
Surplus Facilities Management Program (SFMP)
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**NIAGARA FALLS STORAGE SITE
PROJECT MANAGEMENT
INFORMATION SUPPLEMENT**

September 1985



Prepared by
U.S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS OFFICE

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FOREWORD

This document supplements Report ORO-845, Rev. 1, Niagara Falls Storage Site Project Management Plan (April 1985) in providing detail schedules, more extensive activities descriptions, cost information details, and synopses of administrative procedures essential to the management of the project. The information contained herein does not alter the broad project approach outlined in ORO-845, Rev. 1. The information presented herein is necessary detail which may require more frequent revisions and/or supplementations than required for ORO-845, Rev. 1.

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SECTION A
PROJECT MANAGEMENT CONTROL SYSTEM

PROJECT MANAGEMENT CONTROL SYSTEM

The project management control system (PMCS) utilized on the Niagara Falls Storage Site (NFSS) project is an integrated scope, schedule, and cost control system that identifies responsibilities and interfaces and ensures that all project personnel are fully familiar with the system through training, policies, and procedures. The basic objectives of this system are to:

- o Establish a formal project plan for the execution of the contract within the established work breakdown structure (WBS)
- o Monitor and measure cost and schedule performance against the project plan
- o Analyze variations from the project plan, forecast their impact, recommend corrective action, and modify the plan as mutually agreed upon by DOE and Bechtel National, Inc.

Figure A-1, Project Management Control System, illustrates elements of the system, their interrelationship, and the related flow of information. The system has been developed to comply with the criteria for contractors set forth in DOE Order 2250.1A, "Cost and Schedule Control Systems Criteria for Contract Performance Measurement."

Initial action for implementation of the PMCS is the preparation of the project plan or its equivalent. The DOE-defined scope of work provides the basis for the contract from which the project plan is developed. The plan integrates the scope of work, project organization, schedule of accomplishments, and cost of the project. Its basic elements are:

- o Technical scope of work
- o Scope of services statement

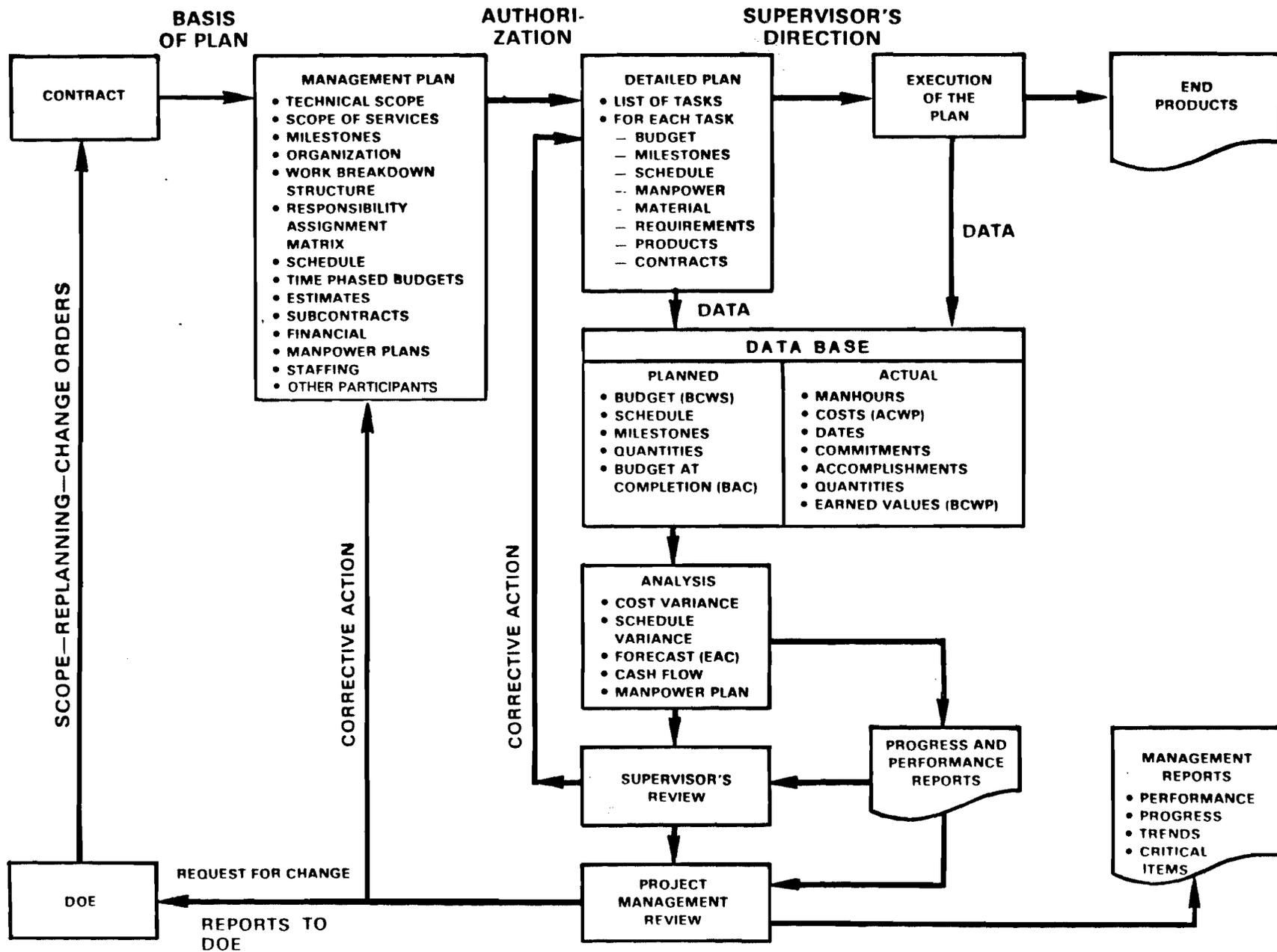


FIGURE A-1 PROJECT MANAGEMENT CONTROL SYSTEM

- o Major milestones
- o Project organization
- o Work breakdown structure
- o Responsibility assignment matrix
- o Project milestone schedule
- o Total estimated cost
- o Planned delivery of major items
- o Manpower and staffing
- o Project cash flow

The scope of work defines all work required to meet the contract. This work is organized into a WBS framework as initially outlined by DOE in its project summary work breakdown structure (PSWBS).

The WBS is used by all NFSS project participants, providing a method for systematic management and coordination of the project work efforts. The WBS identifies the work elements necessary to accomplish the project objectives, establishing a formal structure for organizing, planning, and scheduling work. Under this structure, budget, schedule, and technical performance are integrated, thereby facilitating management analysis and reporting at various levels of the project.

Level 1 of the WBS comprises SFMP and FUSRAP. Level 2 comprises the NFSS project, identified numerically as 115 for the FUSRAP portions of the project and as 202 for the SFMP activities. Level 3 of the WBS consists of the various work components of the project, such as engineering and remedial actions. These components are distinguished alphanumerically (e.g., 201A, 115A) for SFMP and FUSRAP. Level 4 identifies specific work packages performed as part of Level 3 components. For example, any specific work package performed under Level 3 component 201G, Remedial Action, would be a Level 4 SFMP activity.

A responsibility assignment matrix (RAM) is developed to identify the project organizations involved with specific elements of the WBS. This matrix will be used to integrate and coordinate

organizational groups, work descriptions, cost estimates, and schedules. It identifies the individuals responsible for executing specific WBS elements such as major subcontracts within the defined budgets and schedules. The RAM identifies the cost account reporting levels established for the contract and cross-references these levels to the appropriate WBS elements. The RAM meets the following general requirements:

- o Identification of the WBS elements where cost accounts will be established and the higher-level (Level 2 and 3) WBS elements used for reporting the costs, schedule, and cost/schedule performance
- o Identification of the individual who will be responsible for managing each cost account
- o Correlation of items in the statement of work with WBS elements and organizational elements with cost accumulation codes

Work authorizations for performance of the work are issued to the responsible manager. As the work is performed, cost and schedule data are accumulated including:

- o Jobhours (by work package, cost account, WBS, and project organization)
- o Direct and indirect labor costs
- o Work accomplishment (earned value, produced or installed quantities, and budgeted cost of work performed)
- o Equipment and material costs
- o Subcontract costs

At the end of each accounting month, work accomplishment is compared with cost and schedule budgets and variances are identified. Schedule variances occur when the budgeted cost of work performed (BCWP) varies from the budgeted cost of work scheduled (BCWS). Cost variance occurs when BCWP varies from the actual cost of work performed (ACWP). If the variances exceed established thresholds, a variance analysis report is initiated. This report will describe the specific cause of the variance, citing specific cost accounts, identifying any cost or schedule impacts, and specifying appropriate corrective action.

