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Revision 2**

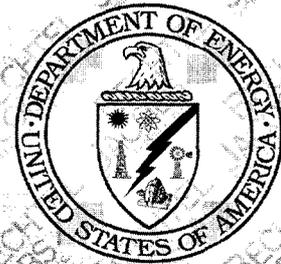
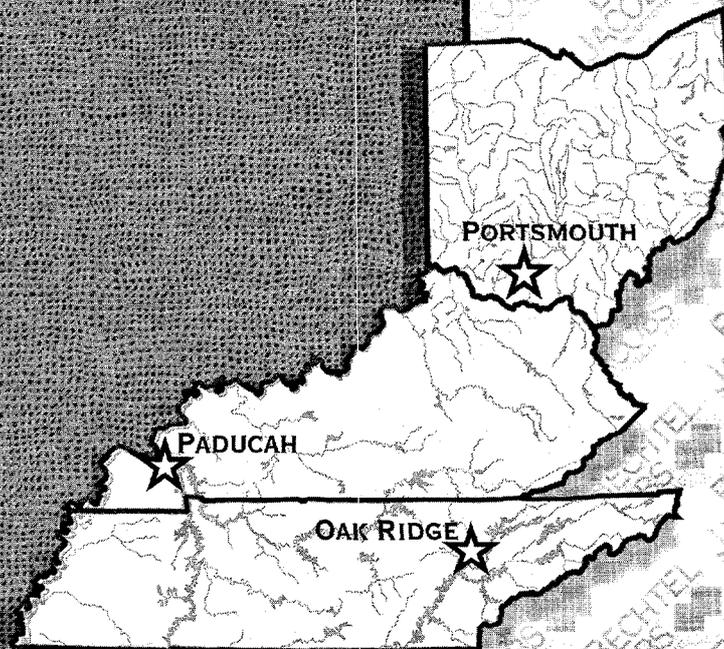
**ENVIRONMENTAL MANAGEMENT  
& ENRICHMENT FACILITIES**

**MANAGEMENT AND INTEGRATION CONTRACT**

**INTEGRATED SAFETY  
MANAGEMENT SYSTEM**

**DESCRIPTION**

**SEPTEMBER 1999**



MANAGED BY  
BECHTEL JACOBS COMPANY LLC  
FOR THE UNITED STATES  
DEPARTMENT OF ENERGY

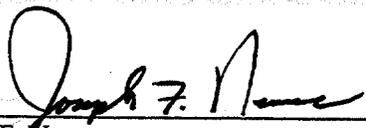
**INTEGRATED SAFETY  
MANAGEMENT SYSTEM  
DESCRIPTION**

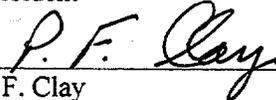
**Date Issued—September 1999**

**Prepared for the  
U.S. Department of Energy  
Office of Environmental Management**

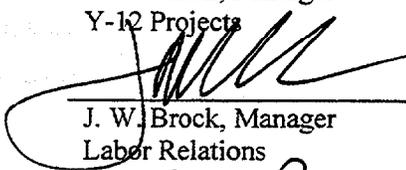
**BECHTEL JACOBS COMPANY LLC  
managing the  
Environmental Management Activities at the  
East Tennessee Technology Park  
Oak Ridge Y-12 Plant Oak Ridge National Laboratory  
Paducah Gaseous Diffusion Plant Portsmouth Gaseous Diffusion Plant  
under contract DE-AC05-98OR22700  
for the  
U.S. DEPARTMENT OF ENERGY**

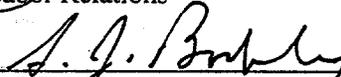
The senior managers of Bechtel Jacobs Company LLC are committed to ES&H excellence through the implementation of Integrated Safety Management.

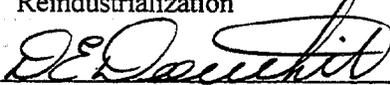
  
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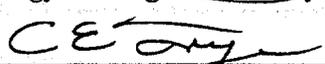
  
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G. L. Dover, Manager  
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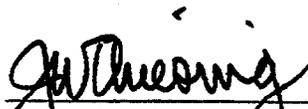
  
J. H. Dunkirk, Manager  
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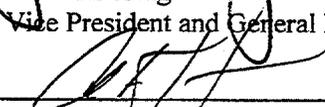
  
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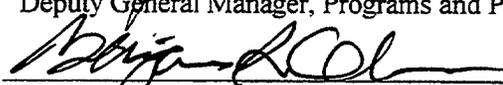
  
R. D. Ferguson, Manager  
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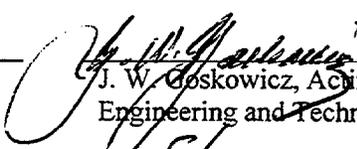
  
C. E. Frye, Manager  
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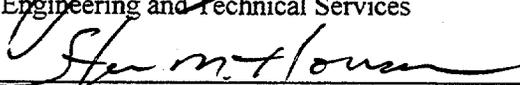
  
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EMWMF Projects

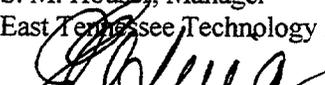
  
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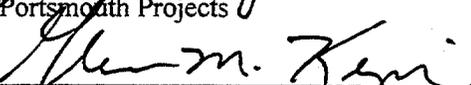
  
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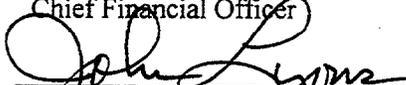
  
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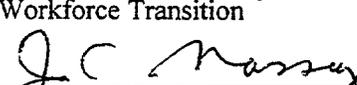
  
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S. M. Houser, Manager  
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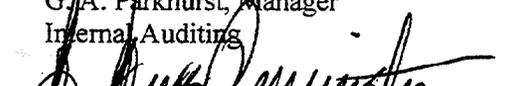
  
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Chief Financial Officer

  
J. E. Lyons, Manager  
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J. F. Schlatter, Manager  
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# CONTENTS

	<b>Page</b>
<b>FIGURES.....</b>	<b>v</b>
<b>ACRONYMS.....</b>	<b>vii</b>
<b>INTRODUCTION .....</b>	<b>1</b>
<b>SCOPE.....</b>	<b>2</b>
<b>1. COMMITMENT .....</b>	<b>3</b>
<b>2. THE BECHTEL JACOBS COMPANY INTEGRATED SAFETY MANAGEMENT SYSTEM.....</b>	<b>7</b>
<b>3. BECHTEL JACOBS COMPANY ORGANIZATION .....</b>	<b>19</b>
<b>4. APPROACH.....</b>	<b>27</b>
<b>5. AUTHORIZATION AGREEMENTS.....</b>	<b>35</b>
<b>6. ISMS MILESTONES .....</b>	<b>37</b>
<b>7. ES&amp;H PERFORMANCE EXPECTATIONS .....</b>	<b>39</b>

## FIGURES

<b>Figure</b>	<b>Title</b>	<b>Page</b>
1.1	We are committed to achieving Zero Accident Performance .....	5
2.1	We use four levels of ISMS implementation .....	7
2.2	We use the five core functions and the seven guiding principles to perform work safely.....	8
2.3	We use a systematic approach to flow down work scope requirements from the program level to the activity level.....	10
2.4	We use a variety of tools to conduct hazard analysis and implement controls at the program, project, task, and activity levels.....	12
3.1	Our workers are actively involved in the integration of safety into the work.....	19
3.2	Our organization is built around the project manager.....	20
3.3	Functions and responsibilities of the Oak Ridge M&I Organization.....	21
3.4	The Bechtel Jacobs Company organizational framework for implementing ISMS.....	24
3.5	Model project organization .....	25
4.1	Each of our ES&H organization levels has individual areas of responsibility. ....	27
4.2	Flowdown of ES&H requirements to subcontractors.....	29
4.3	Under ISMS, the subcontract formation team has a primary role in the subcontractor selection process.....	31
4.4	Project team oversight of subcontract work execution and closeout .....	32
4.5	Our ES&H and subcontractor personnel work together to implement ES&H requirements .....	33
6.1	Subcontracted work.....	37

## ACRONYMS

COR	Contracting Officer's Representative
DOE	Department of Energy
DFF&O	Director's Final Findings and Orders
EF	Enrichment Facilities
EM	Environmental Management
ES&H	environment, safety, and health
ETTP	East Tennessee Technology Park
ISMS	Integrated Safety Management System
LMER	Lockheed Martin Energy Research
LMES	Lockheed Martin Energy Systems
LWC	lost workday case
M&I	management and integration
M&O	management and operations
ORO	Oak Ridge Operations
OSHA	Occupational Safety and Health Administration
OSR	operational safety requirement
PAAA	Price-Anderson Amendments Act
QA	quality assurance
RFP	Request for Proposal
RII	recordable injury and illness
S/RID	Standards/Requirements Identification Document
STR	Subcontract Technical Representative
TSR	technical safety requirement
USEC	United States Enrichment Corporation
USQ	unreviewed safety question
WSS	Work Smart Standards

## INTRODUCTION

This *Integrated Safety Management System (ISMS) Description* reflects the Bechtel Jacobs Company LLC's approach for integrating safety into all aspects of work planning and execution. A companion document, the ISMS Supplement, serves as a road map from the ISMS description to the ISMS implementing mechanisms.

The Bechtel Jacobs Company management and integration (M&I) contract approach poses unique challenges as well as opportunities for environment, safety, and health (ES&H). Systems and processes are developed under the Bechtel Jacobs Company ISMS to ensure that

- ES&H issues and site-wide activities and initiatives are effectively identified, coordinated, and integrated;
- work processes and management systems used to accomplish work adequately integrate ES&H;
- expectations and requirements are included in work directives, agreements, and subcontracts and are properly interpreted, integrated, and consistently applied;
- all workers, managers, subcontractors, and service providers are fully aware of their roles, responsibilities, and authorities for ES&H and are held accountable through formal mechanisms;
- ES&H risks and vulnerabilities are identified, communicated, and appropriately incorporated into the budget planning process;
- workers are meaningfully involved in ES&H processes to better ensure that all job-specific hazards are identified and appropriate controls are implemented;

- workers are involved in the work control planning process;
- work is coordinated, as appropriate, with other contractors to preclude adverse synergistic impacts; and
- lessons learned from previous activities are appropriately included in the planning for future similar work.

The ISMS description embodies our approach to transitioning from a management and operations (M&O) culture to an M&I culture while maintaining a strong ES&H posture without compromise. This document is organized as follows.

- Section 1 discusses our policy and commitment to integrated safety management.
- Section 2 identifies our approach for addressing the core functions and guiding principles of integrated safety management.
- Section 3 provides details on our management organization and associated responsibilities.
- Section 4 addresses our approach for the management of subcontractors.
- Section 5 addresses authorization agreements.
- Section 6 provides our ISMS milestones.
- Section 7 provides our FY 2000 ES&H performance expectations.

The ISMS description is submitted in accordance with the requirements of contract DE-AC05-98OR22700.

## SCOPE

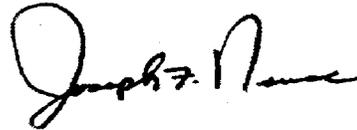
Bechtel Jacobs Company LLC performs Environmental Management (EM) and Enrichment Facilities (EF) work in accordance with the terms and conditions of the M&I prime contract with the U.S. Department of Energy (DOE). This work scope includes activities at the East Tennessee Technology Park (ETTP), the Oak Ridge National Laboratory, the Oak Ridge Y-12 Plant, the Paducah Gaseous Diffusion Plant, the Portsmouth Gaseous Diffusion Plant, and at various off-site locations in the Oak Ridge area. Bechtel Jacobs Company is responsible for ensuring compliance with all applicable laws, regulations, and other requirements as defined in the M&I contract. Bechtel Jacobs Company will also ensure compliance with authorization basis documents and other regulatory agreements.

As described herein, ISMS is applicable to all work performed under the M&I contract whether the work is self-performed or subcontracted. Because 90% of the EM work will eventually be subcontracted, this ISMS describes how we will ensure that our employees and subcontractors perform work safely. The Bechtel Jacobs Company ISMS is not applicable to work performed by other DOE prime contractors, reindustrialization lessees, or other site tenants. However, Bechtel Jacobs Company will communicate M&I activities to other residents to ensure coordination of safe work activities.

## 1. COMMITMENT

### **OUR SAFETY CULTURE**

*The foundation upon which our safety culture is built is our commitment to DO WORK SAFELY. This is an absolute belief — our core value — that the safety and health of every worker and the public at large, and our environment, are the most important assets we are entrusted to protect. This belief is consistent with the mission of the Management and Integration (M&I) Contract: to clean up the site environment. A strong safety culture is a prerequisite and key to the effective integration of safety into all phases of work planning and execution. Our core value of safety is fundamental to every work activity throughout the project and is the basis for the continued growth of our safety culture.*



*President, Bechtel Jacobs Company LLC*

### **POLICY**

Bechtel Jacobs Company is committed to an ISMS that promotes the company's core values. We will do work safely. ISMS and the safety culture provide ES&H, pollution prevention, waste minimization, and quality assurance (QA) programs. These programs are tailored to specific projects and activities. The objective of ISMS is to systematically integrate safety and environmental protection into management and work practices at all levels so that workers, the public, and the environment are protected while our missions are accomplished.

