestions.	Essential
3.3.3.17	Ability to apply monetary awards to Employee Suggestions regardless of status.	Essential
3.3.3.18	Ability to assign a unique identifier to each Employee Suggestion.	Essential
3.3.3.19	Ability to associate the organization the Employee Suggestion belongs to.	Essential
3.3.3.20	Ability to automatically assign a due date based on a set time period from the date the Employee Suggestion was received.	Essential
3.3.3.21	Ability to carry over Employee Suggestions from year to year, such as suggestions waiting for funding to implement and/or for budget planning.	Essential
3.3.3.22	Ability to identify the appropriate Advocate based on the organization the Employee Suggestion is associated with.	Essential
3.3.3.23	Ability to modify Status of Employee Suggestion.	Essential
3.3.3.24	Ability to identify Primary and Backup Advocates.	Essential
3.3.3.25	Ability to provide history of changes to the Employee Suggestion, cannot be overwritten.	Essential
3.3.3.26	Ability to randomly select Suggester or Advocate of Employee Suggestion for award, monthly and annually, with user defined conditions.	Essential
3.3.3.27	Ability to reassign Advocates or Champions.	Essential
3.3.3.28	Ability to run reports based on user defined time period such as the last running 12 months or monthly spread by Calendar Year.	Essential
3.3.3.29	Ability to search/query on keywords.	Essential
3.3.3.30	Ability to status Received versus Assigned Employee Suggestions.	Essential
3.3.3.31	Ability to track Employee Suggestions until archived.	Essential
3.3.3.32	Ability to validate appropriate Employee Suggestion and Suggester Information is recorded before Employee Suggestion can be Closed.	Essential
3.3.3.33	Provide a front end that people typically use every day, such as Outlook or the Web.	Essential

3.3.3.34	Ability to prevent Suggesters from modifying the Employee Suggestion after it has been validated.	Essential
3.3.3.35	Ability for reports to have charting capability.	Desirable
3.3.4 General Finance		
3.3.4.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.4.2	Provide multiple cost allocation and rate structures in a multi-company environment.	Mandatory
3.3.4.3	Must maintain and report balances separately for the current and prior months.	Mandatory
3.3.4.4	Must post to the current fiscal year by month as well as to the prior fiscal year until year-end closing is completed.	Mandatory
3.3.4.5	Must maintain and report balances separately for current and prior fiscal years.	Mandatory
3.3.4.6	Must have ability to enter transactions for a new period while processing the accounting "closing" for prior periods.	Mandatory
3.3.4.7	Must conform to generally accepted accounting practices.	Mandatory
3.3.4.8	Provide flexible account structures such as but, not limited to, charge numbers and organizational and project codes.	Essential
3.3.4.9	Support ability to modify account structure after initial implementation and new account structure must automatically propagate through the system for internal consistency.	Essential
3.3.4.10	Provide ability to expand or easily revise data structure to meet changing requirements.	Essential
3.3.4.11	Support addition, deletions, and changes to accounting classification structure codes without programming changes.	Essential
3.3.4.12	Support multiple, flexible work breakdown and cost element structures.	Essential
3.3.4.13	Provide audit trail that shows, at a minimum, the users identifier, date, time and action with create, update, change, and delete for each recorded element.	Essential
3.3.4.14	Ability to generate paper or electronic invoices to any client on a standard billing cycle	Essential
3.3.4.15	Ability to generate paper or electronic invoices to customers on demand	Essential
3.3.4.16	Provide detail data and documentation supporting invoice amounts available at the time of presentation of the invoice.	Essential
3.3.4.17	Allow project orientation with the ability to support and report at multiple levels of summary, using a government customer defined accounting structure.	Essential
3.3.4.18	Provide automated rate variance re-allocation.	Essential
3.3.4.19	Provide a data structure that supports the cost accumulation and allocation process.	Essential
3.3.4.20	Provide audit trail tracing the transaction from the original cost pool to the final cost objective.	Essential
3.3.4.21	Ability to identify and record indirect costs incurred, including input on costs from feeder systems such as inventory, payroll, and travel.	Essential
3.3.4.22	Ability to detail and/or summarize data in customer defined required formats, and electronically interface with other systems.	Essential
3.3.4.23	Provide ability to report total cost/total budget at any data reporting level.	Essential
3.3.4.24	Provide support to mass change each element of the data structure.	Desirable
3.3.4.25	Ability to derive expanded accounting classification structure from abbreviated user input or alias.	Desirable

3.3.4.26	Support recasting or changing of Department of Energy funding or task codes such as budget and reporting numbers, program baseline summaries, and local projects/tasks.	Desirable
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3.3.4.27	Provide support for purging/archival of past Fiscal Year data.	Desirable
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3.3.5 General Ledger