Monthly progress and management reports are prepared consistent with project requirements. Reports include a summary of activities, cost and schedule management data, variance identification and applicable analysis, and an overall project management assessment of project progress and performance.

SECTION B

DETAILED ORGANIZATION CHART

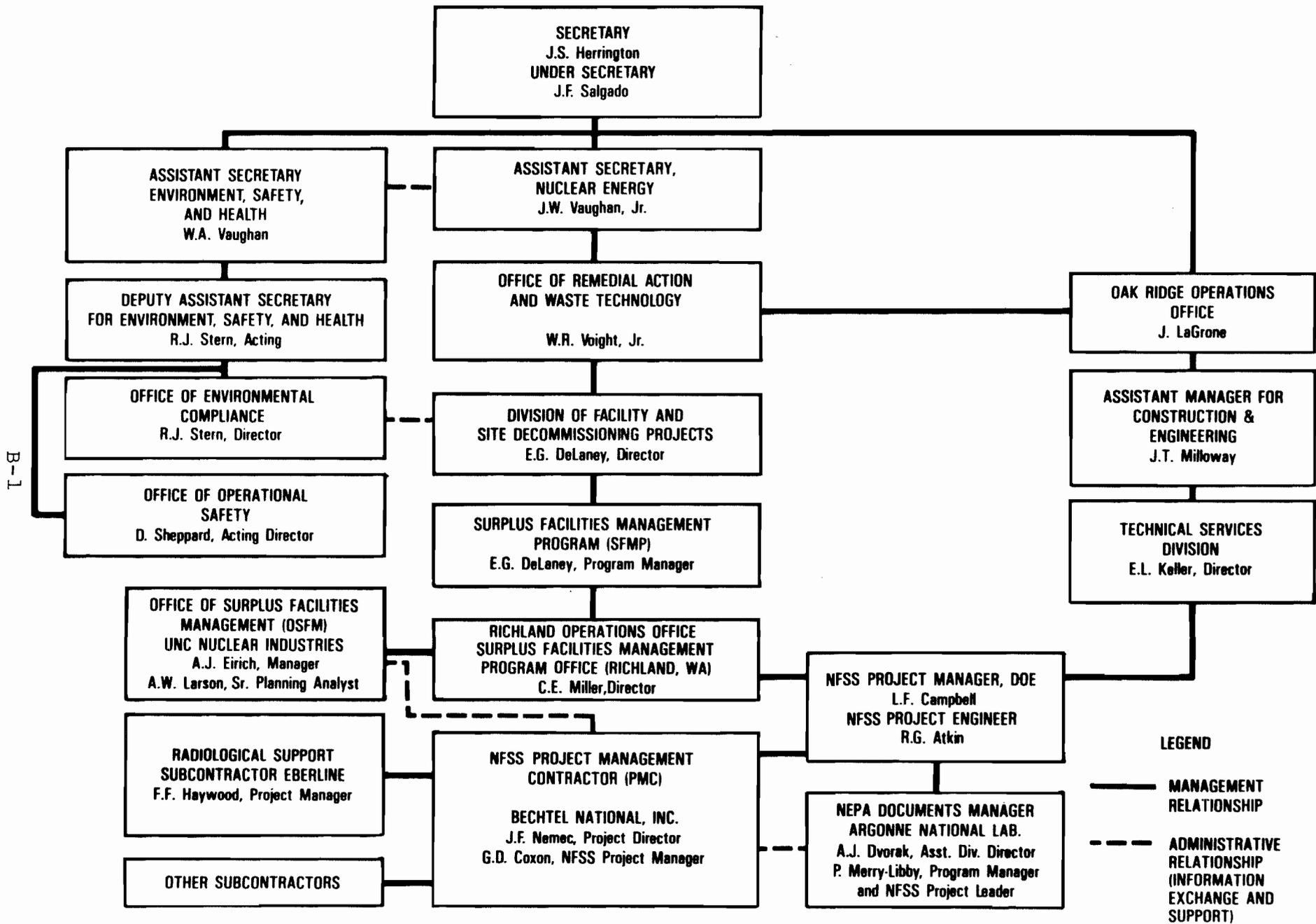


FIGURE B-1 ORGANIZATION CHART FOR THE NIAGARA FALLS STORAGE SITE

SECTION C

PROJECT DOCUMENTS

INTRODUCTION

This section provides brief descriptions of those project documents important to the management of the NFSS project. Each document listed provides specific instructions or procedures to follow when project actions pertain to the specific areas covered by the documents. The summary of each document indicates the types of organization, procedures, and guidance contained within the documents.

REMEDIAL ENGINEERING PROCEDURES MANUAL

This manual defines the organization and responsibilities of the Remedial Engineering Department. It describes the Radwaste Management Group, the Decontamination and Dismantling Group, the Environmental Engineering Group, and the Facilities Engineering Group and outlines the responsibilities of each.

The Planning and Control section of the document describes the preparation of scoping documents, coordination activities within Remedial Engineering and with other project groups, and the procedures for Quality Assurance Assessments and Plans.

The Evaluation and Design section of the manual describes the requirements for initiation, development, and approval of reports. This section also defines the procedures to be followed when performing preliminary engineering, when performing design engineering, and when support is provided to Field Construction personnel by Remedial Engineering personnel during remedial action activities.

The document includes appendices on: The Treatment of Radioactive Materials Resulting from Decontamination Operations; Packaging and Transporting Radioactive Wastes; Disposal of Radioactive Wastes; Decontamination and Dismantling of Contaminated Soil Sites; Environmental Engineering Remedial Site Data; and Radioactive Waste Disposal Site Environmental Selection.

PROJECT SAFETY AND HEALTH MANUAL

This document provides guidelines for implementing a project safety and health program that complies with statutory regulations and DOE requirements. Program objectives are to eliminate personal injury, minimize equipment and property damage, and prevent recurrences.

