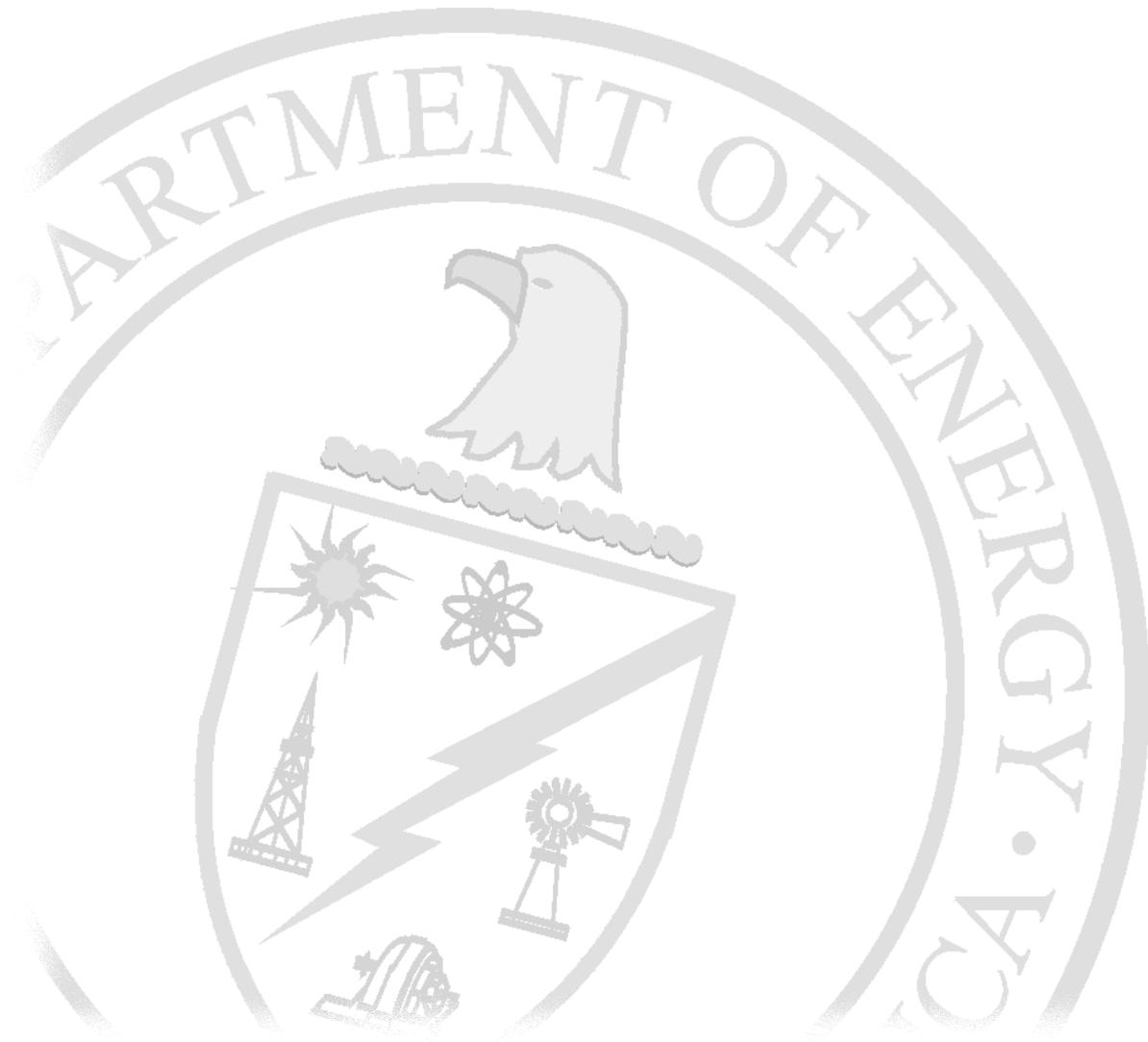


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Appendix



APPENDIX A

REQUIREMENTS

SECTION #	“SHALL” STATEMENTS	PAGE #
Section 1	An acquisition strategy serving the Government’s best interests shall be developed and documented in the Acquisition Plan.	1-4
	The plan shall specify the dates (milestones) when decisions should be made to facilitate attainment of the acquisition objectives. The plan shall address all the technical, business, management, and other significant considerations that will control the acquisition process.	1-4
	An Integrated Project Team (IPT) shall be responsible for developing the Acquisition Plan.	1-5
	At specified times or whenever significant changes occur, the IPT shall review and revise the plan, as appropriate.	1-5
	If an MOU is used it shall be consistent with the PEP.	1-9
Section 2	In all cases, the Justification of Mission Need shall include <ul style="list-style-type: none"> • a description of the conditions or regulatory requirements requiring action. • benefits to the Department of Energy (DOE) and the public. • alternative actions considered. • an outline scope definition. • planning/feasibility cost estimate. • preliminary acquisition plan. • planning/feasibility schedule(s) and milestones. 	2-2
	The IPT shall also include the contractor project manager.	2-2
	Project documentation shall support the request for CD-1, which establishes the project’s preliminary schedule and cost baseline ranges.	2-3
	With the completion of the Project Planning phases, those documents required to obtain Critical Decision-1 (CD-1, Approval Preliminary Baseline Range) approval shall also be completed, approved and provided. These include <ul style="list-style-type: none"> • an Acquisition Plan. • a Conceptual Design Report. • a Preliminary Hazard Analysis Report. • a Preliminary Project Execution Plan. • a design funding estimate. • preliminary baseline ranges for scope, schedule, and cost. • a Project Data Sheet for design. • a Verification of Mission need. 	2-3

SECTION #	“SHALL” STATEMENTS	PAGE #
Section 2	The preliminary project scope shall be defined in a Work Breakdown Structure (WBS) and WBS dictionary that are developed based on the project’s major elements and deliverables.	2-3
	Project cost and schedule ranges shall be developed based on the project WBS.	2-4
	As required by DOE O 413.X, in conjunction with the CD-1 submittal, these documents shall be submitted for SAE/AE approval.	2-4
	The project manager shall not commit to the performance of any tasks without confirming the availability of funds.	2-4