3.3.5.1	Must support, at a minimum, 20 concurrent users.	Mandatory
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3.3.5.2	Must have multiple ledger capabilities.	Mandatory
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3.3.5.3	Ability to maintain and report balances separately for current and prior fiscal years.	Mandatory
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3.3.5.4	Ability to handle detail cost transactions as a balanced business event, i.e., no unbalanced entries possible.	Essential
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3.3.5.5	Support recurring transaction posting for same journal entries with different numbering.	Essential
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3.3.5.6	Ability for journal entries to be balanced, i.e., debits equal to credits, prior to posting.	Essential
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3.3.5.7	Provide multiple allocation structures and multiple recovery methods for cost pools.	Essential
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3.3.5.8	Ability to generate trial balances and other standard account information.	Essential
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3.3.5.9	Ability to automate account closing process and carryover to new fiscal year.	Essential
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3.3.5.10	Ability to have accrual and reversal automation from subsidiary ledgers/systems.	Essential
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3.3.5.11	Provide automated tax reporting for all different tax types for multiple companies.	Essential
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3.3.5.12	Ability to generate reports showing distribution of journal entries and other transactions to accounts.	Essential
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3.3.6 Expense

3.3.6.1	Ability to support, at a minimum, 20 concurrent users.	Desirable
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3.3.6.2	Provide organization and charge code verification.	Desirable
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3.3.6.3	Provide electronic signature authorization for approvals.	Desirable
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3.3.6.4	Provide a comprehensive record keeping system for the travel function.	Desirable
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3.3.6.5	Provide audit controls, audit capabilities, input edits and system security.	Desirable
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3.3.6.6	Provide a check writer capability.	Desirable
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3.3.6.7	Support petty cash and cashier functions.	Desirable
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3.3.6.8	Ability to extract and interface with human resources, document control, financial, payroll and banking data.	Desirable
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3.3.6.9	Provide automated entries of travel ledger data into the payroll and financial system.	Desirable
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3.3.6.10	Ability to utilize MS Outlook notification for travel authorization approvals.	Desirable
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3.3.6.11	Provide automated feed of taxable and nontaxable moving expenses to payroll.	Desirable
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3.3.6.12	Provide reports of outstanding travel balances.	Desirable
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3.3.6.13	Provide reconciliation reports for Treasury.	Desirable
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3.3.7 Accounts Payable

3.3.7.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.7.2	Ability to automatically assign a voucher number to uniquely identify a payment request and to serve as an audit trail identifier.	Mandatory
3.3.7.3	Ability to identify duplicate invoices from vendor.	Mandatory
3.3.7.4	Support check cancellation and reissue.	Mandatory
3.3.7.5	Support generation of manual checks.	Mandatory
3.3.7.6	Ability to record accruals for materials, which have been received, and services, which have been performed but not yet invoiced.	Mandatory
3.3.7.7	Ability to track and record 1099 reporting at invoice level.	Mandatory
3.3.7.8	Ability to track status of invoices as they are processed. .	Mandatory
3.3.7.9	Ability to account for committed costs.	Mandatory
3.3.7.10	Ability to track authorized Purchase Order amount to vendor cost incurred data.	Mandatory
3.3.7.11	Ability to account for actual costs paid in order to determine accrued cost data and outstanding liability.	Mandatory
3.3.7.12	Ability to cancel or delete a request prior to payment and account distribution.	Mandatory
3.3.7.13	Support return and allowance, i.e., credit memo, as well as debit memo data on-line and apply to invoices.	Mandatory
3.3.7.14	Provide method to stop payments and cancel invoices.	Mandatory
3.3.7.15	Provide approval limits by user/group for transactions.	Mandatory
3.3.7.16	Must generate check registers each time checks are created and printed and produce summary.	Mandatory
3.3.7.17	Provide methods to process all invoice types, such as: orders with receivers, orders without receivers, subcontract services, expense reports, disbursement authorizations and freight.	Mandatory
3.3.7.18	Must automate the matching process between invoice, receiver, and purchase order.	Mandatory
3.3.7.19	Provide full integration between Accounts Payable, Procurement and General Ledger.	Mandatory
3.3.7.20	Must generate check-issued file for bank and accept/perform electronic redemption/reconciliation file from bank.	Mandatory
3.3.7.21	Ability to maintain supplier database information including multiple business addresses, socio-economic, and product code, that supports the accounts payable and procurement modules.	Essential
3.3.7.22	Record and track sales and use taxes by locality.	Essential
3.3.7.23	Ability to calculate payment due date based upon invoice or Purchase Order/Receipt data.	Essential
3.3.7.24	Ability to support WBS and/or OBS accounting structures.	Essential
3.3.7.25	Ability to support user controlled check printing processing.	Essential
3.3.7.26	Ability to indicate the vendor or invoice is to be held and not paid.	Essential
3.3.7.27	Provide method to enter terms and discount information.	Essential
3.3.7.28	Track subcontract retention amounts.	Essential
3.3.7.29	Support invoice-less payment to vendors.	Essential
3.3.7.30	Support automatic calculation/compare of best discount terms.	Essential
3.3.7.31	Ability to generate both batch and on-line payments.	Essential

3.3.7.32	Support automatic generating of recurring invoices for payments such as leases.	Essential
3.3.7.33	Ability to list journal detail each time the General Ledger interface occurs.	Essential
3.3.7.34	Ability to report information for General Ledger reconciliation and balancing functions.	Essential
3.3.7.35	Provide ability to make partial payments or progress payments.	Essential
3.3.7.36	Provide mechanism to track lost discounts and amounts.	Desirable
3.3.7.37	Ability to track freight shipping payments over \$50 for reporting to Government Services Administration.	Desirable
3.3.7.38	Provide multiple payment addresses and/or bank information for a single payee.	Desirable
3.3.7.39	Provide multiple bank accounts per company capability.	Desirable
3.3.7.40	Ability to support payment to the third parties that act as agents of the payee.	Desirable
3.3.7.41	Ability to support weekly accruals.	Desirable