### **MANAGEMENT COMMITMENT AND LEADERSHIP**

Safety leadership starts at the top level of the Bechtel Jacobs Company organization. Our president and our general manager are accountable for protecting the environment, safety, and health of every worker in the organization, including those employed by our subcontractors. Their ownership of this responsibility sets the standard for all of the other members of our management team.

A fundamental commitment to put safety first flows down from the president and the general manager to each employee. With this culture,

Bechtel Jacobs Company will achieve excellence in the following ES&H areas.

### **Safety and Health**

The Bechtel Jacobs Company protects the safety and health of workers and the public by identifying, analyzing, and mitigating hazards and implementing sound work practices. We do not compromise safety for the sake of other project objectives, such as cost and schedule. All of our employees and subcontractors share the responsibility for complying with ES&H requirements during all work activities.

### **Environmental Protection**

Bechtel Jacobs Company conserves and protects environmental resources by incorporating environmental protection into the daily conduct of business; fostering a spirit of cooperation with federal, state, and local regulatory agencies; and using appropriate waste management, treatment, storage, and disposal methods. The environmental performance goals we strive to meet are to allow zero unpermitted discharges to the environment; comply with all conditions of environmental permits; and, to the extent practicable, reduce waste generation and maximize recycle and reuse potential.

### ***Facility Safety Programs***

Bechtel Jacobs Company uses facility safety programs for nuclear and high hazard chemical facility activities. These programs provide a higher level of protection for onsite workers, the public and the environment. The level of protection is based on formal analysis of the risks presented by these facilities. The analyses and protective measures are documented in authorization basis documents approved by DOE.

### ***Zero Accident Performance***

Bechtel Jacobs Company fosters a commitment to ZERO ACCIDENT PERFORMANCE, which is reflected in company policies, programs,

procedures, and plans (see Fig. 1.1). All employees are empowered to make "safety first" a reality at their work sites during planning and execution of work.

### ***Pollution Prevention***

Bechtel Jacobs Company demonstrates its commitment to environmental and health protection and continuous improvement through the Bechtel Jacobs Company pollution prevention program. The program assesses planning and work activities to identify alternatives that prevent/reduce waste generation, reduce hazardous material usage, and increase resource conservation (including use of products with recycled material content).

## *Zero Accident Performance*

### **Philosophy**

Bechtel Jacobs Company is dedicated to the concept that all accidents are preventable. Accordingly, the company is committed to achieving and sustaining "Zero Accident Performance" through continuous improvement practices.

### **Objectives**

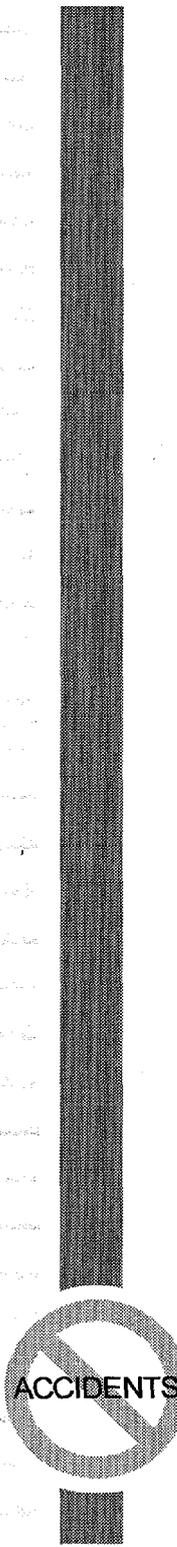
- Strive to eliminate all injuries, illnesses, and adverse impacts to the environment.
- Promote environment, safety, and health objectives as a constant value in designing, planning, training, and executing work.
- Spread ownership for environment, safety, and health program effectiveness throughout the M&I Team.
- Enhance employee awareness and involvement in our environment, safety, and health program implementation.
- Increase employees' consistent use of safe practices in their daily work activities.
- Optimize the use of continuous improvement practices as the basis for "Zero Accident Performance" initiatives.
- Demonstrate to our customer that Bechtel Jacobs Company is "Dedicated to Safety Excellence."
- Select and mentor subcontractors that are committed to "Zero Accident Performance."

### **Ownership**

- Senior management demonstrates leadership and direction for "Zero Accident Performance" implementation.
- All Bechtel Jacobs Company employees and subcontractors are empowered to implement and consistently strive for the "Zero Accident Performance" goal.
- Bechtel Jacobs Company Environment, Safety, and Health Services develops policy, provides technical direction, and coordinates supporting services in partnership with the customer to help achieve safety excellence.

## **Dedicated to Safety Excellence**

*Figure 1.1. We are committed to achieving Zero Accident Performance.*



ACCIDENTS

## 2. THE BECHTEL JACOBS COMPANY INTEGRATED SAFETY MANAGEMENT SYSTEM

### *Safety Management Functions*

The focus of the Bechtel Jacobs Company ISMS is to systematically integrate ES&H controls into management and work practices. In managing the M&I contract, Bechtel Jacobs Company implements five safety management functions:

1. define the scope of work,
2. analyze hazards,
3. develop and implement hazard controls,
4. perform work within controls, and
5. provide feedback and continuous improvement.

### *Guiding Principles*

The application of these five safety management functions is continually influenced by seven ISMS guiding principles and worker involvement:

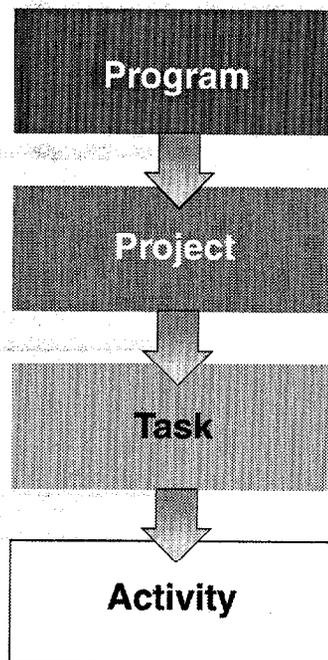
1. line management responsibility for safety,
2. clear roles and responsibilities,
3. competence commensurate with responsibilities,

4. balanced priorities,
5. identification of safety standards and requirements,
6. hazard controls tailored to work being performed, and
7. operations authorization.

### *Four Levels of ISMS Implementation*

Bechtel Jacobs Company approaches the way work is performed in four levels (see Fig. 2.1). Those levels define development of work scope, identification of hazards, and implementation of controls. Each level is defined as follows:

1. The *program* or *corporate* level establishes controls for the company.
2. The *project* or *watershed* level defines controls based on the scope of the project.
3. The *task* or *subcontract* level addresses controls at a level needed to assign work to a subcontractor.
4. The *activity* or *worker* level ensures that controls are in place at the point where work is performed.



ETPRG 99-1556

*Fig. 2.1 We use four levels of ISMS implementation.*

The following paragraphs address each of the five safety management functions and describe our method for applying them in our work. The guiding principles are evident throughout the text and are annotated by the number next to the paragraph headings where they are addressed. Figure 2.2 graphically illustrates the Bechtel Jacobs Company approach to addressing the five core functions of ISMS and the seven guiding principles.

**I. DEFINE THE SCOPE OF WORK**

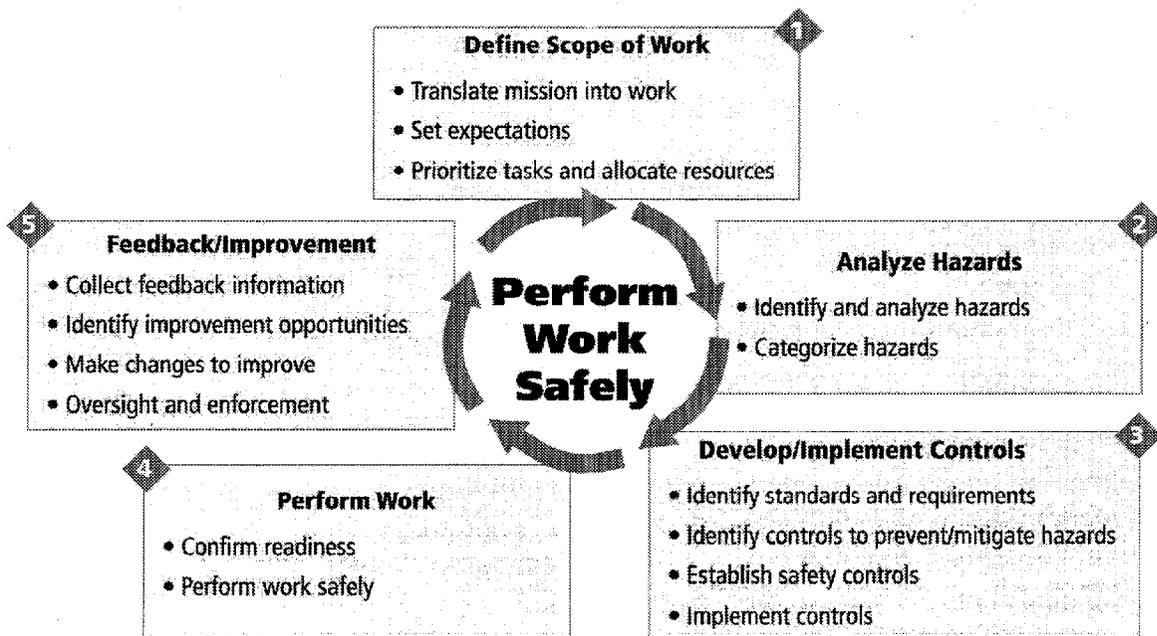
Bechtel Jacobs Company begins the ISMS process by defining the work scope, including translating the contract scope of work into a specific program baseline document, setting expectations, and prioritizing tasks and allocating resources.

The work scope is defined by applying the following steps.

**Translate the Contract Scope into Work (Guiding Principles 1, 2, 4, 5, and 7)**

As detailed in the contract, Bechtel Jacobs Company manages and has overall responsibility and accountability for the performance of work in a manner that is consistent with the principles and core functions of the ISMS, whether the work is self-performed or executed by subcontractor organizations.

Bechtel Jacobs Company managers of projects work with their DOE-Oak Ridge Operations (DOE-ORO) counterparts to develop the Oak Ridge Environmental Management Fiscal Year Baseline based on DOE's *Accelerating Cleanup: Paths to Closure* (1998). The EF Baseline Program Plan is used for activities at ETTP, Paducah, and Portsmouth. These two baseline descriptions include technical, schedule, and cost-planning guidance. They also serve as overall



**The Seven Guiding Principles**

1. Line management responsibility for safety
2. Clear roles and responsibilities
3. Competence commensurate with responsibilities
4. Balanced priorities
5. Identification of safety standards and requirements
6. Hazard control tailored to work
7. Operations authorization

ETTP/GA 98-1325-R1

**Fig. 2.2** We use the five core functions and the seven guiding principles to perform work safely.

project documents that identify work scope and contractor interfaces among Bechtel Jacobs Company, DOE, and other prime contractors.

After the program baselines are developed, they are subdivided, and the project teams plan, schedule, and execute the work. Managers of projects and their teams further divide the work into units that can be self-performed or subcontracted. Activities are reviewed against the safety envelope defined by the facility safety authorization basis document for the work location. The purpose of this review is to comprehensively assess the risks and hazards associated with a particular facility or task to assist management in its decision regarding whether to self perform or subcontract each element. Task scopes of work are defined to ensure that task interactions will not result in conditions that violate the safety envelope. Project teams establish priorities, allocate resources, and schedule the work to be completed based on the agreed-upon program baseline. The scope of work and the associated technical requirements (including ES&H compliance) for each unit of work to be subcontracted is carefully defined in the standard subcontract language and the associated compliance matrix. The subcontractor organization will be responsible for translating the subcontract scope of work into individual activities.

For self-performed activities, work scopes are entered into the specific site's work-control system. The appropriate site organization is responsible for translating the scope of work into field activities.

Figure 2.3 provides a process flowchart for the identification of the scope of work at the program, project, task, and activity levels.

#### ***Set Expectations (Guiding Principles 4, 5, and 7)***

In conjunction with DOE-ORO, Bechtel Jacobs Company establishes project performance objectives at least annually. Milestones and regulatory agreements associated with the program baseline document will be identified and reviewed to establish performance objectives. Criteria used to establish the performance objectives may include DOE budget guidance,

contractual requirements, and work schedules. Incentives and penalties are linked to performance milestones. Safe work performance is integral to meeting these project performance milestones.

ES&H performance expectations are also established on an annual basis. These are included as Section 7 in this document.

Bechtel Jacobs Company uses detailed subcontract language to convey performance objectives to subcontractors. These objectives are drawn from contractual requirements and performance measures related to integrated safety management.

Managers of projects retain the ultimate responsibility and accountability for achieving the performance objectives. Subcontractors are responsible for communicating these expectations to their lower-tier subcontractors.

Activities that are self-performed by the sites are tied to project goals. Each task, based on a graded approach, receives a cost estimate and is scheduled in support of project objectives. Expectations are communicated to all employees involved in the performance of the activity. ES&H information is communicated through the project line organizations to all employees.

#### ***Prioritize Tasks and Allocate Resources (Guiding Principle 4)***

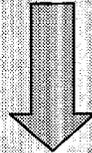
Bechtel Jacobs Company performs EM work in accordance with the priorities established by DOE in *Accelerating Cleanup: Paths to Closure* (1998). The priorities stated in that document are as follows:

- Protect public health and safety.
- Protect worker health and safety.
- Protect the environment.
- Reduce the costs associated with ongoing surveillance, maintenance, and monitoring activities (i.e., mortgage reduction).
- Comply with regulatory requirements.
- Support the DOE-ORO mission: to manage risks to human health and the environment posed by contaminated sites and facilities, legacy waste, and newly generated waste in the most cost-effective and responsible manner possible for future beneficial reuse.

