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Rev. 0

Groundwater/Vadose Zone Integration Project

Project Management Plan

United States
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Richland, Washington

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Approval: M. C. Hughes, Vice President, Operations
Bechtel Hanford, Inc.

Signature 5/11/99 Date

B. D. Shipp, Associate Laboratory Director
Pacific Northwest National Laboratory

Signature 5/10/99 Date

A. M. Umek, TWRS Project Director
Fluor Daniel Hanford, Inc.

Signature 5/6/99 Date

The approval signatures on this page indicate that this document has been approved by the GroundwaterNadose Zone Integration Project contractors for transmittal to

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Project Management Plan

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ACRONYMS

AME	Assistant Manager for Environmental Restoration
BHI	Bechtel Hanford, Inc.
DARTS	Document and Records Tracking System
DIS	Document and Information Services
DMS	Document Management System
DOE	U. S. Department of Energy
DWP	*Detailed Work Plan*
Ecology	Washington State Department of Ecology
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ERC	Environmental Restoration Contractor
FDH	Fluor Daniel Hanford, Inc.
GW/VZ	Groundwater and Vadose Zone
HAB	Hanford Advisory Board
HQ	Headquarters
HSTD	Hanford Site Technical Database
HTI	Hanford Tanks Initiative
ILAW	Immobilized Low Activity Waste
LRP	*Long-Range Plan*
MYWP	Multi-Year Work Plan
NAS	National Academy of Sciences
OEA	Office of External Affairs
ORP	Office of River Protection
OU	Operable Unit
PHMC	Project Hanford Management Contract
PMP	*Project Management Plan*
PNNL	Pacific Northwest National Laboratory
RCRA	*Resource Conservation and Recovery Act*
RIDS	Records Inventory and Disposition Schedule
RL	Richland Operations Office
S&T	Science and Technology
SAC	System Capability Assessment
SE	Systems Engineering
SNF	Spent Nuclear Fuels
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
WAG	Washington Advisory Group
WBS	Work Breakdown Structure
WM	Waste Management
WSDOH	Washington State Department of Health

GLOSSARY

Baseline - A quantitative expression of planned costs, schedules, and technical requirements for a defined project. The baseline should include criteria to serve as a standard for measuring the status of resources and the progress of a project. The initial baseline for a project is normally completed at the end of the project's conceptual phase. The approved project baseline may be modified through the use of a formal baseline change control process. The GW/VZ project baseline is defined and maintained in the *Project Specification* and reflected in the ER Project *Detailed Work Plan* (DWP) and *Long-Range Plan*.

Change Control - A documented process that applies technical/management review and approval of changes to technical, schedule, and cost baselines.

Configuration Control - The systematic evaluation, coordination, documentation, implementation, and audit of all approved changes in the configuration of an element (i.e., structure, system, component) or effort throughout the life of a project.

Cost Baseline - A budget developed from the technical baseline cost estimate, with the majority of the budget time-phased in accordance with the project schedule. The cost baseline is referred to as a baseline since it is integrated with the technical and schedule baselines and is subject to formal change control. The cost baseline normally contains direct and indirect budget; management reserve budget; undistributed budget and higher level budgets; contingency amount; and amount for fee, as appropriate.

Groundwater/Vadose Zone Team - The team of three individuals representing BHI, PNNL, and the PHMC. This team is responsible for the integration and coordination of core projects in their organization relative to the GW/VZ Integration Project. Each representative plays a lead role in the Integration Project's management and decision making process.

Integration Project - The team consisting of RL, and contractors, that is responsible for the work scope associated with groundwater, vadose zone, and Columbia River activities at the Hanford Site.

Milestone - An important or critical event and/or activity that must occur in the project cycle to achieve the project objective(s).

Prioritization Logic - The prioritization logic identifies, in a flowchart format, the upper tier long-range plan strategy for a project, and serves as the basis for developing near-term detailed priority lists. The prioritization logic is updated on an annual basis, prior to the start of the fiscal year planning cycle, or more frequently (as the core priorities shift in importance).

Project - A unique effort that supports a program mission, with defined start and end points undertaken to create a unique product, facility, system, or end state, with interdependent activities planned to meet a common objective/mission.