	Remediation of operable or waste units shall be accomplished through establishing and executing projects.	2-6
	EM work that may be categorized as conventional shall be projectized and managed as a separate project.	2-7
	A facility shall be characterized for types and amounts of contamination, alternative corrective actions developed, and the preferred alternative selected.	2-11
Section 3	The ISM Guiding Principles and Core Functions provided in DOE P 450.4, Safety Management System Policy, shall be applied to ensure that safety is integrated into design.	3-5
	The ISM Guiding Principles and Core Functions provided in DOE P 450.4, Safety Management Systems Policy, shall be applied to ensure that safety is integrated into design.	3-5
	Protecting the public, the workers, and the environment shall be a priority for all new design, construction, modification, or remediation.	3-6
	Each DOE project shall be implemented under a written environmental management process to anticipate and meet growing environmental performance expectations, and to ensure ongoing compliance with national and international regulatory requirements.	3-12
	The environmental baseline for the project shall be established prior to any work being performed at the site.	3-13
	Therefore the IPT shall include support from an environmental specialist.	3-14
	This plan outlines the steps that shall be followed in responding to situations in which hazardous substances, pollutants/contaminants, or oil are inadvertently released into the environment.	3-15
	The Order and Rule provide the basic areas to be covered by the project Quality Assurance Program. For nuclear projects, 10 CFR 830.120 and its attendant Price Anderson Act Program shall be implemented. For other programs, DOE Order 414.1A shall be applied.	3-16
	The Integrated Project Team shall prepare a QAP at the earliest possible stage; no later than the beginning of conceptual design.	3-18
	As early as possible (but no later than the beginning of conceptual design), the quality standard to be applied shall have been selected and the Quality Assurance Plan (QAP) prepared.	3-20
Section 4	Contracting and other procurements shall consider the available funds to avoid liability.	4-5
Section 5	If LPSOs have project delivery responsibility, they shall establish project management support offices that report directly to them, to provide project management support, throughout their organization.	5-3
	The team leader shall be the Federal project manager.	5-7
	However, IPT support shall be each member’s first priority.	5-7