The document defines the scope of the program and describes the project organization and responsibilities for health and safety. It describes in detail the components of the Health Safety Program, including: enforcement policy, safety, training, review, fire safety, the medical program, categories of accident investigation, accident investigation and reporting, and the safety inspection program.

The document also lists the regulations, standards, and codes applicable to the Safety and Health Program.

RADIOLOGICAL PROTECTION PROGRAM MANUAL

Volume I of this document establishes the day-to-day procedures for radiological protection at project sites. The manual details organization and responsibilities, defines the types of radiological hazards at various sites, details the remedial action criteria, and the steps involved in remedial action. Volume I also defines limits for external and internal exposures to radiation and methods for controlling these exposures. It defines procedures for controlling access to radiation areas and the protective clothing and equipment necessary for work in such areas. It describes responsibilities for safe shipment of radioactive materials and covers decontamination procedures. Volume I also describes equipment calibration procedures, training requirements, and requirements for records, reports, audits, and reviews.

Volume II provides detailed descriptions of procedures for taking and analyzing soil, water, airborne gas, and airborne particulate samples. Volume II also covers instrument operation and calibration and details the procedures to be followed for radiological safety in the field (e.g., use of protective equipment). The final section of Volume II covers Quality Control procedures to ensure quality and accuracy.

PROCUREMENT PROCEDURES MANUAL

This manual describes the policies and procedures to be followed to comply with DOE and Bechtel National, Inc. (BNI) procurement requirements and to meet sound business practices and quality assurance standards.

The manual defines organization and responsibilities, contract requirements, DOE consent requirements, and procedures for the evaluation and selection of suppliers. It also describes procedures for preparing specifications and statements of work, processing purchase memoranda and material requisitions, and distributing and controlling procurement documents.

The manual contains sections on proposal and bid controls, preaward meetings, procurement files, taxes, and cost and schedule reporting by vendors and subcontractors. It defines the limits of authority for recommending and approving procurement commitments.