# INPUT

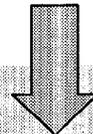
- ◆ Based on DOE mission
- ◆ Accelerating Cleanup: *Paths to Closure*
- ◆ Budget allocation
- ◆ Contractual requirements
- ◆ Applicable laws and regulations
- ◆ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Records of Decision, Action Memorandum
- ◆ DOE - Headquarters milestones
- ◆ Environmental permits
- ◆ Enrichment Facilities Baseline Program Plan
- ◆ DNFSB 95-1

## Program Level (Bechtel Jacobs Company LLC)



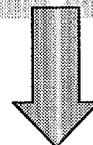
- ◆ Program-level scope of work
- ◆ Interface with DOE watershed team leader
- ◆ Ohio EPA DFF&O

## Project Level (e.g., Waste Operations Project)



- ◆ Project-level scope of work
- ◆ Identification and analysis of hazards
- ◆ Management field walkdowns

## Task Level (e.g., subcontract under Waste Operations Project)



- ◆ Task-level scope of work
- ◆ Hazard analysis
- ◆ Pre- / Post-job briefings

## Activity Level (e.g., work group performing field activities)

# OUTPUT

- ◆ Prime contract
- ◆ Fiscal year baseline
- ◆ Workforce transition
- ◆ Work Smart Standards/Radiation Protection Plan/Integrated Safety Management System
- ◆ Subcontract unit/fixed price strategies
- ◆ Organizational integration between project/functional management
- ◆ Division of roles/responsibilities
- ◆ Policies and Command Media
- ◆ Schedule hierarchy

- ◆ Life cycle/master/intermediate schedules
- ◆ Performance agreement milestones
- ◆ Project execution plan
- ◆ Work controlling documents
- ◆ Application of technical requirements
- ◆ Self-performance of high-risk work
- ◆ Subcontract formation/Request for Proposal
- ◆ Labor standards determination
- ◆ Task interaction review

- ◆ Awarded subcontracts
- ◆ Safety analysis reviews
- ◆ Occupational safety/industrial hygiene controls
- ◆ Radiological controls
- ◆ Commercial labor, material and equipment estimates, resource loaded schedules, and task analysis
- ◆ Initial hazard assessment
- ◆ Compliance matrix
- ◆ Performance metrics
- ◆ Environmental reviews through the National Environmental Policy Act (NEPA) process

- ◆ Completed compliance matrix
- ◆ Job Hazard Analysis
- ◆ Subcontract execution and closure
- ◆ Frontline supervisor and employee/worker ownership in planning process
- ◆ Worker/employee empowerment
- ◆ Management interaction with employees/workers
- ◆ ES&H performance metrics
- ◆ Communication
- ◆ Work packaging
- ◆ Testing and inspecting
- ◆ Change control process
- ◆ Verification of training, qualification, and competency of workers
- ◆ Frontline supervisor validation of implementation of technical and programmatic requirements
- ◆ Lessons learned
- ◆ Activity hazard assessment

**Fig. 2.3** We use a systematic approach to flow down work scope requirements from the program level to the activity level.

The EF program manages and integrates activities in accordance with priorities established by DOE-HQ, DOE-ORO, DNFSB 95-1, and the Ohio EPA Director's Final Findings and Orders (DFF&O). The EF program provides for management of depleted UF<sub>6</sub> and highly enriched uranium storage, removal, and disposition programs; polychlorinated biphenyl collection and containment program; surveillance and maintenance of EF facilities; United States Enrichment Corporation lease administration; and planning for the return of a gaseous diffusion plant to DOE. Priorities used in the EF program are parallel to those in the EM program. Bechtel Jacobs Company subcontractors are required to operate under and implement those priorities.

As program or project conditions emerge, changes from the original baseline plan may be required due to a variety of reasons. Bechtel Jacobs Company uses a baseline change control process to assure that changes in priorities, cost, and schedule are appropriately reviewed and approved.

## **II. ANALYZE HAZARDS**

Before developing a bidder's list for major subcontracts, companies are required to prequalify. Among other scope-specific commercial and technical prequalification criteria, a company must also provide specific information regarding the company's safety and environmental compliance record and experience. ES&H information requested from companies will be based on the job-specific requirements, as well as the risk and hazards analysis. The ES&H representative and the other team members evaluate the information to determine whether the company meets the minimum requirements as spelled out in the prequalification criteria.

Bechtel Jacobs Company and its subcontractors perform an analysis of hazards before the start of work. The project teams identify hazards associated with the performance of project tasks by examining facility safety authorization basis and other available site data, interviewing people involved in the work processes, and performing site walkdowns. Examples of documents which may be reviewed at the program, project, task, and activity levels are shown in Fig. 2.4. If existing

information does not provide adequate data to identify hazards, sampling and characterization must be performed as necessary and a facility safety authorization basis established. The review will be done to comply with the requirements of the applicable authorization basis as impacted by subcontractor activities.

After the hazards are identified, the project team develops a hazard assessment document and compliance matrix. The hazard assessment establishes the requirements for access to a facility or work area and conditions or restrictions on the types of activities that may be conducted. Team members identify and analyze hazards using the methods described below.

The project manager appoints individuals to the hazard assessment walkdown team. Only those individuals who are familiar with the task activities and associated hazards are involved in performing hazard assessment walkdowns.

### ***Analyze Hazards (Guiding Principles 2, 5, 6, and 7)***

The project team uses information gathered during preparation of the preliminary hazard assessment to develop specific subcontract language and a tailored compliance matrix for the subcontract package. The subcontract language requires the submittal of an ES&H plan and identification of applicable contractual ES&H requirements based on the complexity and risk associated with the work.

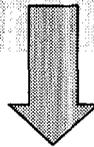
Subcontractors are required to complete the compliance matrix to match their ES&H program to the requirements of the specific task.

The successful bidder is required to submit a detailed description of the subcontractor's plans for conducting the work. This plan includes methods for performing the work in accordance with the laws, regulations, and contractual requirements governing employee and public safety and health and environmental protection. A hazard assessment is also submitted that identifies all types of hazards that are known or could be present under the scope of work, including hazards the subcontractor may create. The hazard assessment document includes details on how the subcontractor plans to mitigate or preclude the hazards identified.

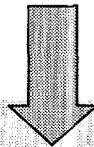
## Hazards Analysis

- ◆ Accelerating Cleanup: *Paths to Closure*
- ◆ Applicable laws and regulations
- ◆ Environmental permits
- ◆ ES&H Program Plan
- ◆ ISMS Description
- ◆ Life Cycle Baseline
- ◆ QA Guidelines
- ◆ Work Smart Standards

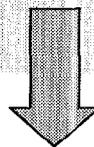
### Program Level (Bechtel Jacobs Company LLC)



### Project Level (e.g., Waste Operations Project)



### Task Level (e.g., subcontract under Waste Operations Project)



### Activity Level (e.g., work group performing field activities)

- ◆ Audit/Oversight Reports
- ◆ Compliance Matrix
- ◆ ES&H Program Plan
- ◆ Facility Authorization Basis Document
- ◆ Hazard Characterization Documents
- ◆ Issues Management/Lessons Learned
- ◆ Performance Metrics
- ◆ Preliminary Hazard Assessment
- ◆ Process Knowledge
- ◆ Project Safety and Health Plan
- ◆ Remedial Investigations/Feasibility Studies
- ◆ Walkdown Reports

- ◆ Audit/Oversight Reports
- ◆ Drawings
- ◆ ES&H Project Plan
- ◆ Hazard Assessment
- ◆ Historical Data
- ◆ Issues Management/Lessons Learned
- ◆ Performance Metrics
- ◆ Readiness Evaluation
- ◆ Subcontractor ES&H Plan
- ◆ Task-Specific Compliance Plans
- ◆ ES&H Project Plan
- ◆ Task-Specific Procedures
- ◆ Walkdown Reports
- ◆ Work/Task Authorization

- ◆ Activity-Specific Procedures
- ◆ ES&H Professionals
- ◆ Frontline Supervisor and Workers
- ◆ Hazard Assessment
- ◆ Issues Management/Lessons Learned
- ◆ Performance Metrics
- ◆ Pre-Planning Walkdowns
- ◆ Pre- / Post-Job Briefings
- ◆ Safety Advocates
- ◆ Subcontract Technical Representatives
- ◆ Task-Specific ES&H Plans
- ◆ Work Control Packages

## Implement Controls

- ◆ Applicable Laws and Regulations
- ◆ Bechtel Jacobs Company LLC ES&H Policies and Procedures
- ◆ Emergency Management
- ◆ Environmental Data Life Cycle
- ◆ ES&H Program Plan
- ◆ Issues Management/Lessons Learned
- ◆ Program Baselines
- ◆ Work Smart Standards

- ◆ Develop Operational Safety Requirements (OSRs), Technical Safety Requirements (TSRs)
- ◆ ES&H Project Plan
- ◆ Facility Authorization Basis Document
- ◆ Hazard Assessment
- ◆ Issues Management/Lessons Learned
- ◆ Preliminary Hazard Assessment
- ◆ Project-Specific Procedures
- ◆ Subcontracts
- ◆ Unreviewed Safety Question (USQ) Screening
- ◆ Work Smart Standards

- ◆ Hazard Assessment
- ◆ Issues Management/Lessons Learned
- ◆ Subcontracts
- ◆ Task-Specific ES&H Plans
- ◆ Task-Specific Procedures
- ◆ USQD Process
- ◆ Work Smart Standards
- ◆ Work Start Authorization

- ◆ Activity-Specific ES&H Plans
- ◆ Activity-Specific Procedures
- ◆ Activity-Specific Training
- ◆ ES&H Permits
- ◆ Issues Management/Lessons Learned
- ◆ Pre-Job Walkdowns
- ◆ Pre- / Post-Job Briefings
- ◆ Work Control Documents
- ◆ Work Start Authorization

**Fig. 2.4** We use a variety of tools to conduct hazard analysis and implement controls at the program, project, task, and activity levels.

The subcontractor submits the completed activity hazard assessment to the project team for review and acceptance before the start of work. The accepted activity hazard assessment becomes part of the subcontractor's ES&H plan.

Based on the complexity and risk associated with the activity, work that is self-performed by Bechtel Jacobs Company employees is reviewed by an integrated multidiscipline team that may include the service requestor, ES&H professionals, the supervisor, and the workers. This team analyzes any hazards to identify the steps required to perform the activity safely while mitigating associated hazards.

#### ***Categorize Hazards (Guiding Principle 4)***

During the phase-in period, a review of facility conditions was initiated to support the transition of facilities from Lockheed Martin to Bechtel Jacobs Company. A "phased approach" was used for assessing facilities and performing a due diligence review required to adequately assess conditions.

Currently, Bechtel Jacobs Company is operating under the facility categorizations in place on April 1, 1998. As facilities are reviewed during the transition period or progress through life cycle changes, they may be recategorized as hazards are mitigated or conditions change. Recategorization of facilities will be performed in accordance with the requirements of DOE-EM-STD-5502-94 and DOE-STD-1027-94. For hazard categorization at the task level, Bechtel Jacobs Company will use the guidance specified in the applicable state and federal regulations.

Major ES&H risks and vulnerabilities are identified, communicated, and appropriately incorporated into budget planning to effectively manage ES&H risks.

The analysis of hazards addresses potential risks and vulnerabilities from credible accident scenarios at the facility level in the facility safety authorization basis documents and at the task level in the activity hazard assessments. For self-performed work, hazards identified by the planning team are categorized by the site ES&H professionals as a part of the planning process.

### ***III. DEVELOP AND IMPLEMENT HAZARD CONTROLS***

After hazards are identified, it is necessary to identify and implement the controls necessary to protect workers, the public, and the environment from harm (see Fig. 2.4). The Bechtel Jacobs Company ISMS subdivides this process into four distinct steps. The first step in controlling hazards is to identify the standards and requirements associated with the work to be performed. These standards and requirements provide the necessary guidance to determine options for hazard mitigation. The hazard control options are evaluated, and the best option is identified. After controls are identified, they are established and implemented.

#### ***Identify Standards and Requirements (Guiding Principle 5)***

Bechtel Jacobs Company is required to comply with the standards and requirements identified in Section J, Appendix E, of the prime contract with DOE. These standards and requirements include work smart standards (WSS) sets for construction and engineering work and ES&H, and standards/requirements identification documents (S/RIDs) covering emergency preparedness and occurrence reporting.

For tasks that are subcontracted, appropriate ES&H requirements from the work smart standards are identified in the request for proposal. A structured process is used for identifying appropriate requirements sets to be included in subcontracts. For consistency and cost efficiency, similar requirement sets are applied to similar work scopes with similar hazards.

For tasks that are performed on the Bechtel Jacobs Company scope of work by other DOE prime contractors, the work is performed to meet the requirements of the applicable Bechtel Jacobs Company WSS. This is specified in the work authorization and is accomplished in the most efficient way for each prime contractor. Work is monitored by the assigned Subcontract Technical Representative (STR), and changes to work practices are evaluated for compliance with Bechtel Jacobs Company requirements.

Lockheed Martin Energy Systems (LMES) will perform work in accordance with LMES procedures. This assures compliance with Bechtel Jacobs Company WSS, since LMES S/RIDs are equivalent to or more restrictive than Bechtel Jacobs Company WSS.