SECTION #	“SHALL” STATEMENTS	PAGE #
Section 6	Program funds needed to develop the proposed project’s conceptual design shall be approved and a limited review accomplished that validates the mission need and funding request..	6-1
	EM work that may be categorized as conventional shall be projectized and managed as a separate project	6-3
Section 7	The project manager shall be held responsible and accountable for ensuring the successful completion of the project.	7-4
	Project roles and responsibilities of the DOE and contractor members of the IPT shall be defined and documented in the PEP and/or formal memoranda of understanding if not covered in the PEP.	7-5
	Development of a formal, detailed Project Execution Plan (PEP) by the IPT shall be performed for all projects.	7-6
	The project manager shall control changes to ensure changes are identified, coordinated and communicated, and that each approved change benefits the project.	7-11
	All change requests shall be documented, evaluated for project impact, approved and reconciled with the approved project baseline before physically implementing a change.	7-11
	Change control systems shall include Change Control Boards (CCB) that are responsible for reviewing and approving or rejecting change requests. The authority and responsibility of a CCB shall be defined in the CCB charter and agreed upon by key stakeholders.	7-11
	The project manager, with the support of the IPT, shall establish a turnover, occupancy, stakeholder acceptance, and user-acceptance process that includes punch-list item resolution, user walkthroughs, and verification of requirement compliance and system startup for proper operation.	7-11
	OECM shall provide the IPR report for preview prior to the critical decision meeting.	7-14
	Under the direction of the project manager, the project shall organize, schedule, and present project reviews based on user needs (tailored approach).	7-14
	Reviews are an important project activity and shall be planned as an integral part of the project, based on project complexity, duration and Critical Decision points.	7-15
Section 8	A project manager shall review CD-0 documentation and ensure top-level deliverables and/or functions have been defined.	8-1
	Regardless of the source, each requirement shall have a documented basis.	8-2
Section 9	The project manager shall verify selected solutions meet validated requirements for high-risk structures, systems, and components.	9-4
	After construction, the project manager shall test and inspect systems in accordance with the validated requirements and developed functional acceptance criteria	9-4
Section 11	The project manager shall develop a Risk Management Plan.	11-1
Section 12	The project shall clearly define and document the end product(s) to be provided to a user.	12-2
	The development of integrated project technical, schedule and cost baselines shall be aligned with DOE strategies, priorities, and goals.	12-7
	Any change to an approved baseline shall be thoroughly reviewed, understood, documented, and formally approved through a structured change control process.	12-8
	The schedule baseline shall be resource-loaded at the appropriate level to facilitate costing and budgeting.	12-8

SECTION #	“SHALL” STATEMENTS	PAGE #
Section 12	Schedule activities shall be activity-based when possible, with a strong relationship between schedule and cost estimate activities.	12-9
	The cost estimates shall be prepared using appropriate estimating methodologies.	12-9
	The cost baseline shall reflect all capital, expense, R&D, and outside funds required from preconceptual design to beneficial or user occupancy. The cost baseline shall also include escalation calculations using the DOE approved escalation rates.	12-9
	The application of contingency shall be considered in all scope, schedule, and cost baselines as being both prudent and necessary.	12-10
	Contingency shall not be used to avoid the effort required to prepare a properly detailed and documented cost estimate	12-10
	Contingency shall be controlled, approved, tracked and documented, based upon established and approved levels of control	12-10
	A schedule contingency shall be developed for each project task, with the amount of contingency assigned to the various activities reflecting the importance, cost, and difficulty of the task.	12-10
	In addition, a contingency usage log shall be maintained to document contingency usage by date, purpose, and amount.	12-11
	Therefore, TPC baseline shall be established with a high degree of confidence so that project completion can be achieved within the cost and schedule baselines.	12-11
	The TPC for the performance baseline shall be established at CD-2.	12-11
	In establishing the performance baseline, project completion shall be clearly and unambiguously defined.	12-11
	From a Congressional accountability perspective, the Performance Baseline shall capture all project costs (Total Project Cost (TPC) includes both the capital and OPEX components) even if the project is fully OPEX funded.	12-11
	Section 14	Project changes shall be identified, controlled, and managed through a traceable, documented and dedicated change-control process.	14-1
Baseline change control should be established early in a project’s life cycle, but shall be organized and functioning prior to requesting CD-2.		14-1
Each organizational level (as appropriate and documented in the PEP) shall establish a CCB for disposition of baseline change proposals within their level of authority/control.		14-2
The proposed baselines and thresholds for each project shall be documented in the Project Execution Plan, and approved at the Approve Performance Baseline, the CD-2, or the equivalent decision point.		14-3
The initiator of a change proposal shall prepare the change request describing the change and identifying the amount of budget required or to be returned.		14-3
Section 15	Each DOE project shall develop and implement a comprehensive, yet tailored, performance measurement/earned value system.	15-1
	In addition, as appropriate, the application of performance measurement/earned value shall be imposed on project suppliers, vendors, manufacturers, and support organizations.	15-2
	For all projects, the appropriate AE shall conduct a quarterly project performance review with the Federal Project Manager and staff.	15-3
	However, these contracts and contractors shall also have adequate control systems that suit the nature of the effort and reflect good business practices.	15-5