GLOSSARY (continued)

Project Manager - An individual assigned responsibility and authority for successfully accomplishing the goals of a project. The project manager is responsible for planning, controlling, reporting, and managing a project effort.

Risk - A factor, element, constraint, or course of action on a project that introduces an uncertainty of outcome and the possibility of technical deficiencies, inadequate performance, schedule delays, or cost overruns that could impact a mission. In the evaluation of project risk, the potential impact and the probability of occurrence must be considered.

Schedule Baseline - A time-phased plan with a logical sequence of interdependent activities, milestones, and events necessary to complete a project. Changes to the schedule baseline are formally processed during the execution of the project (when required).

Scope - In management terms, "scope" refers to those performance and design requirements, criteria, and characteristics derived from mission needs that provide the basis for project direction and execution. In budget terms, "scope" refers to the congressionally approved project parameters/tasks as defined in the *Congressional Project Data Sheet*. In estimating terminology, "scope" generally refers to the quantity definition of the project(s), area(s), site(s), and facilities to which pricing is applied to calculate estimate value(s).

Stakeholder - Any group or individual affected by or who can influence the future of an organization (i.e., customers, regulators, employees, suppliers, owners, other agencies, Congress, and critics).

Systems Engineering - An engineering process that uses a systematic approach to create a product design which considers all project mission objectives and supporting functional requirements throughout the product life cycle (from conception through operations). Systems engineering is a logical sequence of steps transforming an operational need into a description of system performance parameters and a preferred system configuration.

Technical Baseline - A configuration identification document (or set of such documents) that is formally designated and approved by the DOE at a specific time. The conceptual design report (or its equivalent) typically forms the initial project technical baseline. The initial baseline, plus DOE-approved changes to it, constitutes the current technical baseline.

Work Breakdown Structure (WBS) - A multi-tiered framework that organizes and graphically displays elements representing work to be accomplished. The WBS may or may not be product-oriented; orientation may be towards products, project phases, key decision points, various budgeting units of measure (e.g., activity data sheets), or a combination thereof. The WBS is organized such that each element can be estimated, scheduled, budgeted, and reported in terms of work progress.

1.0 INTRODUCTION

1.1 PURPOSE OF THE PROJECT MANAGEMENT PLAN

This *Project Management Plan* (PMP) defines the authorities, roles, and responsibilities of the U.S. Department of Energy (DOE), Richland Operations Office (RL) and those contractor organizations participating in the Hanford Site's Groundwater/Vadose Zone (GW/VZ) Integration Project. The PMP also describes the planning and control systems, business processes, and other management tools needed to properly and consistently conduct the Integration Project scope of work.

This PMP, along with other GW/VZ documents (see Section 9.0), contributes to and supports the achievement of the GW/VZ mission, which is as follows:

> *To ensure that Hanford Site decisions are defensible and possess an integrated perspective for the protection of water resources, the Columbia River environment, river-dependent life, and users of the Columbia River resources, the mission of the GW/VZ Project is to develop and conduct defensible assessments of the Hanford Site's present and post-closure cumulative effects of radioactive and chemical materials that have accumulated throughout Hanford's history (and which continue to accumulate). To support this mission, the GW/VZ Project will also define those actions necessary to establish consistency and maintain mutual compatibility among site-wide characterization and analysis tasks that bear on decisions, receptor impact, and regulatory compliance. The GW/VZ Integration Project will identify and oversee the science and technology initiatives pursued by the national laboratories (as necessary) to enable the assessment mission to be successfully completed.*

1.2 PMP OBJECTIVES

The identification and application of effective project management tools is fundamental to establishing oversight and integrated management of the Hanford Site's many inter-related GW/VZ activities. Preparing and implementing effective systems, and associated processes, also serves to establish credibility with concerned Tribal Nations, stakeholders, and regulators.

The main objectives of the PMP are to outline the management processes and actions necessary to accomplish the following:

- Define the project participant responsibilities and planning methods.
- Establish project cost, schedule, and technical baselines.
- Identify systems and methods to monitor project status, report and analyze performance (using selected indicators), and provide adequate visibility for identified project risks.