Lockheed Martin Energy Research (LMER) will perform work in accordance with LMER procedures supported by the following arrangement:

- LMER will maintain an evaluation that demonstrates that its current procedures satisfy Bechtel Jacobs Company WSS.
- LMER will control changes to its procedures to ensure that they continue to satisfy Bechtel Jacobs Company WSS.
- Bechtel Jacobs Company will notify LMER of changes to Bechtel Jacobs Company WSS.

At Paducah and Portsmouth, work is performed for Bechtel Jacobs Company by United States Enrichment Corporation (USEC). This work is controlled by work authorizations and governed by applicable Bechtel Jacobs Company WSS.

#### ***Identify Controls to Mitigate or Prevent Hazards (Guiding Principle 5)***

Controls to mitigate hazards are identified through operational safety requirements (OSRs), technical safety requirements (TSRs), facility authorization basis, procedures, and subcontract terms. During the contract phase-in period, Bechtel Jacobs Company developed a procedure blue-sheeting process to review and adopt applicable Lockheed Martin procedures as Bechtel Jacobs Company procedures. Initially, blue-sheeted procedures are being used to ensure a seamless transition of work without jeopardizing the safety of workers, the public or protection of the environment. We are using the blue-sheeted procedures from April 1, 1998, until (1) the procedures are revised to reflect Bechtel Jacobs Company work processes and safety philosophy and (2) training is completed for the new requirements.

The Bechtel Jacobs Company procedure process provides guidance for worker involvement in procedure development and validation.

Subcontractors for Bechtel Jacobs Company must address in their activity hazard assessment documents the types of engineered controls, administrative controls, and personal protective equipment to be used to mitigate or preclude the identified hazards. These controls are reviewed and accepted by Bechtel Jacobs Company before the subcontractor is authorized to perform work. The review team will include staff from a variety of organizations (including Engineering and Technical Services, ES&H, and Field Services) to verify that all aspects of the proposed controls are adequate to protect workers, other site personnel, and the public from the consequences of normal operations and accidents.

For self-performed work, work planning includes a step-by-step review of how the activity will be performed, which hazards are involved, and which controls are needed to eliminate or mitigate the identified hazards.

For tasks that are performed by other DOE prime contractors, the work will be performed in accordance with the procedures of the prime contractor. USEC work performed for Bechtel Jacobs Company is controlled by Bechtel Jacobs Company approved procedures.

#### ***Establish Controls (Guiding Principles 3, 4, 5, 6, and 7)***

Controls are established for both worker and facility safety. Administrative ES&H controls for workers are tailored to the specific project and task. Details are included in controlled work procedures and work package documentation.

Personnel qualifications, competencies, and training are derived from the activity hazard assessment and clearly defined in the activity work package. Activity sequences, prerequisites, and hold points related to ES&H must be documented in the activity work plan.

Based on the subcontractor's or self-performing organization's activity hazard assessment, engineered or process controls identified in the documents as necessary to mitigate an ES&H hazard must be implemented. As site conditions change, the existing safety controls may be

discontinued or changed to adapt to changing site and hazardous conditions. Additional controls may be established in facility safety authorization basis documents to ensure that site personnel and the public are protected from unacceptable health and safety consequences due to accidents.

#### ***Implement Controls (Guiding Principles 3, 6, and 7)***

Tools used for implementing controls of identified hazards include the following:

- elimination of hazard,
- project plans,
- subcontracts,
- task work plans,
- activity work packages,
- work permits,
- procedures,
- ES&H plans,
- activity hazard assessments,
- work instructions,
- safety authorization basis documents including OSRs/TSRs,
- designs and/or design changes
- signs and postings,
- training,
- line management responsibility for safety, and
- employee stop work authority.

Specific mechanisms as identified in these documents and methodologies are used to tailor controls at every level of work and hazard. These methods provide the means to implement identified controls and ensure that they remain in effect as long as the hazard is present. Plans and procedures include processes, including the change control process, that the project team will use to implement controls at the performance level. Methods for testing and verifying controls and for ensuring that personnel are qualified to discharge their responsibilities are also defined in these documents.

#### ***IV. PERFORM WORK***

To perform work safely, Bechtel Jacobs Company must confirm the readiness of the project team and its subcontractors, verify that the necessary safety authorization and work authorization documents are in place, and ensure that effective systems for managing change are in place. Each of these important steps in the safe performance of work is discussed in the following paragraphs.

#### ***Confirm Readiness (Guiding Principles 3, 6, and 7)***

To verify that the appropriate pre-job activities have been completed effectively, Bechtel Jacobs Company uses a readiness evaluation process for tasks, activities, and facilities. The rigor of this evaluation increases for more hazardous activities. The evaluations provide evidence that the following elements are in place.

- Workers have been involved in the process.
- Hazards have been adequately identified and characterized in the activity hazard assessment.
- Appropriate controls for the protection of workers have been identified and will be implemented during the execution of work.
- Adequate ES&H procedures, emergency response procedures, and applicable environmental permits and plans have been developed and will be implemented during execution of work.
- Adequate levels of ES&H staff, training, and technical support are in place before the start of work.
- Safety systems are operable and maintained according to design specifications.

Readiness evaluations will be conducted by the project teams to demonstrate that they and the subcontractors are ready to perform work. All work, including work that does not require DOE approval under the M&I contract, must be approved by Bechtel Jacobs Company.

Typical issues and questions to be addressed as part of a readiness evaluation are shown below.

#### **Example Readiness Evaluation Topics**

- Is the task clearly defined?
- Have all the hazards been identified?
- Are the appropriate work authorizations in place (environmental permits, state approval, stakeholder approval, NEPA, CERCLA, etc.)?
- Are the appropriate procedures in place?
- Are the proposed control measures adequate and appropriate?
- Does the work affect other subcontractors' work? If so, what measures have been taken to coordinate the work and limit the effect?

- Does the work affect other prime contractors' or reindustrialization lessees' work? If so, what measures have been taken to coordinate the work and limit the effect?
- Are all team members trained and qualified?

At the activity level, the topics above are addressed through a prejob briefing and through interfaces with the requestor of the service or the building manager before commencing work activities.

When appropriate, formal operational readiness assessments are conducted in accordance with DOE requirements.

***Operations Authorization (Guiding Principles 5 and 7)***

Bechtel Jacobs Company is continuing operations under a combination of safety authorization basis documents approved prior to April 1, 1998, and approved safety authorization basis documents developed by Bechtel Jacobs Company after April 1, 1998. These safety documents will be reviewed and revised as necessary or appropriate during the transition period and as projects enter new life-cycle phases.

***Management of Change (Guiding Principles 5, 6, and 7)***

For both nuclear and nonnuclear facilities, Bechtel Jacobs Company follows a change control process that evaluates changes in work plans, procedures, and effects of unforeseen or changing hazards. The change control process encompasses the following:

- screening all changes;
- evaluating changes in hazards and controls;
- verifying that the changes are within the existing hazards baseline and work authorizations; and
- revising the baseline, controls, and authorizations, as appropriate.

For nuclear facilities, tasks and activities are screened to determine whether they represent potential unreviewed safety questions (USQs).

***Stop Work Authority (Guiding Principles 1 & 2)***

Section H-9.(4) of the Bechtel Jacobs Company contract states that the "DOE Contracting

Officer's Representative(s) (CORs)" shall have the authority to provide "directions to the Contractor which suspend work when clear and present danger exists to workers or members of the public." In addition, authority to stop work is extended to all Bechtel Jacobs Company and subcontractor employees. Our policies and procedures provide specific guidance on stop work authority. Without fear of reprisal, employees are encouraged to approach all work with a high degree of inquisitiveness and to satisfy themselves that it is safe to proceed.

Management empowers all employees to refuse to perform work that is unsafe, even if directed to do so by supervisors, customers, or other prime contractors on shared sites. Work that is suspected or proven to place workers, the public, or the environment at risk shall be stopped until it can be demonstrated that it is safe to proceed with the work.

Work that is stopped for safety or environmental reasons, such as changing conditions, emerging hazards, or failure to implement specified hazard controls, can be resumed only on the authority of the project ES&H representative (or higher), and the project manager (or higher), and only after corrective or compensatory actions have been instituted.

***V. FEEDBACK AND CONTINUOUS IMPROVEMENT (Guiding Principles 1, 2, and 3)***

Bechtel Jacobs Company is committed to strong and active assessment programs with worker input. To be effective, self-assessments by line managers and program assessments conducted by the ES&H and Performance/Quality Assurance organizations are required to provide four basic elements:

- collection of feedback information,
- identification of opportunities for improvement,
- implementation of effective corrective actions, and
- active worker involvement.

All corrective actions are tracked to completion and evaluated for effectiveness.

***Collect and Manage Feedback Information  
(Guiding Principles 1 and 2)***

To complete the cycle and continue to improve the integration of ES&H and the resulting ES&H performance with each project and task, experience from work execution is provided as feedback to our employees and subcontractors. This feedback is collected at the program, project, task, and activity levels through formal and informal mechanisms.

Examples of informal feedback are the results of project walkdowns by project teams and the discovery of specific problems that have been relayed verbally to the STR and the subcontractor. Employee suggestions or concerns also provide feedback/ lessons learned.

Formal feedback mechanisms include Bechtel Jacobs Company internal audits and performance monitoring, nonconformance reports, occurrence reports, and self-assessments. Requirements for subcontractors to conduct self-assessments are included in the subcontract.

Appropriate and measurable indicators to assess ES&H performance monitoring also measure activities that are encompassed in ISMS. STRs, safety advocates, and project teams will measure each subcontractor's performance against the submitted compliance matrix and contract criteria. They will implement the subcontractor's fee and incentive program as appropriate.

Self-assessments that include an evaluation of the conduct of ES&H operations by both Bechtel Jacobs Company and subcontractor employees will be conducted.

***Identify Continuous Improvement Opportunities  
(Guiding Principles 1, 2, and 3)***

Complaints, concerns, or incidents receive immediate attention. Feedback from these sources is reviewed immediately by functional and project management and the project ES&H support personnel. Corrective actions, up to and including stopping work, are taken as appropriate.

Appropriate managers review self-assessment reports and final occurrence reports to identify improved processes and/or corrective actions that

will prevent recurrences of causal factors or root causes. This process encourages proactive identification of changes that result in process improvements and correction or elimination of problems.

Investigations of accidents, incidents, environmental releases or noncompliances, near misses, radiological events, and property damage are reviewed at the program level to ensure that investigations were thorough and that corrective actions were sufficient to prevent any recurrences. Programmatic improvements, such as procedure changes and lessons learned, are identified and communicated, as appropriate, to all affected employees and organizations. Incident tracking and trending is performed to identify common causes and issues for resolution.

Lessons learned programs from ORO, the DOE complex, and other government or commercial operations are central to a proactive approach to prevention of ES&H issues and continuous improvement opportunities. The lessons learned program is an integral part of the Bechtel Jacobs Company ISMS.

***Implement Corrective Actions (Guiding Principle 1)***

After issues are identified, corrective actions are initiated at the direction of functional or project management. Corrective action plans are developed for any noncompliance with requirements of ES&H significance.

***Worker Involvement in Continuous Improvement  
(Guiding Principle 2)***

All Bechtel Jacobs Company and subcontractor employees are empowered and responsible for ensuring that all work is conducted in a safe, healthful, and environmentally sound manner. Our ISMS, work planning processes, subcontracting processes, and ES&H programs are designed to support individual workers in the proper execution of their work.

All employees are encouraged to claim ownership of the ES&H program and to take an active role in ISMS processes. All Bechtel Jacobs Company and subcontractor employees are encouraged to inform their immediate supervisors when safety or

environmental issues of any kind arise. Employees are empowered to question the safety of the planned work and to stop the work if they believe unsafe work conditions exist.

Employees in functional and project groups and bargaining unit and subcontractor personnel are included in ES&H walkdowns, incident investigations, and self-assessments.

### 3. BECHTEL JACOBS COMPANY ORGANIZATION (Guiding Principles 1 and 2)

#### THE EMPOWERED WORKER

Each employee, as an empowered worker, holds the key to the success of ISMS: *the effective application of safe work processes*. Whether employed by Bechtel Jacobs Company or a subcontractor, each employee's abilities and commitment to execute activities in a safe and environmentally sound manner form the basis for our ES&H culture. Bechtel Jacobs Company is committed to all employees being trained and qualified commensurate with their duties and responsibilities. As illustrated in Fig. 3.1, employees are personally involved in the ISMS process through the following:

- being adequately trained and qualified;
- identifying workplace hazards;
- participating in work control document and procedure development;

- following procedures; and
- providing feedback, including lessons learned.

Project and functional managers meet frequently with employees to explain and emphasize Integrated Safety Management and safe work behavior expectations.

Supervisors and line managers clearly communicate ES&H expectations during daily briefings that address job-specific hazards and the means to mitigate them. User-involved procedures, work permits, and task-specific activity hazard assessments are developed through encouraging full participation by the individuals with the best knowledge and experience of actual job-site conditions. All employees are empowered to put **SAFETY FIRST**.