SECTION #	“SHALL” STATEMENTS	PAGE #
Section 15	Systematic measurement of baseline performance shall be conducted for each project in order to facilitate timely, meaningful, and proactive monitoring.	15-5
	As a project progresses from initiation through execution, performance measurement criteria shall be periodically reviewed and updated.	15-6
	Regardless of the EVMS implemented on a project, each project shall (on a tailored basis) prepare a list of metrics that can be used to gauge project progress on a gross or overall basis.	15-7
Section 16	Early in the project life-cycle, the project manager shall prepare a responsibility/authority matrix that identifies a responsible individual for each project work task.	16-2
	Each Federal project manager shall prepare formal Memoranda of Understanding with management, user and contractor project manager(s) as early as possible, but prior to requesting CD-2.	16-3
	Each memoranda shall be timed, dated and signed by each involved individual.	16-3
	A project manager shall prepare and issue a project charter which defines the project and the job descriptions for all team members.	16-3
Section 17	Additional reporting requirements, if any, shall be determined by the DOE Federal project manager and the responsible DOE program office. Agreements will be documented in the Project Execution Plan.	17-7
	The project manager shall submit quarterly project status reports using the data elements, analyses and narrative information specified above.	17-8
	DOE program managers shall provide project status reports to the Acquisition Executive on a quarterly basis, including their assessment of project performance as required by the Acquisition Executive.	17-8
	When projects are performed under contract or when they involve significant procurement activity, particular attention must be given to archiving financial records.	17-8
	The project manager shall prepare or have prepared component and system test procedures, perform or witness the tests, document the test results, and complete or have completed all required corrective actions.	18-2
	Turnover of a completed project shall include the turnover of appropriate project documentation/records to the user.	18-3
	At completion, the project shall prepare and distribute a lessons learned document.	18-3
Section 18	A project manager shall perform or assure these activities are performed prior to turnover, project closeout, and personnel reassignment.	18-3
	The project shall consider, plan, and work towards ORR/RA activities throughout the project lifetime. In addition, the project shall initiate all actions and activities that will improve or accelerate the ORR/RA process.	18-4
Section 19	To ensure orderly closeout of a project, the project shall, at the direction of DOE, and once all costs are incurred against the project with invoices and contracts closed, prepare a project closeout report following the approval of Critical Decision 4, Approve Start of Operations or Project Closeout.	19-2

APPENDIX B

REFERENCES

The Directive system is the means by which DOE policies, requirements, and responsibilities are developed and communicated throughout the DOE complex.

Department of Energy Directives include policies, orders, notices, manuals, and guides, that are intended to direct, guide, inform, and instruct employees in the performance of their jobs, and enable them to work effectively within the Department and with agencies, contractors, and the public.

The current list of directives is updated monthly and is available on the Internet in both .pdf and .wpd formats. The list can be accessed from the Explorer website at URL: <http://www.explorer.doe.gov.1776/htmls/regs/doe/previous/html>.

DOE Current Directives—new series, old series, headquarters, secretarial notices.

DOE Draft Directives—all DOE draft directives for review and comment.

DOE Archived Directives—DOE archived directives.

Supplemental Directives—Field directives.

DOE Directives Reference Tools—current checklist of DOE directives, DOE glossary, baseline directives by contract, crosswalk, and directives identified for sunset review.

Other Useful Information—Federal Register, DOE (see page 12-9 of the manual), CFRs, DOE forms, secretarial delegation of authority, etc.