- Establish change control and configuration management processes for project baselines, including technical configuration control.

An overriding goal of this PMP is to ensure consistent application of approved management policies and systems throughout the life of the Integration Project. This is especially important to the GW/VZ site-wide management and integration mission, because of the number and diversity of involved GW/VZ activities, participating organizations, and interested parties.

1.3 MANAGEMENT BASIS

A certain management basis serves to define boundaries for the Integration Project in terms of technical and administrative scope, organizational authorities, responsibilities, ties to other Hanford Site projects, site-wide priorities, funding basis, cost and schedule controls, legal and regulatory requirements, contractual obligations, communication protocols, and other business matters. The fundamental elements of this basis include the following:

- The RL Assistant Manager for Environmental Restoration (AME) is responsible for directing the Hanford Site's GW/VZ Integration Project mission. Bechtel Hanford, Inc. (BHI) is assigned as the integrating contractor for the project, with key participation and support provided by Fluor Daniel Hanford, Inc. (FDH) and the Battelle Memorial Institute (Pacific Northwest National Laboratory, i.e., PNNL).

- The site-wide GW/VZ integration function will be managed as a project. The design of the management structure, its organizational roles, the baseline framework, and baseline tools will be based on the Hanford Site's Environmental Restoration (ER) Project management approach.

- Enabling authority is assigned by the RL Manager to the AME, as the lead RL project office, and to BHI, as the integrating contractor, to accomplish the site-wide integration of the multiple GW/VZ activities. This authority will be invoked through the RL contracting officer, or contracting officer's representative, who will direct the changes required to implement the needed actions. This authority permits the Integration Project team to (1) integrate the GW/VZ scope-related activities of other Hanford Site programs, projects, and contractors; (2) establish configuration control of the GW/VZ technical baseline; (3) approve work priorities; (4) monitor and effect control over baseline performance; (5) manage the ER-authorized budget and funds; and (6) manage change control processes.

- Hanford Site contractors will continue to perform current-year planning activities in FY99, unless specific activities conflict with the purposes and mission of the site-wide GW/VZ integration effort, in which case direction will come from the RL contracting officer. Future year activities of involved programs will be reviewed and approved by the Integration Project team in order to ensure comprehensive overall planning information, as well as compatibility with this site-wide mission. Subsequent direction will be given to contractors through the RL contracting officer (as necessary).

2.0 PROJECT ORGANIZATION

2.1 MANAGEMENT APPROACH

The Hanford Site's GW/VZ Integration Project reports administratively through the RL Field Office Manager to the Environmental Management (EM) program office at DOE Headquarters (HQ). HQ sets overall EM management goals and objectives, provides oversight of RL performance in achieving these objectives, and is the project lead for interface with Congressional staff, the Office of Management and Budget, the National Academy of Sciences (NAS), and other organizations. The field office develops priorities and proposed budgets to achieve the program. It also executes, controls, and reports the activities.

The Integration Project manages and/or interfaces with three areas of work scope:

- The Integration Project work scope, which is directly funded and managed by the Integration Project, and which includes the System Assessment Capability (SAC), Science and Technology (S&T), Peer Review, Public Involvement, and Project Management.

- The GW/VZ related activities, termed the "core projects," which are funded and executed by Hanford Site organizations. These activities are part of the Integration Project planning, reporting, and change control processes.

- Other Hanford Site activities that may have an interface with the Integration Project relative to GW/VZ activities, but which are not part of the Integration Project planning, reporting, and change control processes.

2.2 AUTHORITIES AND RESPONSIBILITIES

2.2.1 RL Field Office

Within RL, the AME is the lead organization for the Integration Project, and is responsible for integrating the other applicable DOE offices with this effort. Other involved DOE offices include (1) the Office of River Protection (ORP), which has responsibility for characterization of 149 single shell tanks (SSTs), 28 double shell tanks (DSTs), and past releases from these tanks; (2) the Assistant Manager for Technology, which manages S&T; (3) the Waste Program Division, which manages operations of low level burial grounds and retrievable transuranic waste sites; and (4) the Environmental Assurance and Permits Division, which manages Columbia River monitoring work.