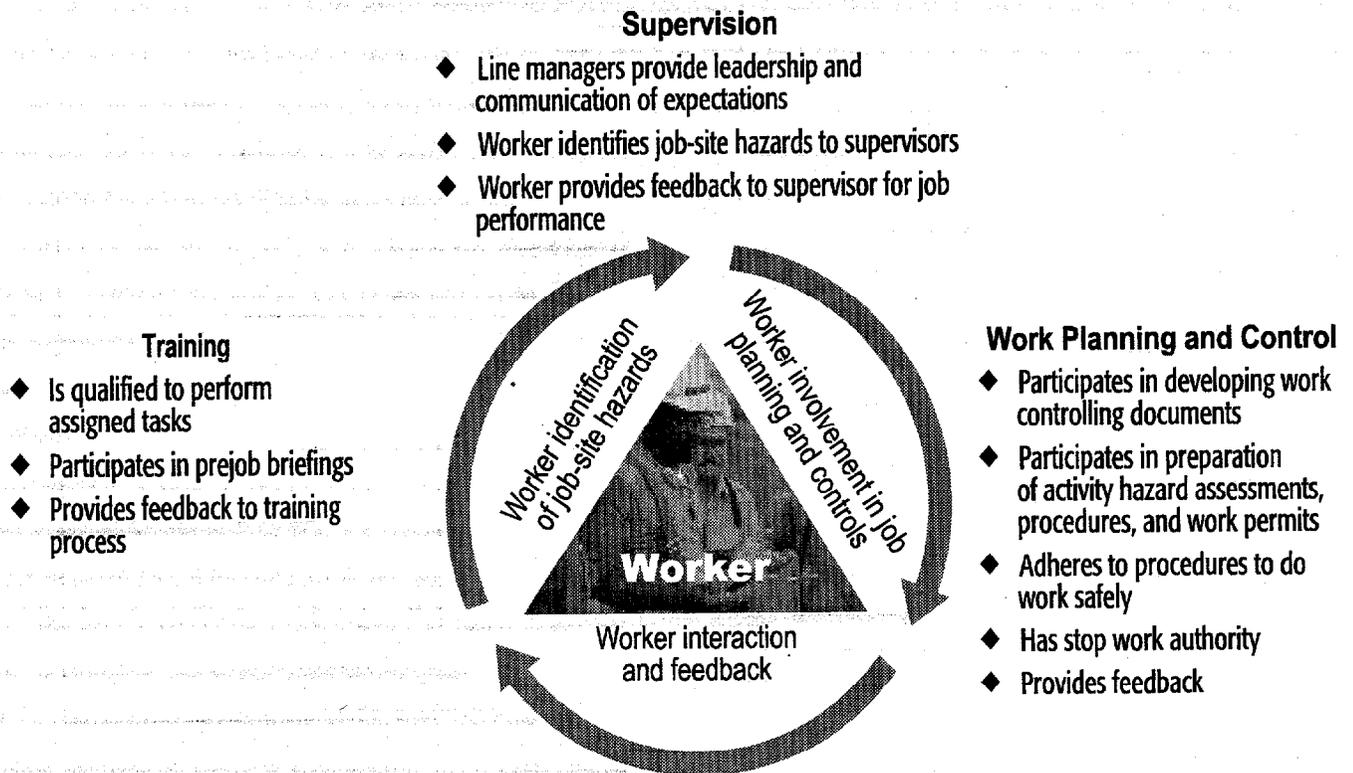


Fig. 3.1. Our workers are actively involved in the integration of safety into the work.

## BECHTEL JACOBS COMPANY MATRIX ORGANIZATION

Bechtel Jacobs Company is responsible for planning, integrating, managing, and executing the programs, projects, operations, and activities necessary to execute the contract scope of work in a safe, effective, and efficient manner. Key elements of the Bechtel Jacobs Company organization are depicted in Figure 3.2. Figure 3.3 identifies the functions and responsibilities of the M&I organization.

### THE MANAGEMENT TEAM

The organization defines roles and responsibilities to ensure effectiveness of communication during work planning and execution. The president

is responsible for managing the M&I project and guiding the management team toward the safe performance of all work. As the senior manager for the Bechtel Jacobs Company, he has ultimate responsibility for ES&H and leads in setting the company standards and expectations for all work under this contract. The general manager focuses on project integration and performance. The general manager accounts for the safe performance and quality of the work, ensures compliance with requirements, allocates resources, integrates project execution and support functions, and focuses on project completion.

### MANAGERS OF PROJECTS

Project Execution Organizations are led by managers of projects responsible and accountable for the execution of the EMEF work scope.

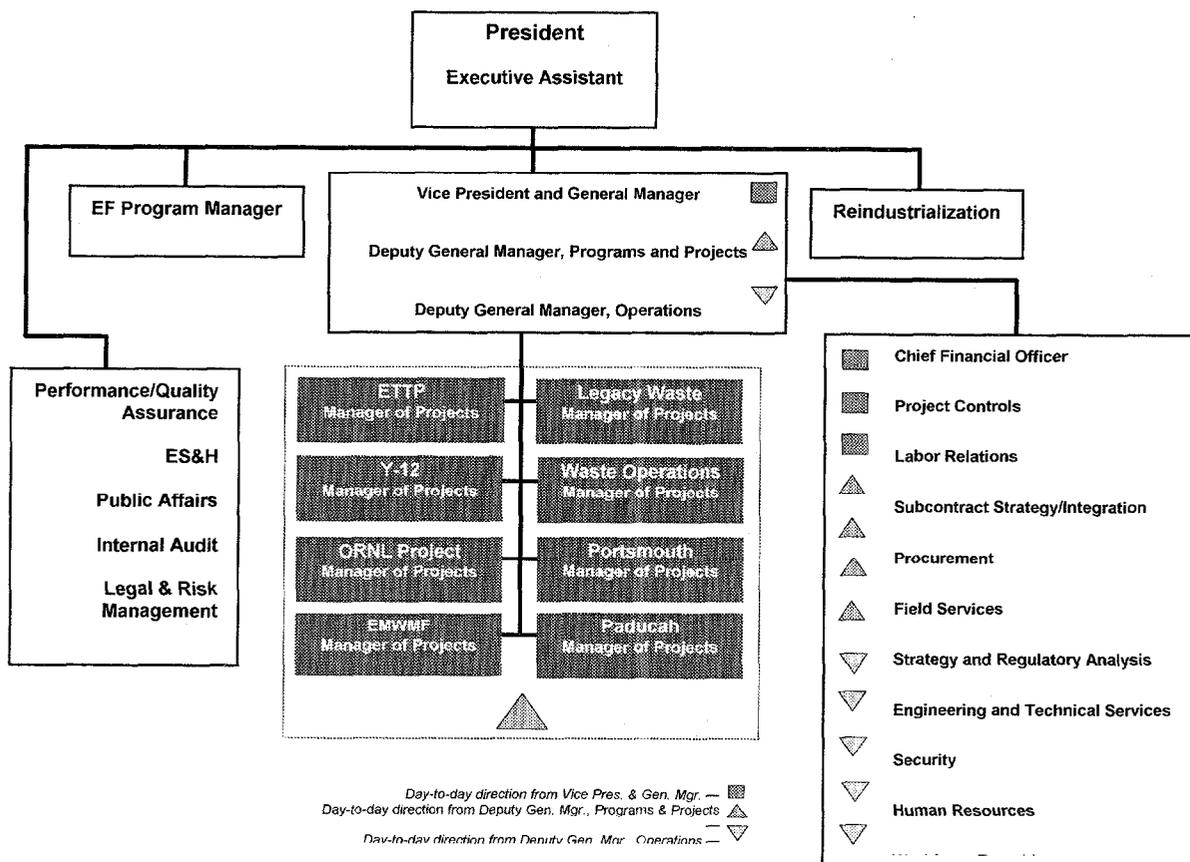
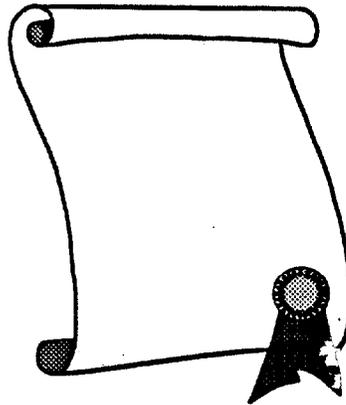


Fig. 3.2 Our organization is built around the project manager.



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Managers of projects are senior leaders who are fully empowered to control project resources and have cradle-to-grave responsibility for project planning and execution. They have direct and immediate responsibility for the safe performance of project activities under their direction, including field implementation of ISMS. The general manager holds each manager of projects personally accountable for the safe performance of work under his or her purview.

Managers of projects assign project managers to lead project teams in the successful execution of an assigned scope of work. Project managers also direct the activities of personnel and project subcontractors (through STRs) and implement ES&H programs and requirements. The project managers' success in implementing ISMS depends on effective use of the company's functional resources, as described in Figure 3.4.

### ***FUNCTIONAL MANAGERS***

The Bechtel Jacobs Company functional managers provide policy, procedures, and programs within their areas of responsibility and provide support to the project teams by "matrixing" their professional resources and staff to the projects. Program support organizations such as ES&H and Performance/Quality Assurance report to the president, whereas project support organizations such as Field Services and Labor Relations report to the general manager.

Bechtel Jacobs Company program support managers provide support at the programmatic level and perform programmatic oversight functions. The project support managers integrate the actions of the project teams from a technical perspective, ensuring that technical specialists

deployed to the project teams conduct their work in accordance with established procedures and guidelines. They also share lessons learned among the teams to improve safety and work/cost efficiencies. ES&H provides both program and project support services.

### ***PROJECT TEAMS***

The project teams are composed of personnel matrixed to the project from the functional organizations. Although the makeup of project teams varies depending on the work scope, the basic project team consists of a project manager, procurement supervisor, STR, cost/schedule supervisor, and an ES&H representative. Other functional resources and personnel with task-specific experience are included on the team as needed.

Project teams are responsible for the planning and successful execution of the work. They develop project-specific plans, procedures, and subcontracting requirements necessary to perform both project activities and project oversight to confirm that activities comply with the specified requirements.

Project teams provide the mechanism for integrating ES&H into project activities. The project teams are responsible for defining the scope of work, including task prioritization and resource allocation. They also ensure that the hazards associated with the project are appropriately identified, analyzed, and controlled and that readiness is confirmed prior to the start of work. Changes from the initial plan are reviewed by the project team prior to implementation. Figure 3.5 depicts the Bechtel Jacobs Company model project organization.

<b>Key Functional Responsibilities:</b>
<p><b>Chief Financial Officer</b> Payroll, accounts payable, indirect budget process, disclosure statement, financial controls, and funds management.</p>
<p><b>Engineering and Technical Services</b> Design engineering and technical standards, nuclear safety, authorization basis documentation, engineering controls, as low as reasonably achievable and radiological engineering, sample management and analytical services, technology demonstrations, computer and telecommunication systems, and compliance with DOE requirements for nuclear safety and criticality.</p>
<p><b>Environment, Safety, and Health</b> Integrated Safety Management System; environmental programs; safety, radiation protection, industrial hygiene, environmental permits; occupational medicine; regulatory compliance oversight; and ES&amp;H incident reporting, safety advocates and environmental compliance support to projects, and ES&amp;H training.</p>
<p><b>Field Services</b> Subcontractor direction/oversight, field and construction resources, operations and maintenance, facility configuration management system, remedial construction, decontamination and decommissioning, management of subcontract technical representative process, generation of work planning and control packages, daily field interaction with safety advocates, transportation safety, and waste packaging.</p>
<p><b>Human Resources</b> Personnel management, training program, employee concerns program, and tracking of subcontractor hiring programs.</p>
<p><b>Internal Audit</b> Investigation of waste, fraud, and abuse issues and audits of internal organizations.</p>
<p><b>Labor Relations</b> Collective bargaining, grievance process, and sponsor for the Labor Alliance.</p>
<p><b>Legal and Risk Management</b> Oversight of and support to projects and operations; regulatory and ARARs interpretation; compliance oversight; Notice of Violation responses; and manages M&amp;I insurance program and workers compensation claims.</p>
<p><b>Performance/Quality Assurance</b> Performance assurance, quality programs, Price-Anderson Amendments Act (PAAA) coordination, work smart standards, procedure development process, external assessment coordination, conduct of operations processes, readiness review processes, Continuous Improvement processes, issues and corrective action management, occurrence reporting, lessons learned, and Defense Nuclear Facilities Safety Board coordination.</p>
<p><b>Procurement</b> Subcontracting processes, prime contract administration, property management, warehouse operations, and prequalification of subcontractors.</p>
<p><b>Project Controls</b> Budget and annual work planning processes, baseline management and change control process, scheduling/estimating/project controls systems and processes and program/management status reporting.</p>
<p><b>Public Affairs</b> Media relations, coordination of the Bechtel Jacobs Company public and government affairs, support to projects for public meetings, and coordination.</p>
<p><b>Security and Emergency Management</b> Personnel, computer, and information security; access control; classified material and records requirements; nuclear safeguards, material control, and accountability; and fire protection and emergency management programs.</p>
<p><b>Strategy and Regulatory Analysis</b> Development of regulatory strategies to expedite cleanup; provision of consistency in application of baseline risk assessment; coordination of Federal Facility Agreement activities and other documentation; and milestone tracking.</p>
<p><b>Subcontract Strategy/Integration</b> Develop overall strategy and structure of M&amp;I subcontracts, determine estimates of procurement needs, coordinate with managers to develop procurement packages and ensure common approach to subcontracting.</p>
<p><b>Workforce Transition</b> Coordinate planning for and implementation of workforce transition as work is transitioned to performance-based subcontracts and support project and functional managers in planning for and effecting workforce transition.</p>