3.3.8 Time Recording

3.3.8.1	Must support, at a minimum, 200 concurrent users.	Mandatory
3.3.8.2	Ability for worker to enter time.	Mandatory
3.3.8.3	Ability for worker to enter time card corrections for previous weeks.	Mandatory
3.3.8.4	Ability to enter time for entire week from one panel.	Essential
3.3.8.5	Ability to approve time card based on organizational structure.	Essential
3.3.8.6	Support time entry using the work breakdown structure used within the financial system.	Essential
3.3.8.7	Provide multiple pay codes such as shift differential, certification pay, qualification pay, platoon and guard pay practices, varying overtime rates and other premiums.	Essential
3.3.8.8	Provide multiple pay and shift schedule calendars, incorporating varying holiday schedules.	Essential
3.3.8.9	Provide audit functions for all time entry activities.	Essential
3.3.8.10	Ability to alert responsible manager for timecard delinquencies.	Essential
3.3.8.11	Ability to designate alternate staff other than immediate manager for time card review and approval.	Essential
3.3.8.12	Ability for contract personnel to enter time without generating paychecks.	Essential
3.3.8.13	Ability to record all time worked, regardless whether payable time or not	Essential
3.3.8.14	Ability to save time throughout the day, not just after 9 hours of recordable time.	Essential
3.3.8.15	Provide manager re-approval notification if time is modified after initial approval.	Essential
3.3.8.16	Provide supervisor and employee electronic authorization with date/time stamp audit trail.	Essential
3.3.8.17	Provide archival and user selectable retrieval of timesheet historical information.	Essential
3.3.8.18	Provide invoice matching for contract employees and accounts payable.	Desirable

3.3.9 Payroll

3.3.9.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.9.2	Provide a complete up-to-date set of tax tables, which store all tax data including state rules.	Essential
3.3.9.3	Support the ability to override previously established employee-level data, such as the cost center to which earnings and hours should be charged.	Essential
3.3.9.4	Support the ability to enter or modify one-time deductions and one-time taxes.	Essential
3.3.9.5	Provide deletion and resetting of deduction codes within the same calendar year.	Essential
3.3.9.6	Support on line viewing of all paycheck data.	Essential
3.3.9.7	Ability to track and update earnings for employees with multiple jobs.	Essential
3.3.9.8	Support the ability to process off-cycle payrolls.	Essential
3.3.9.9	Support the ability to make adjustment to pay.	Essential
3.3.9.10	Support the ability to update all month-to-date, quarter-to-date, and year-to-date payroll accumulators, including earnings, deductions, and taxes.	Essential
3.3.9.11	Support the ability to access unlimited payroll history on-line.	Essential
3.3.9.12	Support the ability to create unlimited codes and definitions for earnings and deductions.	Essential
3.3.9.13	Ability to prorate mid-period pay increases, hires, terminations, and other transactions automatically.	Essential
3.3.9.14	Ability to automate U.S. Savings Bonds deductions in pay process.	Essential
3.3.9.15	Ability to calculate pay based on hire or termination dates. Include partial pay for off-cycle checks.	Essential
3.3.9.16	Ability to rack balances for arrears, direct deposit distributions, garnishments, and leave accrual.	Essential
3.3.9.17	Support multiple garnishments for an employee.	Essential
3.3.9.18	Ability to track daily employee attendance by date, including absenteeism, vacation, leaves of absence, and sick time.	Essential
3.3.9.19	Support retroactive union pay.	Essential
3.3.9.20	Support retroactive benefits adjustments.	Essential
3.3.9.21	Support gross-up check calculations and "what-if" scenarios.	Essential
3.3.9.22	Support processing of multiple companies in same pay cycle.	Essential
3.3.9.23	Support paycheck reversals.	Essential
3.3.9.24	Support generation of manual checks.	Essential
3.3.9.25	Support multiple pay calendars that reflect varying shift and holiday schedules.	Essential
3.3.9.26	Support multiple start and stop dates for all payroll deductions and contributions related to benefits.	Essential
3.3.9.27	Ability to have Payroll check and reimbursement of employee expenses on one check/electronic funds transfer and remittance with appropriate W-2 wages and payable balances in General Ledger.	Essential
3.3.9.28	Ability to create pay sheets from time the entry information for all user defined pay cycles. Insure these time sheets are compatible for use in the proposed payroll system.	Essential
3.3.9.29	Ability to integrate with an Accounts Payable module.	Essential
3.3.9.30	Ability to integrate with a General Ledger module.	Essential
3.3.9.31	Ability to integrate with a Project Accounting/Costing system.	Essential

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| 3.3.9.32 | Ability to integrate with the Time Entry system. | Essential |
| 3.3.9.33 | Support direct deposit electronic distribution of employee earnings to multiple banking entities for an employee. | Essential |
| 3.3.9.34 | Ability to enter and track employee benefits such as stock options. | Essential |
| 3.3.9.35 | Ability to estimate labor costs between pay cycles. | Desirable |