In addition, the manual describes the preparation, processing, content, evaluation, and administration of purchase orders and revisions. It describes the BNI policy for utilization of small businesses and businesses owned and controlled by socially and economically disadvantaged individuals in obtaining goods and subcontract services. The terms and procedures for terminating a subcontract are also described.

The manual specifies the documents to be included in all bid invitations. It defines the requirements for the preparation, review, and control of bid evaluations. It provides detailed instructions governing the preparation of subcontracts and subsequent amendments. Procedures for administering contracts are also outlined.

FIELD CONSTRUCTION MANUAL

The Field Construction Manual describes the Field Construction Department organization, responsibilities, and operating procedures.

The manual describes preconstruction activities, personnel, and responsibilities and covers such topics as drawings, technical specifications, and contract documents. It describes travel and expense reporting procedures and the procedures for establishing field offices.

The manual details various responsibilities and activities during the construction phase of a project, from preconstruction meetings to oversight of subcontractors to field change orders.

A major section of the manual covers quality control (inspection) procedures and requirements, documentation, and the nonconformance process.

The final section of the manual details procedures for work close-out, including inspection, final report, and close-out of the field office.

DESIGN CRITERIA AND DESIGN BASES

The Design Criteria document is a generic document that describes the regulations, standards, and codes applicable to remedial action activities associated with project sites. Design criteria are periodically revised, as appropriate, to reflect new practices, additional information or regulations, and revision of standards.

As a specific scope of work for a site is determined during the characterization and preliminary engineering phases of projects, design bases for the projects will be developed. The design basis for a project contains specific information about the site, the requirements that must be met for the proposed remedial actions, and the governing project documents, codes, regulations, and criteria.

PROJECT PROCEDURES MANUAL

The Project Procedures manual establishes the procedures for the interfaces between DOE-Oak Ridge Operations and BNI. The manual provides detailed instructions regarding accounting, administration and communications (including document control), construction, cost control, and contracting/subcontracting. In addition, the manual describes emergency planning and reporting procedures, field operations, management organizations, and office services.

PROJECT QUALITY ASSURANCE MANUAL

A DOE plan for Quality Assurance has been established and put into effect for the NFSS project. The plan complies with DOE Order OR-5700.6. The plan applies to BNI, architect-engineers, construction and service subcontractors, and other subcontractors as may be identified.

The Project Quality Assurance Manual complies with the plan for Quality Assurance and outlines requirements for the Project Quality Assurance Program, including the areas and tasks considered an integral part of the Quality Assurance Program and basic requirements. The Project Quality Assurance Manual describes the requirements necessary for quality assurance program planning and control, program implementation, and quality management and control.

FIELD OPERATIONS MANUAL

The Field Operations Manual provides policy, administrative guidance and operating instructions to personnel engaged in day-to-day maintenance and operations activities at sites managed by Bechtel for DOE. The manual is a ready reference for uniformity and standardization of field operations. The scope of the manual is limited to guidance for field operations personnel involved in maintenance, operations, safety, site management, and security activities at DOE-owned sites assigned to Bechtel under the Formerly Utilized Sites Remedial Action Program (FUSRAP) and the Surplus Facilities Management Program (SFMP). The facilities managed include buildings, grounds, structures, and utilities and the maintenance and operation of assigned equipment. Routine day-to-day activities and emergencies are addressed. Remedial action and construction guidance are found in other project documents.

PROJECT ENGINEERING PROCEDURES MANUAL

The Project Engineering Procedures Manual is a collection of individual procedures which define requirements and methods for performing segments of the engineering work of the project. The document governs the preparation of design drawings, specifications, procedures, and other engineering documents included in the Subcontract bid packages prepared on the project. Included in the document are specific descriptions pertaining to project engineering organization, planning and control, design execution, engineering administration, and engineering procurement functions.

SECTION D
NFSS ACTIVITIES AND COSTS
FY 1985-86

NFSS ACTIVITIES AND COSTS
FY 1985-86

The activities currently planned for NFSS in FY 1985-86 are listed on the following pages. The activities are presented by WBS, with B/A and B/O figures given for each Level 3 WBS activity.