*Fig. 3.4 The Bechtel Jacobs Company organizational framework for implementing ISMS.*

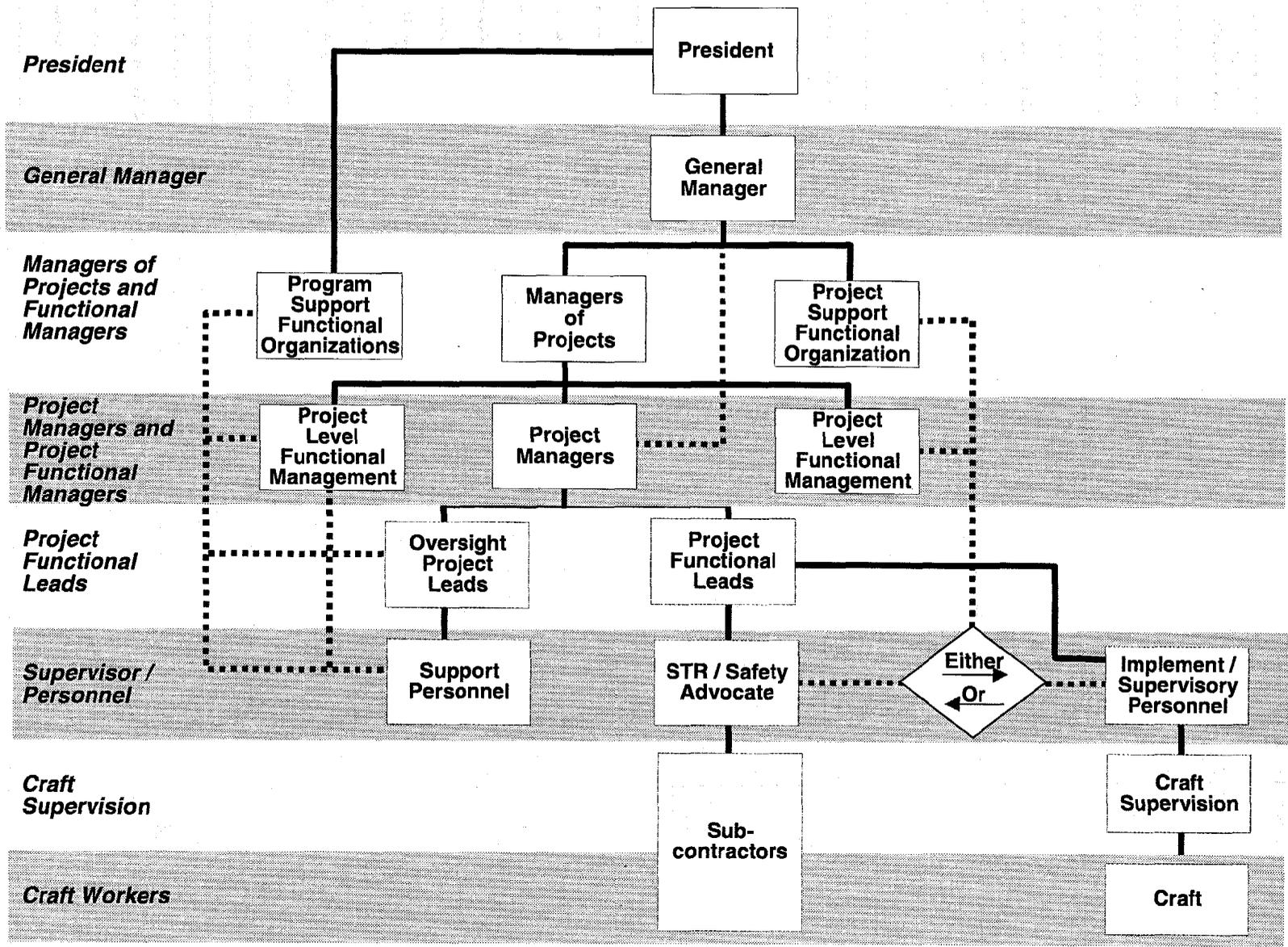


Fig. 3.5 Model Project Organization.

## 4. APPROACH

*(Guiding Principles 1, 2, 3, 4, and 5)*

### **ENVIRONMENT, SAFETY, AND HEALTH ORGANIZATION**

The Bechtel Jacobs Company ES&H organization provides direct support to program and project support groups and project teams throughout the company to facilitate integration of ES&H activities specified in ISMS. The ES&H organization includes groups responsible for radiation protection, industrial hygiene, occupational safety, environmental compliance, emergency management, and matrixed staff support to projects. Integration of safety throughout Bechtel Jacobs Company and subcontractor operations provides the basis for excellence, fosters continuous improvement, promotes teamwork, and creates ownership of safety principles.

Figure 4.1 summarizes the duties of the Bechtel Jacobs Company ES&H organization and the staff who serve as ES&H field representatives either supporting the project teams or serving as safety advocates to subcontractors.

### **MANAGEMENT SYSTEMS NEEDED FOR ISM**

A set of underlying management systems is integral to successfully implement any process or

program. These systems provide the procedures and other administrative tools necessary for an integrated company approach.

The functional areas develop the necessary procedures and other documents that implement the management systems. The management systems applicable to ISMS within Bechtel Jacobs Company are the following:

- assessment,
- budget and financial management,
- communications,
- emergency management,
- engineering,
- human resources,
- issues management,
- labor relations,
- lessons learned,
- planning,
- procurement,
- standards management,
- training and qualification, and
- work control.

Information on these management controls and the procedures that implement them is provided in the ISMS Supplement. The ISMS Supplement serves as a road map from the ISMS description to the ISMS implementing mechanisms.

<b>ES&amp;H Program Management</b>	<b>Project ES&amp;H Support</b>	<b>Task/Activity Safety Advocate</b>
<ul style="list-style-type: none"> <li>◆ Establishes ES&amp;H programs, policies, and procedures</li> <li>◆ Establishes and manages integrated safety management systems</li> <li>◆ Establishes subcontractor selection criteria</li> <li>◆ Establishes subcontractor standard ES&amp;H language</li> <li>◆ Interacts with clients</li> <li>◆ Interacts with regulatory personnel on program issues</li> <li>◆ Promotes continuous improvement</li> <li>◆ Has program responsibility for emergency preparedness and medical surveillance</li> </ul>	<ul style="list-style-type: none"> <li>◆ Participates in scope planning, budgeting, and scheduling</li> <li>◆ Develops preliminary hazard assessments</li> <li>◆ Generates subcontractor compliance matrix</li> <li>◆ Participates in procurement process                             <ul style="list-style-type: none"> <li>- provides compliance matrix for request for proposal</li> <li>- reviews subcontractor proposals</li> <li>- participates in subcontractor selection</li> </ul> </li> <li>◆ Conducts ES&amp;H training</li> <li>◆ Provides field performance oversight</li> <li>◆ Assists in accident/injury investigations</li> <li>◆ Provides emergency management and occurrence reporting support</li> </ul>	<ul style="list-style-type: none"> <li>◆ Provides ES&amp;H orientation to subcontractors</li> <li>◆ Serves as technical resource for program implementation</li> <li>◆ Assists subcontractor in development of corrective actions</li> <li>◆ Assists subcontractor in incident or near-miss investigations</li> <li>◆ Mentors subcontractor to attain safety excellence</li> <li>◆ Observes subcontractor work trends</li> </ul>

**Fig. 4.1.** Each of our ES&H organization levels has individual areas of responsibility.

## ***SUBCONTRACTORS***

Bechtel Jacobs Company uses a four-step, graded approach to specify contractual ES&H requirements to subcontractors. The steps are: (1) clearly specifying ES&H requirements pertinent to the work scope in the request for proposal, (2) providing detailed specification of ES&H requirements in the contract language, (3) providing daily oversight of the subcontractor's performance of work by an STR and project ES&H oversight, and (4) providing orientation and mentoring by a safety advocate.

Because 90% of the EM work scope will be performed by subcontractors by the end of the two-year transition period, we have established detailed methods to convey our ES&H expectations through the subcontracting process and ensure compliance with ISMS (see Fig. 4.2). Subcontractors are held responsible and accountable for implementing elements of ISMS and ES&H policies and procedures during the performance of activities under their individual scopes of work.

Each subcontractor (as appropriate) will appoint a qualified ES&H representative who is acceptable to Bechtel Jacobs Company. The subcontractor's ES&H representative will be responsible for managing the subcontractor's ES&H program. The Bechtel Jacobs Company STR oversees subcontractors on a day-to-day basis. The Bechtel Jacobs Company safety advocate coaches the subcontractor and lower-tier subcontractors to attain safety excellence through the use of appropriate controls.

### ***Worker Involvement***

Worker involvement is an important part of Bechtel Jacobs Company's planned approach for ISMS. Workers are knowledgeable of environment, safety, and health hazards for their immediate work areas and for the type of work in which they are involved. Each worker possesses a unique knowledge base and can enhance the safety and feedback systems by providing job-specific

information. Worker participation in the various levels of work planning helps assure that the work control process has the benefit of this expertise. Worker involvement also helps to ensure that unnecessary controls are not imposed that could adversely affect ES&H. As we move to the M&I method of accomplishing work, the workers' historic knowledge of the site, facilities, and processes makes their input critical to these elements of ISMS.

### ***Subcontract Technical Representatives (STRs)***

STRs are Bechtel Jacobs Company personnel assigned to a project manager from Field Services. They are responsible for the management of activities within the contract scope of the subcontractor(s) assigned to them and are the primary focal point through which all communication flows between the subcontractor(s) and Bechtel Jacobs Company. STRs are trained in subcontract language, subcontract administration, and ES&H requirements to ensure that the subcontractor(s) understand the requirements for safe conduct of work within the guidelines of the Bechtel Jacobs Company contract and ISMS. STRs are nominated by the appropriate functional managers and selected by the project manager and STR manager with the concurrence of Procurement, Field Services, and ES&H managers. As line managers, STRs are responsible for budget, schedule, oversight, and ES&H management of their assigned subcontractor(s). Their responsibilities associated with ES&H include the following:

- maintaining a safe work environment and creating a culture where workplace safety and environmental protection are core values,
- effectively managing and coordinating subcontractor ES&H activities,
- promoting and fostering ZERO ACCIDENT PERFORMANCE,
- working with the subcontractor and safety advocate to strengthen the subcontractor's ES&H program,
- confirming that subcontractor employees are trained and qualified for their work assignments before starting work,

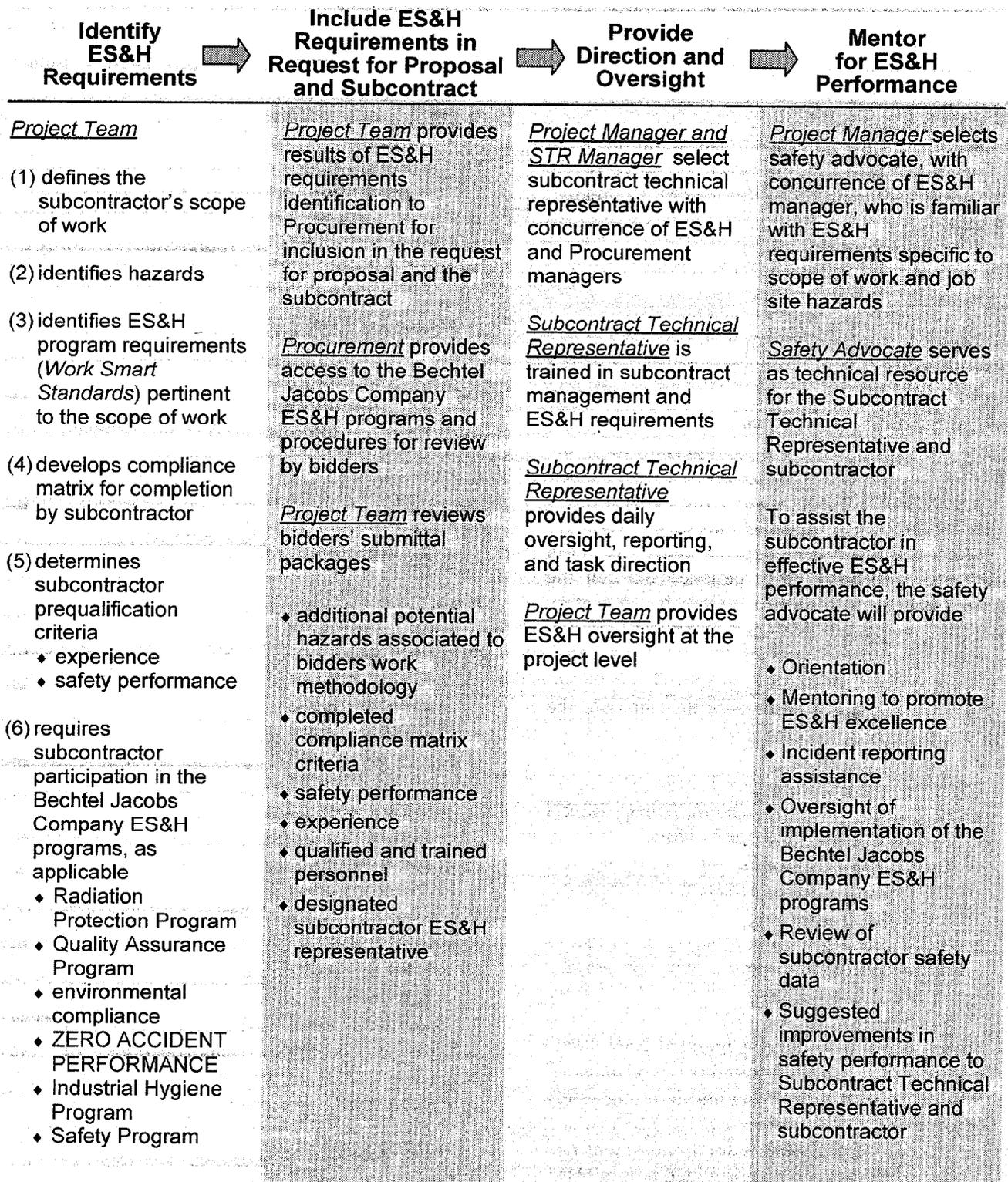


Fig. 4.2 Flowdown of ES&H requirements to subcontractors.