The formal assignment of roles and responsibilities for the AME project manager and the DOE offices managing core projects was established in a letter from the RL Manager to contractors dated November 25, 1998 (see Appendix A). The AME project manager is required to ensure development of the required Integration Project data (characterization data and scientific information) and numerical tools for performing effects assessments for remedial action

proposals on a schedule that supports other major Hanford Site projects. The authority to accomplish this is established in two ways. First, the AME project manager is authorized to provide direction to the core projects assigned to the AME, and to the BHI Integration Office. Second, for projects managed by other DOE offices, the AME project manager is authorized to either initiate direction to these projects (through the managing DOE office) or concur on core project direction prepared by the managing DOE office.

In response to the DOE management structure, BHI has formed a multi-contractor project team that is co-located with BHI staff. Consistent with contract lines of authority, the BHI GW/VZ Integration Project Manager is required to transmit formal guidance, direction, or requests to other contractors through the AME project manager. However, before any such transmittal occurs, the integrated project team concept facilitates an understanding of and expedites implementation of formal transmittals.

The working relationships among RL organizations and the contractors are documented in the following sections.

2.2.2 GW/VZ Integration Project Office

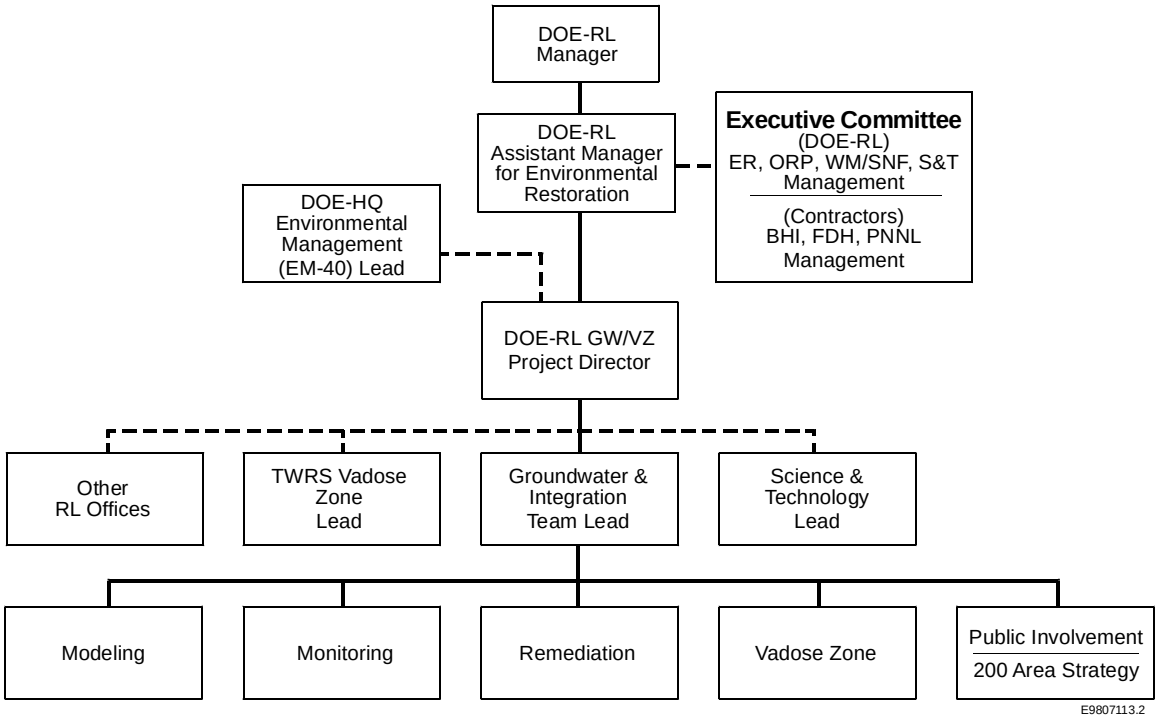
The RL Project Director is responsible for ensuring that Hanford Site GW/VZ activities are integrated into a single planning effort. The RL Project Office provides required contractual direction to BHI, FDH and PNNL, as well as oversight of their performance.