3.3.10 Purchasing and Service Orders

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| 3.3.10.1 | Must support, at a minimum, 100 concurrent users. | Mandatory |
| 3.3.10.2 | Support an average of 50 requisitions and/or purchase orders per day. | Mandatory |
| 3.3.10.3 | Support an average of 5 Items per requisition or purchase order. | Mandatory |
| 3.3.10.4 | Must have a capability of over 100 items per requisition or purchase order. | Mandatory |
| 3.3.10.5 | Ability to provide procurement and receiving functions such as: tracking evaluated suppliers, receipt inspection requirements, and documentation and tracking of supplier non-conformance. | Mandatory |
| 3.3.10.6 | Ability to capture standard information about the receipt of goods or the approval of services rendered. | Mandatory |
| 3.3.10.7 | Provides for a single purchase order to be created from multiple requisitions with item roll up. | Mandatory |
| 3.3.10.8 | Ability to track all modifications separate from basic award coding. | Mandatory |
| 3.3.10.9 | Ability to maintain award information until closeout of award. | Mandatory |
| 3.3.10.10 | Provide for zero dollar awards. | Mandatory |
| 3.3.10.11 | Ability to change buyer codes when subcontracts are transferred to new administrator. | Mandatory |
| 3.3.10.12 | Ability to maintain closeout steps to track retention balance and release options, final acceptance of services, and date. | Mandatory |
| 3.3.10.13 | Provide for electronic purchase requests. | Mandatory |
| 3.3.10.14 | Ability to track and provide current and historical data on small business, socio-economic, and other procurement metrics such as competition and performance base awards. | Mandatory |
| 3.3.10.15 | Support creation of service and consulting contracts. | Mandatory |
| 3.3.10.16 | Provide automated requisition routing and approval processes for original and modifications. | Mandatory |
| 3.3.10.17 | Ability for contracts to be awarded, renewed or additional releases / options to be exercised electronically. | Mandatory |
| 3.3.10.18 | Provide a commitment tracking capability. | Mandatory |
| 3.3.10.19 | Support matching with invoice and receivers. | Mandatory |
| 3.3.10.20 | Provide capability to allow cost distribution to one or more different cost centers either at the purchase order line item or purchase order header level. | Mandatory |
| 3.3.10.21 | Support Request for Proposal and Request for Quote processing. | Mandatory |
| 3.3.10.22 | Support progress payment recording based on earned value calculations. | Mandatory |
| 3.3.10.23 | Ability to have more than one open non-id purchase order per vendor for the same service or commodity. | Mandatory |
| 3.3.10.24 | Provides item history by vendor and dollar amount. | Mandatory |
| 3.3.10.25 | Provides item history by socio-economic awards and other small business awards. | Mandatory |
| 3.3.10.26 | Provides item history by time phase data extraction, e.g., contract value | Mandatory |

	increases for Fiscal Year 1996 vs. Total of all.	
3.3.10.27	Provides item history by buyer summary.	Mandatory
3.3.10.28	Provide support for user definable clauses.	Essential
3.3.10.29	Support clause template table for user to modify clauses for individual purchase orders.	Essential
3.3.10.30	Ability for clauses and MS Word documents to be attached to material requests and purchase orders.	Essential
3.3.10.31	Ability to prevent output of award documents when correct entries have not been made.	Essential
3.3.10.32	Ability for multiple awards of purchase orders from a single requisition at item level.	Essential
3.3.10.33	Provide for the capability to support past modification histories as breakout of roll up number.	Essential
3.3.10.34	Provide capability to purge vendors.	Essential
3.3.10.35	Provides ability to enter Pre/Post dates for items such as option modifications, change orders.	Essential
3.3.10.36	Ability to maintain buyer code history information.	Essential
3.3.10.37	Provide a supplier evaluation and rating capability.	Essential
3.3.10.38	Provide user defined parameters that notify users of pending critical dates for open or pending orders.	Essential
3.3.10.39	Capability to track buyer actions against a pre-determined approval authority that is based on individual transactions rather than a cumulative basis.	Essential
3.3.10.40	Capability to report volumes of transactions by buyer and projects.	Essential
3.3.10.41	Provide electronic processing / work flow for payment authorizations by Buyer Technical Representative, Accounts Payable and Buyer.	Essential
3.3.10.42	Provide Material Procurement and Service Contracts with the same look and feel to minimize cross training.	Essential
3.3.10.43	Support Request for Information processing.	Desirable
3.3.10.44	Support electronic bid responses and postings.	Desirable

3.3.11 Material Purchasing

3.3.11.1	Must support, at a minimum, 100 concurrent users.	Mandatory
3.3.11.2	Ability to track lead times.	Mandatory
3.3.11.3	Ability to suspend requisitions without removing requisition data	Mandatory
3.3.11.4	Supports several levels of acceptance for materials, such as receipt acknowledged and quality assurance hold, reject, or acceptance.	Mandatory
3.3.11.5	Ability to define a tolerance by either a dollar amount or a percentage increase/decrease.	Mandatory
3.3.11.6	Ability to upward or downward adjust a purchase order upon receipt of goods where the price per quantity or the quantity differs from the ones on the purchase order by a user-defined tolerance.	Mandatory
3.3.11.7	Provides item history by standard industrial classification, product codes and Environmental Protection Agency designated items purchased.	Mandatory
3.3.11.8	Ability to catalog inventory items detailing information such as item descriptions, locations, sources, quantities, and prices.	Essential
3.3.11.9	Ability for on-line processing of stock items received, issued, and returned.	Essential
3.3.11.10	Support multi-warehouse environment including more than one bin and/or	Essential