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DOE P 413.1, Program and Project Management Policy for the Planning, Programming, Budgeting, and Acquisition of Capital Assets, 6-10-00

DOE O 413.X, (Draft) Program and Project Management for the Acquisition of Capital Assets

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DOE O 414.1A, Quality Assurance (and implementing Guide)

DOE O 420.1, Change 2, Facility Safety (and implementing Guide)

DOE G 420.1-1, Section 2, Nonreactor Nuclear Safety Design Criteria and Explosives Safety Criteria Guide for Use with DOE O 420.1, Facility Safety

DOE O 420.2, Change 1, Safety of Accelerator Facilities

DOE O 425.1A, Startup and Restart of Nuclear Facilities

DOE O 430.1, Life Cycle Asset Management

DOE G 430.1-1, Cost Estimating Guide

DOE G 430.1-2, Implementation Guide for Surveillance and Maintenance during Facility Transition and Disposition

DOE G 430.1-3, Deactivation Implementation Guide

DOE G 430.1-4, Decommissioning Implementation Guide

DOE O 430.1A, Life Cycle Asset Management, 10-14-98

DOE O 435.1, Radioactive Waste Management (and implementing Manual and Guides)

DOE O 440.1A, Worker Protection Management for Federal and Contractor Employees (and implementing Guides)

DOE P 441.1, DOE Radiological Health and Safety Policy (and implementing Guides)

DOE P 450.1, Environmental Safety and Health Policy for Department of Energy Complex

DOE P 450.2A, Identifying, Implementing and Complying with ES&H Requirements

DOE P 450.3, Authorizing Use of the Necessary and Sufficient Process for Standards-Based ES&H (and implementing Manual and Guides)

DOE P 450.4, Safety Management System Policy (and implementing Guide)

DOE G 450.4-1A, Integrated Safety Management System Guide for use with DOE P 450.4, Safety Management System and DEAR Safety Management System Control clauses

DOE P 450.5, Line Environment, Safety and Health Oversight

DOE P 450.6, Secretarial Policy Statement Environmental Safety and Health

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DOE O 5480.30, Nuclear Reactor Safety Design Criteria

DOE O 5480.4, Environmental Protection, Safety and Health Protection Standards

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DOE-HDBK-3012-96, Guide to Good Practices for Operational Readiness Reviews, Team Leaders Guide

DOE-HDBK-3027-99, Integrated Safety Management System (ISMS) Verification Team Leader's Handbook

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Title 31 — Money and Finance: Treasury

Title 40 — Protection of the Environment

Title 43 — Public Lands: Interior

Title 48 — Federal Acquisition Regulations System

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Title 50 — Wild Life and Fisheries

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OMB Circular No. A-131, Value Engineering 5-21-98

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Energy Policy Act, Pub. L. 102-486, Section 305

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Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Pub. L. No 96-510. 42 USC §9601 et seq. (including Superfund Amendments and Reauthorization Act of 1986) and implementing regulations)

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Federal Advisory Committee Act (FACA). Pub. L. No. 92-468

Federal Water Pollution Control Act (Clean Water Act). Pub. L. No 95-217. 33 USC §1251, et. seq., as amended and implementing regulations

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APPENDIX

ACRONYMS

ASME	American Society of Mechanical Engineers
ACWP	Actual Cost of Work Performed
ALARA	As Low As Reasonably Achievable
AE	Acquisition Executive
ANSI	American National Standards Institute
BAC	Budget at Completion
BCWP	Budgeted Cost of Work Performed
CADD	Computer Aided Drafting and Design
BCWS	Budgeted Cost of Work Scheduled
BR	Budget Request
CAA	Clean Air Act
BY	Budget Year
CAM	Cost Account Manager
CBB	Contract Budget Baseline
CDR	Conceptual Design Report
CCB	Change Control Board
CD	Critical Decision
CDR	Conceptual Design Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFO	Chief Financial Officer

CFR	Code of Federal Regulations
COO	Chief Operating Officer
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
CPDS	Construction Project Data Sheet
CRD	Contractor Requirements Document
CPI	Cost Performance Index
CV	Cost Variance
CWA	Clean Water Act
CX	Categorical Exclusion
D&D	Decontamination and Decommissioning
DEAR	Department of Energy Acquisition Regulation
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOE-MR	U.S. Department of Energy Management Reserve
DNFSB	Defense Nuclear Facilities Safety Board
EA	Environmental Assessment
EAC	Estimate at Completion
EE/CA	Environmental Evaluation/Compliance Assessment
EIR	External Independent Review
EIS	Environmental Impact Statement
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ESAAB	Energy Systems Acquisition Advisory Board