The RL Project Office cooperates closely with the RL offices of the ORP, Waste Management (WM), S&T programs, the Environmental Assurance, Policy, and Permits Division, and other site organizations to ensure that respective programmatic responsibilities and milestones supporting the site-wide integration effort are clearly understood, correctly prioritized, and successfully completed.

Figure 2-1 shows the RL Project Office organization that reports to the RL AME. While the normal DOE chain-of-command for management exists between the RL Project Director, the AME, and RL Manager, direct communications have also been established between the RL Project Office and HQ EM-40.

DOE has also established a GW/VZ Executive Council that reviews project progress, provides guidance, and resolves issues between DOE offices and contractors.

Figure 2-1. GW/VZ Integration Project: DOE Organization.



The GW/VZ Executive Committee is chaired by the AME and consists of senior RL managers representing the ER Project, ORP, WM, Spent Nuclear Fuels (SNF), and S&T programs, as well as senior managers from BHI, FDH, and PNNL. The committee was formed to accomplish the following:

- Maintain a senior-level awareness and understanding of the Integration Project.
- Authorize and hold the Integration Project accountable for integrating and managing GW/VZ activities across the Hanford Site.
- Attend or hold a separate project review on the status of the key activities. The committee can assign actions and support resolution of issues that are beyond the Integration Project organization's control.
- Anticipate and provide guidance to the project team on broad site-wide issues, changes (etc.) that could impact the Integration Project.
- Resolve issues impacting multiple RL programs.

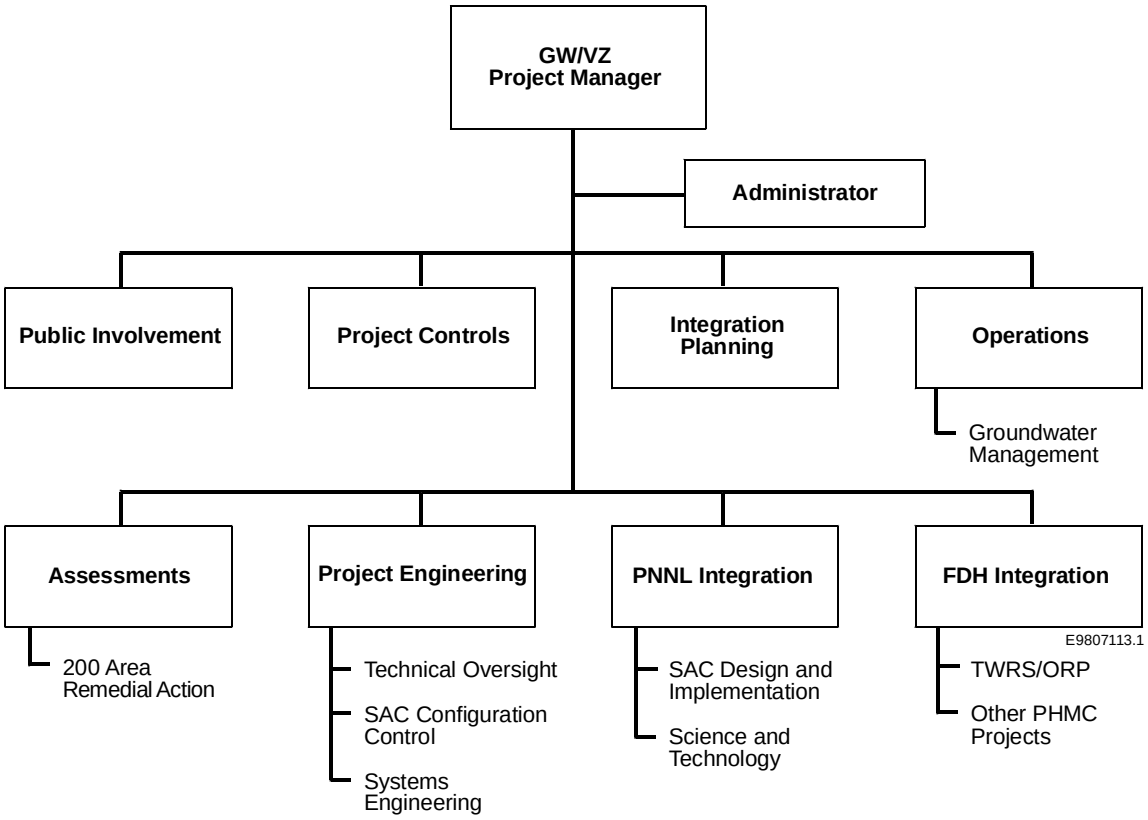
The GW/VZ Integration Project Office, with support by BHI, serves as the primary point of contact for Tribal Nations, stakeholders, regulators, citizen's advisory board(s), congressional delegations, other state and federal agencies, the media, and other external organizations and