	location per stocked item.	
3.3.11.11	Ability to maintain at least 12 months of usage information.	Essential
3.3.11.12	Ability to consolidate full requisition listing regardless of lead times.	Essential
3.3.11.13	Support on-line requisitioning and reservation of stocked items during job planning.	Desirable
3.3.11.14	Support on-line requesting for non-stock items during job planning.	Desirable
3.3.11.15	Support automatic recommended reordering of stock items based on the predefined reordering point information.	Desirable
3.3.12 Inventory		
3.3.12.1	Must support, at a minimum, 100 concurrent users.	Mandatory
3.3.12.2	Provides change data traceable to activity type, date, time, and user.	Mandatory
3.3.12.3	Provides the capability to record acquisition date, received date, transfer dates, etc.	Mandatory
3.3.12.4	Provides the capability to record and maintain custodian and location information such as building, room, bin/drawer, assigned project or work package, assigned manager.	Mandatory
3.3.12.5	Provides the capability to record and maintain information such as: acquisition cost, accounting status, asset type, shelf life and replacement value.	Mandatory
3.3.12.6	Provides the capability to record and maintain inventory information, such as: safety class, the levels of inspection required and/or performed by Quality Assurance.	Mandatory
3.3.12.7	Provides the capability to record standard inventory information, such as name, manufacturer name, mfg. number, serial number, size/capacity and document number.	Mandatory
3.3.12.8	Provide an automated, integrated database in order to purchase and manage inventory.	Mandatory
3.3.12.9	Provide inventory management capabilities, such as, transaction tracking, reorder point analysis, physical count, financial accounting, and demand history.	Mandatory
3.3.12.10	Provides storage management capabilities, such as storage space, reserves, distribution, material put away, storage types, material staging, and shipping.	Mandatory
3.3.12.11	Provides the capability to record transferring inventory items to excess.	Mandatory
3.3.12.12	Provides the capability to track equipment from purchase to disposal.	Mandatory
3.3.12.13	Support controlling and tracking tool crib items and Measure and Test Equipment functions including calibration recall.	Essential
3.3.12.14	Ability to reserve inventory, release inventory, and return inventory.	Essential
3.3.12.15	Ability to integrate with the selected Work Management module.	Essential
3.3.12.16	Provides capability to scan documents into system or link to scanned documents, such as vendor documentation.	Essential
3.3.12.17	Provides the capability to use bar code readers for collection of inventory information.	Essential
3.3.12.18	Provides management reporting/analysis for acquisition review, reutilization, cost/benefit analysis, and lease vs. buy analysis.	Essential
3.3.12.19	Ability to identify and conduct periodic cycle counts.	Essential

3.3.13 Human Resources

3.3.13.1	Must support, at a minimum, 20 concurrent users.	Mandatory
3.3.13.2	Support ability to automatically enroll employees in multiple types of benefit plans that cover Long Term Disability, Short Term Disability, Retirement Plans, Flexible Reimbursement Accounts, Savings Plans, Pension Plans, Insurance Plans, and Consolidated Omnibus Budget Reconciliation Act.	Mandatory
3.3.13.3	Provide the ability to generate and view individual employee benefit summary information.	Mandatory
3.3.13.4	Provide generation of benefits data for electronic transmittal to various benefits providers, such as Health Maintenance Organizations.	Mandatory
3.3.13.5	Support multiple merit increases types, promotion types, pay grades, and salary plans.	Mandatory
3.3.13.6	Ability to track employee grievance, complaint, and disciplinary data.	Mandatory
3.3.13.7	Support ability to track hires, leaves, terms, transfers, promotions, retirements, rehires, concurrent jobs, and all salary changes.	Mandatory
3.3.13.8	Ability to track employee family and emergency contact information.	Mandatory
3.3.13.9	Support multiple union codes.	Mandatory
3.3.13.10	Ability to track veteran and disabled veteran statistics.	Mandatory
3.3.13.11	Support ability to track adverse impact data for job codes in support of Equal Employment Opportunity reporting purposes.	Essential
3.3.13.12	Support all data requested by the Americans with Disabilities Act.	Essential
3.3.13.13	Ability to track an applicant in the database before the applicant becomes an employee.	Essential
3.3.13.14	Ability to uniquely identify each applicant as one entity regardless of the number of applications submitted.	Essential
3.3.13.15	Ability to track applicant history.	Essential
3.3.13.16	Ability to convert applicant data into an employee record once decision is made to hire.	Essential
3.3.13.17	Ability to track the process flow and status of a personnel requisition, including interview schedules, costs, evaluation forms, offers, offer status, and disposition reasons.	Essential
3.3.13.18	Ability to associate an applicant record with one or more open requisitions.	Essential
3.3.13.19	Ability to retain data on applicant's previous jobs and salary history.	Essential
3.3.13.20	Support user-definable and other custom letters to be used in the applicant flow process.	Essential
3.3.13.21	Support skill coding of all applicants and requisitions.	Essential
3.3.13.22	Ability to track education data for applicants and requisitions.	Essential
3.3.13.23	Ability to track resume routing process.	Essential
3.3.13.24	Ability to track applicant medical exams and appropriate results.	Essential
3.3.13.25	Support cafeteria benefits program.	Essential
3.3.13.26	Provide Long Term Disability, Short Term Disability, Retirement Plans, Flexible Reimbursement Accounts, Savings Plans, Pension Plans, Insurance Plans, and Consolidated Omnibus Budget Reconciliation Act. Support different rate structures depending on the benefits plan selected by or assigned to the employee.	Essential
3.3.13.27	Provide a salary review module with multiple compensation types.	Essential