ES&H	.....	Environmental Safety and Health
ETC	.....	Estimate to Complete
EVMS	.....	Earned Value Management System
F&Rs	.....	Functions and Requirements
FAR	.....	Federal Acquisition Regulations
FFCA	.....	Federal Facilities Compliance Act
FM	.....	DOE Office of Field Management
FPM	.....	Federal (DOE) Project Management
EVMS	.....	Earned Value Management System
FONSI	.....	Finding of No Significant Impact
FSAR	.....	Final Safety Analysis Report
GAO	.....	Geeral Accounting Office
GPG	.....	Good Practice Guide
GPP	.....	General Plant Project
GPRA	.....	Government Performance and Results Act
HAD	.....	Hazard Assessment Documentation
HAR	.....	Hazards Analysis Report
HR	.....	Human Resources
HQ	.....	Headquarters
IFC	.....	Issued for Construction
IFD	.....	Issued for Design
ICE	.....	Independent Cost Estimate
ICO	.....	Interface Control Document
IIR	.....	Internal Independent Review
IMS	.....	Integrated Master Schedule

IPABS	Internal Planning, Accountability, and Budget System
IPL	Integrated Project Listing
IPR	Independent Project Review
IPS	Integrated Project Schedule
IPT	Integrated Project Team
ISM	Integration Safety Management
ISMS	Integrated Safety Management System
ISO	International Standards Organization
IT	Information Technology
JMN	Justification of Mission Need
LCAM	Life Cycle Asset Management
LLP	Long-Lead Procurement
LPSO	Lead Program Secretarial Office
M&I	Management and Integration
M&O	Management and Operating
MEM	Management Evaluation Matrix
MS	Major System project
NARA	National Archives and Records Administration
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
NPDES	National Pollution Discharge Elimination System
NQA-1	American Society of Mechanical Engineers/National Quality Assurance Standard - 1
NRC	National Research Council

OBS	Organizational Breakdown Structure
OECM	Office of Engineering and Construction Management
OMB	Office of Management and Budget
OPC	Other Project Costs
OPEX	Operating/Expense
ORR	Operational Readiness Review
OSHA	Occupational Safety and Health Administration
P&ID	Process and Instrumentation Diagram
PBC	Performance-Based Contract
PBS	Project Baseline Summary
PCR	Project Closeout Report
PDRI	Project Rating Definition Index
PDS	Project Data Sheet
PED	Project Engineering and Design
PEP	Project Execution Plan
PERT	Program Evaluation and Review Technique
PI	Performance Indicator
PM	Project Management
PMB	Performance Measurement Baseline
PMBOK	Project Management Book of Knowledge
PMCDP	Program/Project Management Career Development Program
PMP	Project Management Plan
PSAR	Preliminary Safety Analysis Report
PSO	Program Secretarial Officer
QA	Quality Assurance

QAP	Quality Assurance Plan
QAPP	Quality Assurance Program Plan
QSL	Qualified Seller List
RA	Readiness Assessment
R&D	Research and Development
RAM	Responsibility Assignment Matrix
RCRA	Resource Conservation and Recovery Act
RFP	Request for Proposal
RFQ	Request for Quotations
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RSE	Remedial Site Evaluation
ROM	Rough Order of Magnitude
SAE	Secretarial Acquisition Executive
SAR	Safety Analysis Report
SB	Small Business
SB/PP	Statement of Basis/Proposed Plan
SDB	Small Disadvantaged Business
SE	Systems Engineering
SEB	Source Evaluation Board
SES	Senior Executive Service
SOW	Scope of Work
SPI	Schedule Performance Index
SV	Schedule Variance
T&PRA	Technical and Programmatic Risk Analysis

TEC	Total Estimated Cost (Capital)
TPC	Total Project Cost
TPCE	Total Project Cost Estimate
TSCA	Toxic Substances Control Act
TTR	Technical Task Report
VAR	Variance Analysis Report
VE	Value Engineering
WBS	Work Breakdown Structure