NIAGARA FALLS STORAGE SITE
 TOTAL PROJECT COST
 CURRENT SCOPE OF WORK
 (\$ in thousands)

Funding Source	Previous Project Management Plan 4/84	Current Project Management Plan 4/85
FUSRAP		
-115	\$15,143	\$20,759 ^a
-191	1,769	2,583
SFMP	7,130	8,728
AFRIMET	<u>6,300</u>	<u>6,300</u>
Total	\$30,342	\$38,370

^aExcludes \$1,000,000 included in ESAPP Rev. 1 for limited road repair and decontamination of the warehouse on vicinity property "B".

FUSRAP
 NIAGARA FALLS STORAGE SITE
 PROJECT PLAN COST SUMMARY
 (\$ in thousands)

Task/Title	Prior Years Cost		FY 1985		FY 1986		FY 1987		Total	
	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O
115 Niagara Falls Storage Site										
A. Site Characterization	---	---	108	108	---	---	---	---	---	---
C. NEPA Process (ANL)	---	---	181	166	---	---	---	---	---	---
D. Design Engineering	---	---	379	379	160	160	---	---	---	---
G. Remedial Action	---	---	4,808	5,510	1,910 ^a	2,618 ^a	---	---	---	---
I. Surveillance and Maintenance ^b	---	---	203	203	---	---	---	---	---	---
J. Final Report ^c	---	---	49	49	130	130	150	150	---	---
Subtotal	12,681	11,286	5,728	6,415	2,200	2,908	150	150	20,759	20,759
191 General Project Support	1,516	1,516	604	604	443	443	20	20	2,583	2,583
Project Total	14,197	12,802	6,332	7,019	2,643	3,351	170	170	23,342	23,342

^aExcludes \$1,000,000 included in ESAPP Rev. 1 for limited road repair and decontamination of the warehouse on vicinity property "B".

^bRadiological monitoring by Mound Laboratories.

^cThe final report will address on-site and off-site activities. A funding split between FUSRAP and SFMP will be considered.

SFMP
 NIAGARA FALLS STORAGE SITE
 PROJECT PLAN COST SUMMARY
 (\$ in thousands)

Task/Title	Prior Years Cost		FY 1985		FY 1986		Total	
	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O
202 Niagara Falls Storage Site								
A. Characterization	108	108	---	---	---	---	108	108
B. Preliminary Engineering	483	483	---	---	---	---	483	483
C. NEPA Process (ANL)	169	169	---	---	---	---	169	169
D. Design Engineering	440	440	---	---	---	---	440	440
G. Remedial Action	3,685	3,275	1,575	1,725	---	260	5,260	5,260
I. Surveillance and Maintenance ^a	813	813	185	185	235	235	1,233	1,233
J. Final Report ^b	---	---	---	---	---	---	---	---
K. General Project Support	<u>474</u>	<u>474</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>484</u>	<u>484</u>
Subtotal	6,172	5,762	1,765	1,915	240	500	8,177	8,177
Capital Equipment	<u>551</u>	<u>551</u>	---	---	---	---	<u>551</u>	<u>551</u>
Project Total	6,723	6,313	1,765	1,915	240	500	8,728	8,728

^aRadiological monitoring by Mound Laboratories; site surveillance and maintenance by Bechtel National, Inc. Site surveillance and maintenance beyond FY 86 excluded.

^bFunding for final report is included in WBS 115 (FUSRAP).

AFRIMET
 NIAGARA FALLS STORAGE SITE
 PROJECT PLAN COST SUMMARY
 (\$ in thousands)

Task/Title	Prior Years		FY 1985		FY 1986		Total	
	Costs		B/A	B/O	B/A	B/O	B/A	B/O
	B/A	B/O						
301 Niagara Falls Storage Site								
A. Site Characterization	---	---	---	---	---	---	---	---
D. Design Engineering	---	---	---	---	---	---	---	---
G. Remedial Action	---	---	300	1,288	---	---	---	---
K. General Project Support	---	---	---	---	---	---	---	---
Project Total	6,000	5,012	300	1,288	---	---	6,300	6,300