3.3.13.28	Support the ability to check proposed salary increase spending against salary increase budgets given remaining funds in spend plan.	Essential
3.3.13.29	Support the ability to calculate compa-ratios and range penetration analysis by grade and job.	Essential
3.3.13.30	Provide monitoring of base salary and other compensation components such as certification, overtime, bonuses, recognition, and other premium pays.	Essential
3.3.13.31	Provide review and monitoring of specific salary increases given to an employee.	Essential
3.3.13.32	Support tracking of changes to an employee by leave status and date.	Essential
3.3.13.33	Provide the ability to future date an employee record for organizational, pay, and any other status changes.	Essential
3.3.13.34	Ability to track absenteeism for all employee types.	Essential
3.3.13.35	Support ability to track and review any enrollment data for an employee.	Essential
3.3.13.36	Support electronic skills assessment processing system including resume handling.	Desirable
3.3.13.37	Support a table of new salary ranges for each pay grade for a new fiscal year.	Desirable
3.3.13.38	Provide overall ability to link salary increases with annual funding budgets.	Desirable
3.3.13.39	Support skill coding of all employees and link to compensation factors.	Desirable
3.3.13.40	Provide capability to manage headcount based on position data.	Desirable
3.3.13.41	Ability to track multiple project assignments and multiple supervisors per employee.	Desirable
3.3.13.42	Support retrieval of data for historical analysis of staffing requirements by department.	Desirable
3.3.13.43	Support a full position management capability.	Desirable
3.3.13.44	Ability to identify approved, pending, and open positions.	Desirable
3.3.13.45	Ability to identify current and historical incumbents for a selected position.	Desirable

3.3.14 Training

3.3.14.1	Must support, at a minimum, 60 concurrent users.	Mandatory
3.3.14.2	Support the ability to access employee training data.	Essential
3.3.14.3	Support the ability to track course sessions by employee name and employee name by course session.	Essential
3.3.14.4	Support on-line course session registration.	Essential
3.3.14.5	Support ability to track course schedules and rosters.	Essential
3.3.14.6	Ability to identify all course prerequisites.	Essential
3.3.14.7	Ability to associate a collection of courses with a training program or a certification program.	Essential
3.3.14.8	Support alternate and equivalent courses, as well as tracking expirations and providing automatic updates for classes.	Essential
3.3.14.9	Support creation and maintenance of training plans for individual employees. Indicate whether courses are mandatory, optional, or other user defined justification codes, such as qualification requirements.	Essential
3.3.14.10	Support ability to create career plans.	Essential
3.3.14.11	Ability for multiple course completion codes to be entered.	Essential
3.3.14.12	Ability for training costs to be calculated for selected departments.	Essential
3.3.14.13	Support individual craft information, such as qualification requirements,	Essential

	training records, local address and telephone number.	
3.3.14.14	Ability to develop and track training plans for employees and augmented staff.	Essential
3.3.14.15	Ability to track delinquencies and training requirements for all staff.	Essential
3.3.14.16	Ability to integrate with Human Resources for employee information and operator certification pay.	Essential
3.3.14.17	Ability to verify people's current qualifications based on training taken.	Essential
3.3.14.18	Ability to access health records to determine physical and whole body count status.	Essential
3.3.14.19	Ability to link to employee job task analysis information.	Essential
3.3.14.20	Ability to generate management reports such as training delinquencies, forecasting and trending.	Essential
3.3.14.21	Ability to flag new training requirements, allowing grace period before appearing as delinquent.	Essential

4.0 TECHNICAL SYSTEM OPERATIONAL REQUIREMENTS

The following are the technical system operational requirements that are common to all business areas.

4.1 GENERAL

The following are the administration and vendor support requirements common to all business areas.

4.1.1 Administration

- | | | |
|-----------------|--|-----------|
| 4.1.1.1 | Provide documentation with each version covering system administration functions including installation, hardware, environment considerations, backup, archiving, and system error messages. | Mandatory |
| 4.1.1.2 | Ability for the system administrator to add new reports and modify existing reports. | Mandatory |
| 4.1.1.3 | Must have modules affected by software patches, releases, and version changes clearly identified and documented. | Mandatory |
| 4.1.1.4 | Ability for the software to have a transaction logging method and support data recovery in the event of hardware or software failure. | Mandatory |
| 4.1.1.5 | Ability to recover a batch process from a failed point. | Mandatory |
| 4.1.1.6 | Provide a means to monitor users on-line and shall allow for the accumulation of metrics concerning usage. | Essential |
| 4.1.1.7 | Ability to monitor and track performance at the server level. | Essential |
| 4.1.1.8 | Provide tools for aid with version upgrades of primary software and third party software products. | Essential |
| 4.1.1.9 | The software shall allow menus/screens to be customized by the system administrator as needed. | Essential |
| 4.1.1.10 | The software must provide a method to archive data, removing it from the production database. | Essential |
| 4.1.1.11 | Provide a defined process and method to retrieve archived data. | Essential |
| 4.1.1.12 | The software shall support an audit trail such as event logging that records user identification date/time and transaction status for every database insertion, change, or deletion. | Essential |
| 4.1.1.13 | Provide the version upgrade process for Commercial-Off-The-Shelf (COTS) products with effective methods for sustaining users modifications to the software and data structures. | Desirable |
| 4.1.1.14 | Provide field or context sensitive help and have editing capability by the system administrator. | Desirable |
| 4.1.1.15 | Ability to remove users from security groups upon removal of access from the system. | Desirable |