- encouraging subcontractors to empower their employees to actively participate in safety program development and review,
- communicating policy and worker rights and responsibilities,
- serving as the primary focal point through which all communication flows between the subcontractor and Bechtel Jacobs Company, and
- mentoring the subcontractor.

### ***Safety Advocate***

Safety advocates are Bechtel Jacobs Company ES&H representatives familiar with the specific requirements of the subcontractor's scope of work and with the workplace hazards that will be encountered on the job. They report through the ES&H organization but are matrixed to a project team depending on the size of the subcontractor organization. Safety advocates are responsible for orienting and mentoring subcontractors to attain safety and environmental excellence through the appropriate level of safety controls. A safety advocate is paired with an STR to provide assistance in performing his or her responsibilities.

The safety advocate's responsibilities include the following:

- assisting the subcontractor in transitioning to programs and performance that meet ES&H expectations for their scope of work;
- assisting subcontractors in defining or establishing programs pertinent to applicable requirements of ISMS;
- fostering implementation of the Bechtel Jacobs Company ES&H programs, where appropriate, including ZERO ACCIDENT PERFORMANCE;
- reviewing subcontractor-generated ES&H data and reports, such as air monitoring or bioassay results, as well as tracking and trending safety performance;
- suggesting improvements for trends identified by the subcontractor and provided to the STR;
- serving the subcontractor and the STR as a technical resource for ES&H program implementation and compliance;
- coaching the subcontractor in developing and implementing corrective actions resulting from audits or self-assessments;

- assisting the subcontractor in incident or "near miss" investigations; and
- monitoring subcontractor ES&H work trends and promoting continuous improvement processes as needed.

The safety advocate provides dedicated support and assistance to the subcontractor to accelerate attainment of safety excellence and supports the subcontractor technical representative through feedback.

### ***Approach for Requirements Flowdown***

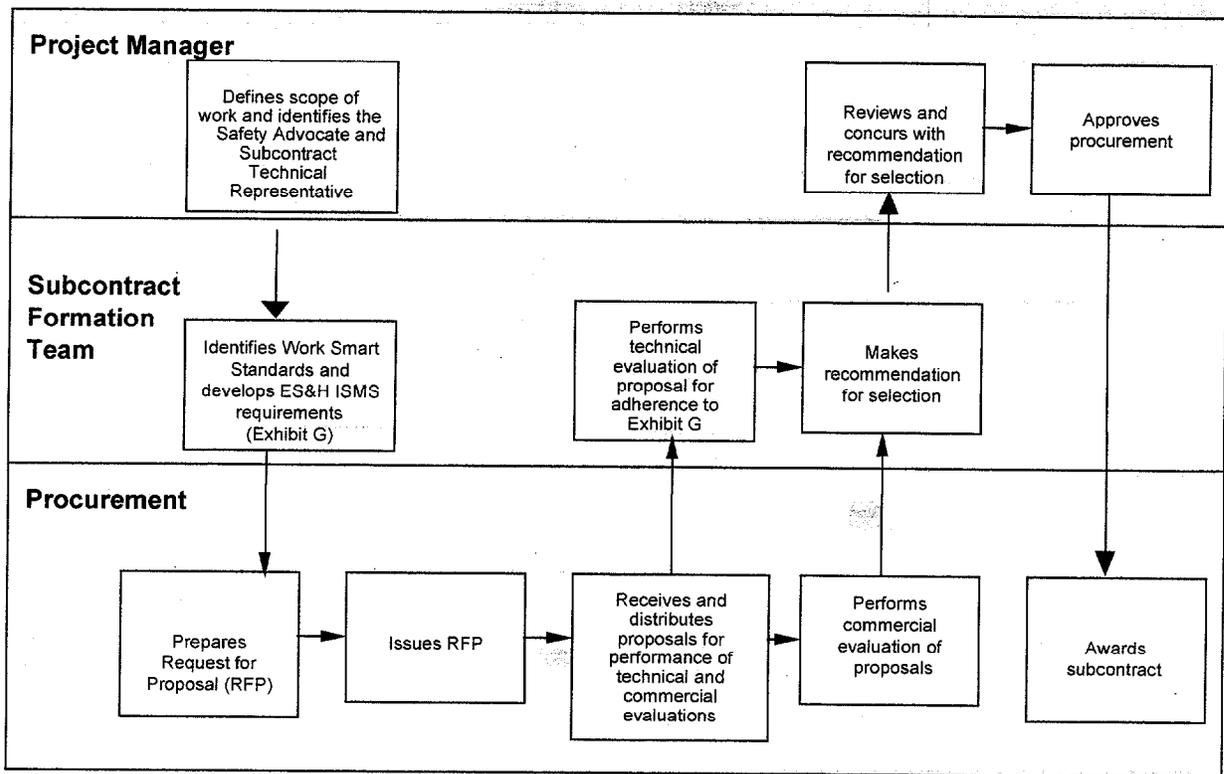
In addition to the approach described earlier, the Subcontract Formation Team develops a preliminary compliance matrix for inclusion in each request for proposal that clearly specifies the ES&H performance requirements for the subcontract. The team also works with Procurement to develop specific subcontract language applicable to the work scope.

### ***Subcontractor Selection Process***

Bechtel Jacobs Company selects subcontractors to perform work within the scope of the M&I contract according to a defined process under the authority of the Bechtel Jacobs Company Procurement group, as represented graphically in Fig. 4.3. The subcontractors' previous safety and environmental compliance performance and a willingness to be mentored to attain excellence are factored into the selection process.

ES&H staff assist with selection of the subcontractors best able to perform the defined scope by evaluating the subcontractors' bid submittal information. This information includes the completed compliance matrix, previous ES&H performance statistics, qualifications of the proposed ES&H representative, and previous applicable work experience.

To streamline the subcontractor selection process and allow for "prequalification" of subcontractors, the functional ES&H organization provides performance criteria to the Procurement group. ES&H criteria used for prequalification are established thresholds for lost workday case rates, total Occupational Safety and Health



**Fig. 4.3** Under ISMS, the subcontract formation team has a primary role in the subcontractor selection process.

Administration (OSHA) recordable case rates, experience modification rates, and environmental performance factors, such as notices of violation. Subcontractors who are below these thresholds are prequalified to bid on a Bechtel Jacobs Company scope of work.

#### ***Subcontractor Accountability and Responsibility***

Subcontractors are responsible and accountable for their ES&H performance as specified in the subcontract. Subcontractors must provide a responsible line manager and an ES&H representative acceptable to Bechtel Jacobs Company to direct field activities in their respective assignments. All subcontracted activities will be conducted under the procedures of the subcontractor. The subcontractor's program must be consistent with Bechtel Jacobs Company ES&H contract requirements and will be reviewed for adequacy by the Bechtel Jacobs Company ES&H organization before the start of work.

As shown in Fig. 4.4, project team personnel perform post-award oversight activities to ensure subcontractor accountability for ES&H.

Interfaces between Bechtel Jacobs Company and the subcontractor are shown in Fig. 4.5. All subcontractors are required to complete the compliance matrix. In addition, subcontractors performing complex or hazardous work are required to submit an ES&H plan that demonstrates their commitment to ISMS and describes how the principles and core functions are incorporated into the work performed. Also, at a minimum, all subcontracted activities are conducted under the Bechtel Jacobs Company Radiation Protection Program unless a memorandum of understanding has been signed with another DOE prime contractor specifying otherwise.

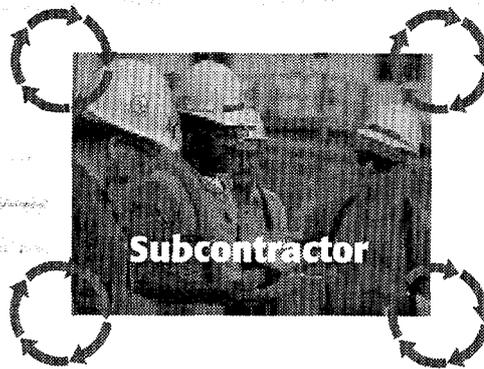
<u>Post Award</u>	<u>Work Execution</u>	<u>Project Closeout</u>	
<b>Field Services</b>			
<b>STR Assignment</b> Validates training and qualification of STR	<b>Program Monitoring</b> Monitors STR implementation	<b>Performance Metrics</b> Validates ES&H terms and conditions	
<b>Procurement</b>			
<b>Liaison</b> Interface between subcontractor, STR, and Safety Advocate	<b>Subcontract Administration</b> Provide STR and Safety Advocate overall subcontract interpretation support	<b>Financial Closeout</b> STR and Safety Advocate acceptance	
<b>ES&amp;H</b>			
<b>Safety Advocate Assignment</b> Validates training and qualifications of Safety Advocate	<b>ES&amp;H Submittal Process</b> Reviews and concurs with submittals	<b>ISMS Program Monitoring</b> Performs overall subcontractor ES&H performance assessments	
<b>STR</b>			
<b>Kickoff Meeting</b> <ul style="list-style-type: none"> <li>◆ Defines ES&amp;H roles and responsibilities</li> <li>◆ ES&amp;H matrix</li> </ul>	<b>Notice to Proceed</b> <ul style="list-style-type: none"> <li>◆ Confirms ES&amp;H submittals acceptable from Safety Advocate</li> <li>◆ Mobilization of subcontractor</li> </ul>	<b>Reporting and Inspections</b> <ul style="list-style-type: none"> <li>◆ Daily reports</li> <li>◆ Field verification of ES&amp;H performance</li> </ul>	<b>Final Closeout</b> <ul style="list-style-type: none"> <li>◆ Demobilization</li> <li>◆ Release of final payment</li> <li>◆ Record retention closure</li> </ul>
<b>Safety Advocate</b>			
<b>ES&amp;H Definition</b> <ul style="list-style-type: none"> <li>◆ Translates ES&amp;H requirements</li> </ul>	<b>Submittal Review and Verification</b> <ul style="list-style-type: none"> <li>◆ Facilitates submittal review through ES&amp;H department</li> </ul>	<b>ISMS Project Oversight</b> <ul style="list-style-type: none"> <li>◆ Daily mentoring of ES&amp;H implementation</li> <li>◆ Daily reporting to STR</li> </ul>	<b>Performance Assessment</b> <ul style="list-style-type: none"> <li>◆ Provide STR and Procurement with ES&amp;H performance evaluation</li> </ul>

ETPIGA 98-1430

*Fig. 4.4 Project team oversight of subcontract work execution and closeout.*

- Project Team**
- ◆ Define scope of work
  - ◆ Prepare compliance matrix
  - ◆ Require participation in ES&H programs

- Safety Advocate**
- ◆ Trained in tailored ES&H
  - ◆ Assist subcontractor with ES&H compliance
  - ◆ Resource for subcontractor and STR



- Project Team**
- ◆ Add compliance matrix to subcontract package
  - ◆ Make ES&H document available to bidders
  - ◆ Review bidders' compliance matrix

- STR Oversight**
- ◆ Work for project manager
  - ◆ Trained in ES&H requirements contract management
  - ◆ Provide subcontractor with direction to balance priorities

**Fig. 4.5. Our ES&H and subcontractor personnel work together to implement ES&H requirements.**

Subcontractors are responsible for reporting all accidents, injuries, incidents, environmental releases or noncompliances, and near misses to the STR and the project manager. The project manager is responsible for initiating the appropriate level of incident investigation. The Bechtel Jacobs Company safety advocate may provide information on incident investigation and presentation formats required by Bechtel Jacobs Company and DOE.

Subcontractors are also responsible for ensuring the competence of personnel performing work under their scope. Personnel must have competence commensurate with their responsibilities.

Subcontractors are responsible for maintaining current qualifications and training for their employees. All subcontractor employees are required to perform work in a manner consistent with our ES&H culture. Subcontractors are expected to take appropriate action when any employee demonstrates a lack of commitment to our ES&H culture.

#### ***Subcontractor Compliance***

Subcontractors are required to demonstrate compliance with the approved ES&H matrix they submitted before the contract was awarded. If the subcontractor does not have a program that is consistent with our requirements, they will either be required to develop one or use a blue-sheet-like process to incorporate the Bechtel Jacobs Company procedure or process into its program.

#### ***Subcontractor Work Authorization***

Contractual approval to perform work is managed by the Bechtel Jacobs Company Procurement group. The project Procurement representative is responsible for the definition and administration of the subcontractor's scope of work under the contract. The STR is responsible for managing and monitoring the subcontractor's day-to-day performance of work.