individuals relative to the defined Integration Project scope. Although these entities are not part of the direct management chain for the project, their desire to be kept informed and to participate is strong and their input is valued by DOE and the project team.

2.2.3 Contractor Project Team

The contractor project team, which reports to the RL Project Office, is made up of the three principal contractors: BHI, FDH, and PNNL. Figure 2-2 summarizes the contractor project team organization. The primary responsibilities for each of these team members are summarized below, and are more fully described in the following subsections.

Figure 2-2. Contractor Project Team Organization.



The GW/VZ Integration Project poses a unique challenge and a new way of doing business for Hanford Site. While BHI has been assigned the project lead through the AME organization, and the PHMC and PNNL have been directed to support the project, there are no contractual agreements that define the respective roles and responsibilities of the contractors relative to the Integration Project. This PMP will provide the basis for further definition of roles and responsibilities. While the participating contractors are accountable for their work, the success of the Integration Project is dependent on contractor coordination, cooperation, and compromise.

The overall roles of the contractors are as follows:

BHI has been assigned responsibility for the overall management and integration of the GW/VZ project. This includes the integration of the existing planning and reporting system, and management and maintenance of the technical baseline (which consists of the *Project Specification, Cost and Schedule Baseline*, and *Long-Range Plan*). Additionally, BHI's groundwater management and 200 Area assessment activities are core projects that will support and/or interface with the Integration Project.

FDH has the role of integration for the Hanford Site and, as such, has a primary role of incorporating the Integration Project into the overall Hanford Site technical baseline. Additionally, the PHMC's ORP vadose zone characterization, ILAW characterization and performance assessment, HTI cone penetrometer development, and solid waste performance assessment activities are core projects that will support and/or interface with the Integration Project.

PNNL is the science and technology lead for the Integration Project. This responsibility includes the technical lead in the development and implementation of a S&T Roadmap, the development of the SAC, and the interface with other national laboratories. Additionally, PNNL's groundwater monitoring and modeling, and Columbia River monitoring, are core projects that will support and/or interface with the Integration Project.

2.2.3.1 GW/VZ Integration Project Manager. The BHI Integration Project Manager reports through BHI management to the RL Project Director, with the following primary responsibilities:

- Provide Integration Project team leadership.
- Provide a management interface with the RL Project Director.
- Act as independent facilitator for GW/VZ team decision processes.
- Implement and/or communicate recommendations of the GW/VZ team to the RL Project Director and Integration Project team members.
- Authorize work within an approved project baseline, scope, and budget for GW/VZ Integration Project activities.
- Support the RL interface with HQ, Tribal Nations, stakeholders, regulators, congressional representatives, the media, and other external organizations and individuals.
- Ensure that BHI, FDH, and PNNL provide the resources required for the project in accordance with approved work plans.
- Develop Integration Project protocols, where necessary.

- Develop and administer Integration Project budgets.
- Track, monitor, control, and report project performance/status.
- Manage baseline change control.
- Report events and occurrences; hold critiques; perform self-assessments; and share lessons learned.