4.1.2 Vendor Support

- | | | |
|----------------|---|-----------|
| 4.1.2.1 | The software vendor, in the form of consulting services and software functionality, shall provide support for implementation and data migration as an optional service. | Essential |
| 4.1.2.2 | Provide help desk support for COTS products, at a minimum, during Pacific Standard Time business hours. | Essential |

4.2 ARCHITECTURE

The following are the database, infrastructure, interface, product and security requirements that are common to all business areas.

4.2.1 Database

- | | | |
|----------------|---|-----------|
| 4.2.1.1 | Ability to utilize one of the following relational database engines: Oracle and/or MS SQL Server. | Mandatory |
| 4.2.1.2 | Ability for product databases to allow for modification and addition of tables and data fields. | Mandatory |
| 4.2.1.3 | Provide row level locking for managing concurrent updates to databases. | Mandatory |
| 4.2.1.4 | Ability to have multiple database regions/files with separate security. | Essential |

4.2.2 Infrastructure

- | | | |
|----------------|---|-----------|
| 4.2.2.1 | Use UNIX or MS NT server operating system, supporting multiple hardware platforms. | Mandatory |
| 4.2.2.2 | Support Ethernet and Transmission Control Protocol/Internet Protocol communications. | Mandatory |
| 4.2.2.3 | Provide compatibility with MS Windows 98 and 2000 workstation operating systems. | Mandatory |
| 4.2.2.4 | Provide compatibility with, and interact with as appropriate, the MS office automation suite of MS Word, MS Excel, MS PowerPoint and MS Access. | Mandatory |
| 4.2.2.5 | Where applicable, the software shall interact with MS Outlook for users notifications. | Mandatory |
| 4.2.2.6 | Provide compatibility with standard MS Windows printing controls. | Essential |

4.2.3 Interface

- | | | |
|----------------|--|-----------|
| 4.2.3.1 | Ability for the software to print to network-attached printers/plotters. | Mandatory |
| 4.2.3.2 | Ability to interact with external systems using industry standard methods such as Open Data Base Connectivity (ODBC), Object Linking and Embedding (OLE), or custom Application Programming Interface (API). Documentation must be provided for supported methods. | Mandatory |
| 4.2.3.3 | Provide a web-enabled, thin client access capability. | Essential |

4.2.4 Product

- | | | |
|----------------|--|-----------|
| 4.2.4.1 | Software vendors must demonstrate that their software is Year 2000 compliant. | Mandatory |
| 4.2.4.2 | Software product vendors must provide supporting documentation, which defines the database architecture in detail. | Mandatory |
| 4.2.4.3 | Utilize standard naming conventions for system objects such as tables, views, forms, reports, programs, packages, etc. | Mandatory |
| 4.2.4.4 | Allow for the importing of existing, legacy system data. | Essential |
| 4.2.4.5 | Allow multi-access read/write capability. | Essential |
| 4.2.4.6 | Allow for scalability in the number of users and the volumes of data with no appreciable loss in response time. | Essential |
| 4.2.4.7 | The software users interface must be MS Windows standard GUI based. | Essential |

4.2.4.8	Provide a quick method of moving about the system with user definable hot keys.	Desirable
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4.2.5 Security

4.2.5.1	A unique user identifier and password must control access to the system.	Mandatory
4.2.5.2	The password must be encrypted, able to be chosen by the user, and not displayed on the screen when entered.	Essential
4.2.5.3	Ability to have various security levels for read/write access, such as menu, screens, and field levels.	Essential
4.2.5.4	Allow a group security profile, enabling users to be commonly grouped for access to the software.	Essential

5.0 APPENDIX A – DATA ELEMENTS

5.1 PROJECT CONTROLS REPORTS

The following have been identified as data elements needed for Project Control Reports. Note that all these reports are time phased.

5.1.1 Time Periods

The below time period options are applicable to all Project Control Reports.