#### ***Subcontractor ES&H Incentives***

To enhance the ES&H culture of its subcontractors, Bechtel Jacobs Company may offer financial incentives to subcontractors for achieving ES&H excellence. Incentives may be in the form of reduced retention of contract payments.

#### ***Facility Management for other DOE Reservation Residents***

The project teams have the unique task of integrating the ISMS culture as it relates to interaction with other DOE prime contractors, reindustrialization tenants, and other government agencies on DOE owned or leased property. Formal agreements are negotiated between the project team(s) and the affected DOE reservation resident(s) to ensure continuity in the implementation approach.

The applicable project team assigns a building operator to each facility through the Building/

Facility Responsibilities program. This guideline applies to facilities and process systems that are operational as well as those that are no longer in use, including those under standby, shutdown, decontamination/decommission, or environmental remediation status.

For self-performed work, the building operator is responsible and accountable for implementing the ES&H plan, design basis documentation, and

emergency response plans for the facility. For subcontracted scopes of work that involve the use of multiple occupancy space, such as office buildings, laboratories, warehouses, material and equipment laydown areas, and leased facilities, the building operator coordinates through the applicable project team's STR and safety advocate.

## 5. AUTHORIZATION AGREEMENTS

The Bechtel Jacobs Company M&I contract provides assurance that important activities are initiated only when the appropriate controls are in place and the appropriate reviews and approvals by DOE have been obtained. Consistent with the Defense Nuclear Facilities Safety Board Recommendation 95-2 Implementation Plan, the Bechtel Jacobs Company prime contract

- requires Bechtel Jacobs Company to manage work safely (ISMS),
- includes an agreed-upon list of requirements (Section J, Appendix E), and
- establishes safety management expectations (performance-based fee and performance objectives).

The Bechtel Jacobs Company work scope is being conducted in accordance with DOE-approved Work Smart Standards that specify requirements necessary and sufficient for ES&H protection. Work Smart Standards include requirements to develop and comply with the appropriate federal and state permits, facility authorization basis documents (including change control), radiation protection plan, and quality assurance plan, as well as requirements to complete appropriate readiness assessments before initiating activities. Additionally, selected activities are carried out under Authorization Agreements that have been jointly approved by Bechtel Jacobs Company and DOE.

## 6. ISMS MILESTONES

The Bechtel Jacobs Company prime contract with DOE provides a two-year transition period (April 1, 1998, to April 1, 2000) during which the company will shift from an M&O to an M&I method of accomplishing work. Implementation of the Bechtel Jacobs Company ISMS has evolved significantly since the beginning of this transition period. Initially, a large number of workers formerly employed by Lockheed Martin were transitioned to Bechtel Jacobs Company. Because of Bechtel Jacobs Company's commitment to subcontract 90% of the EM work, most of these workers will, over the course of the transition, become employees of one of our subcontractors. Approximately 40% of this workforce transition has already occurred. The award of subcontracts for the execution of EM work and the associated reduction in Bechtel Jacobs Company staffing as employees are transitioned to subcontractors is represented graphically in Fig. 6.1.

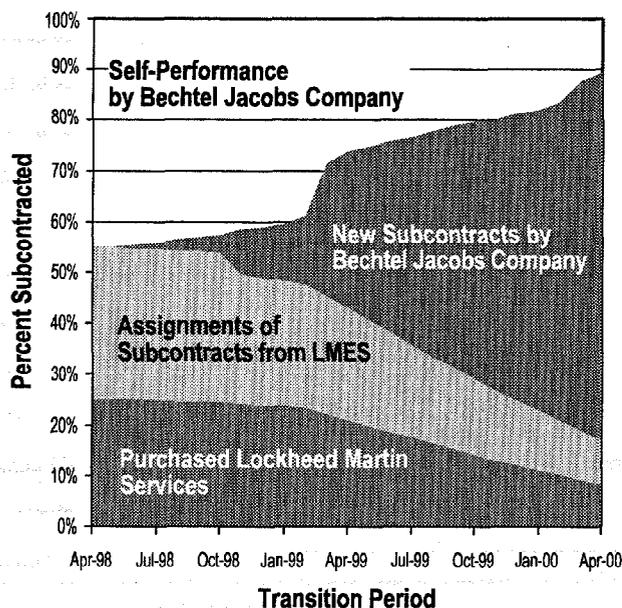


Fig. 6.1. Subcontracted work.

As part of the implementation of ISMS, the following actions were taken during the phase-in period before April 1, 1998:

- completed blue-sheeting of applicable Lockheed Martin procedures to ensure continuous operations during the transition period;

- submitted ISMS description to DOE-ORO (February 16, 1998);
- submitted Radiation Protection Plan to DOE-ORO (February 2, 1998); and
- initiated facility walkdowns and due diligence reviews (February 17, 1998).

During the initial months of the transition period since April 1, 1998, Bechtel Jacobs Company has continued with the implementation of ISMS by:

- including ISMS requirements in RFPs,
- implementing the STR and safety advocate functions to mentor subcontractors and ensure ES&H excellence,
- revising blue-sheeted Lockheed Martin procedures into Bechtel Jacobs Company programs and procedures,
- completing the due diligence reviews,
- developing an ISMS supplement to serve as a road map from the ISMS description to the ISMS implementing mechanisms,
- performing a programmatic baseline assessment of the status of ISMS implementation, and
- performing a line self-assessment of ISMS implementation.

At the beginning of FY 1999, the DOE-ORO EM COR for Bechtel Jacobs Company established a joint DOE/Bechtel Jacobs Company ISM team. The purpose of this team is to plan, coordinate, and conduct ISM-related review and assessment activities necessary to ensure readiness for Phase I and Phase II verification. This team has completed a pilot Phase I verification assessment. In performing this assessment, the team reviewed the:

- adequacy of documentation at the corporate level,
- level of ISM program knowledge of the senior managers, and
- communication of expectations.

As a result of this assessment, the team concluded that:

- the Bechtel Jacobs Company ISMS Description meets DOE's expectations for an effective ISMS,

- senior managers are knowledgeable of and actively participate in the implementation of ISM, and
- communication of expectations needs to be a continued focus.

In an August 31, 1999, memo to the ORO manager, the EM COR accepted the team's recommendation that the Bechtel Jacobs Company ISMS Description is complete and ready for verification.

The joint team is proceeding into a review of Phase II implementation and will provide feedback to DOE on a monthly basis. A combined Phase I/Phase II verification is planned for January 2000.

## 7. ES&H PERFORMANCE EXPECTATIONS

Bechtel Jacobs Company and ORO are firmly committed to the safety of workers and the public and to protection of the environment. Effective integration of ES&H into all aspects of Bechtel Jacobs Company work planning and execution is a fundamental element of this commitment. The following tables define the ORO specific ES&H performance expectations for Fiscal Year 2000.

Table A defines a number of specific, focused ES&H performance expectations that represent areas of particular interest.

Table B defines adverse ES&H performance conditions which, if encountered, would be indicative of an ES&H program that does not meet minimum requirements and could provide a basis for ORO to invoke the conditional payment of fee clause.

**Table A. FY 2000 ES&H Performance Expectations**

	Element <sup>1</sup>	Expectation	Deliverable
ESH-A01	<p><b>INTEGRATED SAFETY MANAGEMENT SYSTEM</b></p> <p>Since April 1998, Bechtel Jacobs Company LLC has been developing and implementing systems that would transition them from a management and operations mode (M&amp;O) of operation to one of management and integration (M&amp;I). As such, their ISMS implementation is reflective of the dynamics associated with evolving systems and processes.</p>	<p>A01-1 Demonstrate continued progress toward implementing ISMS in an M&amp;I environment.</p> <p>A01-2 <i>Core Function: Feedback &amp; Continuous Improvement</i> Develop and implement an M&amp;I contract self-assessment program reflecting assessment of the integration of the ISMS Core Functions, Guiding Principles, and worker involvement.</p> <p>A01-3 <i>Guiding Principle: Qualifications Commensurate with responsibilities</i> Develop and implement a process for linking required training with responsibilities for the Bechtel Jacobs Company organization.</p>	<p>A01-1.1 Trend implementation of ISM on a quarterly basis (November 15, 1999; February 15, 2000; May 15, 2000; August 15, 1999) utilizing the Bechtel Jacobs Company ISMS evaluation metric and assess strengths and areas for improvement.</p> <p>A01-1.2 Attain programmatic and field implementation of ISMS by April 1, 2000 (or as scheduled by DOE-OR) by completing Phase I and Phase II ISMS Verification.</p> <p>A01-1.3 Submit ISM System Description update by October 30, 2000, in accordance with DOE requirement.</p> <p>A01-2.1 Develop and pilot an M&amp;I self-assessment program by January 15, 2000.</p> <p>A01-2.2 Establish schedule and implement the M&amp;I self-assessment program by April 1, 2000.</p> <p>A01-3.1 Develop the program for linking required training to responsibilities for Bechtel Jacobs Company positions and establish a schedule for completing job responsibility/training requirements descriptions by November 30, 1999.</p> <p>A01-3.2 Meet established schedule in A01-3.1 above.</p>

**Table A (continued)**

	Element <sup>1</sup>	Expectation	Deliverable
ESH-A02	ES&H PERFORMANCE METRICS	A02-1 Identify, analyze, and report performance for key ES&H leading and lagging program metrics. Attain a favorable performance trend relative to applicable ES&H benchmarks.	<p>A02-1.1 Provide a report to DOE by the 15<sup>th</sup> of each month to be used at the DOE-BJC Monthly Status Review Meeting on the following ES&amp;H metrics:</p> <p><i>Lagging Indicator</i></p> <ul style="list-style-type: none"> <li>• Total OSHA Recordable Injury and Illness (RII) Rates</li> <li>• Lost Workday Case (LWC) Rates</li> <li>• Radiological Occurrences reviewed for PAAA Applicability</li> <li>• Reportable Occurrences of Releases to the Environment</li> <li>• Environmental Notices of Violation</li> </ul> <p><i>Leading Indicator</i></p> <ul style="list-style-type: none"> <li>• Near Miss Events</li> <li>• Personal Radiological Contamination Events</li> <li>• Subcontractor ES&amp;H Program Performance Evaluation</li> <li>• "I Care/We Care" Issues</li> </ul> <p>These metrics shall include both Bechtel Jacobs Company LLC and Subcontractor performance where appropriate.</p> <p>A02-1.2 Provide analysis of data on a semiannual basis (due on May 1, 2000, and November 1, 2000).</p>
ESH-A03	HEALTH ISSUES	A03-1 Bechtel Jacobs Company will facilitate addressing historical and emerging health studies/issues relative to M&I contract scope. Demonstrating effective management and coordination of identified (by DOE-OR EM/EF) health evaluations/issues to ensure timely and efficient resolution.	<p>A03-1.2 Meet commitments for specific health issues as established by DOE-OR EM/EF Contracting Officer Representative.</p> <p>A03-1.2 Submit a quarterly summary report on December 15, 1999; March 15, 2000; June 15, 2000; and September 15, 2000.</p>

**Table A (continued)**

	<b>Element<sup>1</sup></b>	<b>Expectation</b>	<b>Deliverable</b>
ESH-A04	EMERGENCY MANAGEMENT	A04-1 Bechtel Jacobs Company will make demonstrable improvements in the Emergency Management Program. Hazards assessments and appropriate program command media will be developed. Training and qualifications for the ERO will be enhanced.	<p>A04-1.1 Submit a monthly report due on the first working day of the month on the company's progress in meeting the ORO Emergency Management Working Group's Corrective Action Plan.</p> <p>A04-1.2 Develop an annual drill and exercise schedule for ETTP by 10/29/99.</p> <p>A04-1.3 Submit to ORO an exercise report 30 days after the exercise.</p> <p>A04-1.4 Plan and conduct a Full Participation Exercise (FPE) for ETTP in accordance with the schedule developed in A04-1.2.</p> <p>A04-1.5 Submit final FPE report 30 days after event.</p>

<sup>1</sup>The performance indicators in Table A are DOE-ORO ES&H expectations for Bechtel Jacobs Company LLC. Although these are not intended to be applied with respect to invoking the Contract Conditional Payment of Fee clause, they represent elements of DOE-ORO's commitment to communicate focused areas for achieving excellence in contractor ES&H performance.

**Table B. Indicators of an Unsatisfactory ES&H Program**

The following adverse conditions are indicators of failure(s) in Integrated Safety Management System (ISMS) and/or implementation of the associated management control systems. These are to be applied, if necessary, with respect to invoking the Contract Conditional payment of Fee clause.

	<b>Adverse Conditions<sup>1</sup></b>
ESH-B01	<ul style="list-style-type: none"> <li>• A pattern of repetitive events or violations that indicate a breakdown in ISMS and/or the management control systems that implement the ISMS.</li> </ul>
ESH-B02	<ul style="list-style-type: none"> <li>• A work-related fatality or serious and debilitating injury resulting from a failure of ISMS and/or associated implemented management control systems.</li> </ul>
ESH-B03	<ul style="list-style-type: none"> <li>• An unplanned radiation exposure from a work activity with an individual dose exceeding 5 rem resulting from a failure of ISMS and/or associated implemented management control systems.</li> </ul>
ESH-B04	<ul style="list-style-type: none"> <li>• A pattern of or significant off-site release of hazardous, toxic, or radiological materials in quantities that exceed regulatory limits resulting from a failure of ISMS and/or associated implemented management control systems.</li> </ul>

<sup>1</sup>The above are subject to the pre-existing clauses of the Bechtel Jacobs Company LLC Contract.