- Optional selection of either:
 - Spread
 - Monthly
 - Fiscal Year to Date
 - Current Month
 - Current Month
 - Fiscal Year to Date
 - Project to Date
 - Combined

5.1.2 Actual Cost of Work Performed and Budgeted Cost of Work Scheduled Reports

- WBS (number and title)
- Organization Code (number and title)
- Cost Type (labor or non-labor)
- Direct and Indirect Costs (base dollars with a display of burden dollars)

5.1.3 Budgeted Cost of Work Performed Report

- WBS (number and title)
- Cost Type (labor or non-labor)
- Direct and Indirect Costs (base dollars with a display of burden dollars)

5.1.4 Cost Variance and Schedule Variance Reports

- BCWS
- BCWP
- ACWP
- By WBS (number and title)
- By Cost Type

5.1.5 Variance Analysis Report

- Total by BCWS by WBS (number and title)
- Total by BCWP by WBS (number and title)
- Total by ACWP by WBS (number and title)
- Cost Variance
- Schedule Variance

- Budget at Completion
- Estimate at Completion
- At Completion Variance
- Fiscal Year to Date for the BCWS, BCWP, and ACWP

5.1.6 Budget at Completion Report

- Total BAC by WBS (number and title)
- Total EAC by WBS (number and title)

5.1.7 Estimate at Completion and Estimate to Complete Reports

- WBS (number and title)
- Element of Cost
- Time Phase
- Actuals to Date
- Estimate to Complete for the rest of the timeframe

5.1.8 Total Project Cost Report

- WBS (number and title)
- Element of Cost
- BCWS
- BCWP
- ACWP
- Estimate at Completion

5.2 GENERAL USE ACTION / DEFICIENCY TRACKING SYSTEM

The following are data elements needed for an General Use Action / Deficiency Tracking system.

- Action Actual Completion Date
- Action Planned Completion Date
- Action Request Approval Date
- Action Request Approved By
- Action Request Category
- Action Request Disposition
- Action Request Disposition Date
- Action Request Disposition Reason
- Action Request Distribution List
- Action Request Distribution Recipients
- Action Request Due Date
- Action Request Keywords
- Action Request Notes
- Action Request Originator
- Action Request Receipt Date
- Action Request Status
- Action Request Status Date
- Action Request Title

- Action Request Type
- Action Request Unique ID
- Assignment Actionee
- Assignment Complete Date
- Assignment Description
- Assignment Disposition
- Assignment Due Date
- Assignment Estimated Complete Date
- Assignment Note Description
- Assignment Note Type
- Assignment Number
- Assignment Responsible Group
- Assignment Status
- Assignment Subject
- Assignment Type
- CAM Representative
- Category Reportables
- Closure Documentation
- Closure Notes
- Condition Evaluation Date
- Corrective Action Approved Date
- Corrective Action Plan
- Corrective Action Plan Approved By
- Corrective Action Type
- Correspondence Records
- Deficiency Number
- Deficiency Title
- Delinquency Date
- Delinquency Item
- Direct Cause Code
- Direct Cause Description
- Direct Cause Note
- Document Number
- Document Point of Contact
- Document Sheet
- Document Sub-Type
- Document Title
- Document Type
- Document Unit
- Evaluation Attendees
- Evaluation Chairperson
- Evaluation Facilitator
- Event Code
- Initiating Document Date
- Initiating Document Originator
- Initiating Document Point of Contact
- Initiating Document Status
- Law Violated
- Lessons Learned

- Lessons Learned Applicability
- Lessons Learned Number
- Notes Category
- Notes Description
- Originating Group
- Owed to Group
- Owed to Group Disposition
- Reference ID
- Reference Type
- Restart Authorized By
- Restart Date
- Restart Prerequisites
- Risk Rank Value
- Risk Rank Value Justification
- Root Cause Code
- Root Cause Description
- Root Cause Note
- Safety Class
- Screen Date
- Screened by Name
- Stop Work Date
- Stop Work Decision
- Stop Work Notes
- Sub-Assignment Actionee
- Sub-Assignment Complete Date
- Sub-Assignment Description
- Sub-Assignment Disposition
- Sub-Assignment Due Date
- Sub-Assignment Estimated Complete Date
- Sub-Assignment Note Description
- Sub-Assignment Note Type
- Sub-Assignment Number
- Sub-Assignment Parent
- Sub-Assignment Progress Notes
- Sub-Assignment Responsible Group
- Sub-Assignment Status
- User ID
- Validation Completion Date
- Validation Form Data
- Verification Completion Date
- Verification Form Data

5.3 EMPLOYEE SUGGESTIONS SYSTEM

The following are data elements needed for an Employee Suggestions system.

- Advocate Backup
- Advocate Backup User ID
- Advocate Backup Organization

- Advocate User ID
- Advocate Name
- Advocate Organization
- Champion Name
- Champion User ID
- Employee Suggestion Current Situation
- Employee Suggestion Expected Result
- Employee Suggestion Possible Implementation
- Employee Suggestion Suggestion
- Employee Suggestion Appeal(s)
- Employee Suggestion Assignment
- Employee Suggestion Assignment Date
- Employee Suggestion Assignment Status
- Employee Suggestion Award Date
- Employee Suggestion Award Received
- Employee Suggestion Award Type
- Employee Suggestion Certificate Issue Date
- Employee Suggestion Cost Savings (Return on Investment)
- Employee Suggestion Disposition
- Employee Suggestion Due Date
- Employee Suggestion Implementation Date
- Employee Suggestion Notes
- Employee Suggestion Received Date
- Employee Suggestion Reject Category
- Employee Suggestion Risk Assessment Completed Y/N
- Employee Suggestion Status
- Employee Suggestion Status Date
- Employee Suggestion Subject Area
- Employee Suggestion Title
- Employee Suggestion Unique Identifier
- Suggester Correspondence Preference (e.g., email, phone)
- Suggester Hanford ID
- Suggester Mail stop
- Suggester Name
- Suggester Organization
- Suggester Phone Number