2.2.3.2 GW/VZ Team (BHI, PNNL, FDH). The GW/VZ Team consists of a representative from each of the three contractors (BHI Project Engineer, FDH Integration Manager, and PNNL S&T Manager). This team is responsible for scope integration and coordination of core projects in their organizations relative to the Integration Project. Each representative plays a lead role in the Integration Project's management and decision-making processes. In addition to the specific functional responsibilities identified in Section 2.2.3, the GW/VZ team responsibilities are as follows:

- When specific decisions relative to the Integration Project are needed, the GW/VZ team will develop and provide recommendations to the Integration Project Manager. The GW/VZ team will concur on the scope, cost, and schedule for the Integration Project.
- Identify the scope, schedule, and resources needed to perform specific tasks, as requested by the GW/VZ team.
- Provide the resources (staff and technical support) required to implement assigned tasks funded by the Integration Project.
- Efficiently manage costs, schedule, and resources for assigned scope in accordance with project baselines and work order agreements.
- For assigned tasks and core activities, apply appropriate project controls and report performance/status in accordance with reporting requirements established for the Integration Project.
- Interface with respective RL project lead counterparts.
- Interface with senior management within their respective companies.
- Manage the interface between their company's core project activities and the Integration Project.
- Sign off on change controls for inter-project impacts relative to the Integration Project.
- Support the RL interface with HQ, the Tribal Nations, stakeholders, and regulators.

- Provide early notices to the BHI Integration Project Manager of known or anticipated performance variances; technical issues; safety, health, or environmental problems; regulatory compliance issues; or other issues that might affect performance, cost, or schedule.

- Consult with legal counsel for their respective companies on any legal issues arising in the course of the project, including compliance with environmental and safety regulations.

2.2.4 Project Activity Roles and Responsibilities

Integration Project activities can be generally segregated into the following five areas.

- Management and Integration
- System Assessment Capability
- Science and Technology
- Peer Review
- Public Involvement

The general roles and responsibilities for the Integration Project, and individual project contractors, are identified in Sections 2.2.4.1 through 2.2.4.5. These roles and responsibilities are summarized in Table 2–1.

2.2.4.1 Management and Integration. The Integration Project is responsible for the management and integration of GW/VZ activities, and integration with the core project activities associated with the groundwater, the vadose zone, and the Columbia River pathway.

The GW/VZ team (BHI, FDH, PNNL) is responsible for highlighting and articulating opportunities for integration, and for taking the actions necessary to implement these opportunities. Additionally, the GW/VZ Team, by authority of the AME, participates in, provides recommendations for, and concurs with the definition of the technical baseline, as well as planning change control processes for the core project activities and the Integration Project.

BHI has the role of integration, which includes oversight of the overall scope definition, budget planning, reporting, and performance evaluation. In addition, BHI acts as the regulatory and stakeholder interface for the Integration Project.

BHI is responsible for the Integration Project technical baseline, and manages the baseline systems, as well as the planning, reporting, performance evaluation, and change control systems for the Integration Project. This includes both fiscal year and lifecycle activities. In addition, BHI is responsible for obtaining the resources and defining the requirements necessary to implement these management systems.

Core projects (BHI/FDH/PNNL) support technical baseline development, planning, and reporting, and are responsible for execution of the assigned work scope.

Table 2-1. Summary of Integration Project Roles and Responsibilities.

	Management and Integration	System Assessment Capability	Science and Technology	Peer Review	Public Involvement
Integration Project	Manage and integrate GW/VZ and core project activities.	Define, coordinate, and develop SAC data and tools.	Develop S&T Roadmap; integration and implementation of S&T activities.	Manage and integrate the multiple peer review processes for the Integration Project.	Define and implement a public involvement process.
GW/VZ Team	Highlight integration opportunities. Take actions to implement opportunities. Provide recommendations and concur on technical baseline, planning, and change control.	Concur on SAC standards, requirements, design, and operability.	Identify S&T needs and concur on S&T planning.	Identify opportunities for peer review and support the peer review process.	Identify public involvement opportunities. Concur on PI planning and press releases.
BHI	Oversight of planning, reporting, and performance evaluation. Regulatory and stakeholder interface. Define and maintain the technical baseline. Management of core projects.	Oversight of planning, reporting, and performance evaluation. Manage configuration control systems for data and modeling activities.	Oversight of planning, reporting, and performance evaluation. Support S&T planning and implementation.	Administer, for DOE, planning, reporting, and performance evaluation.	Oversight of planning, reporting, and performance evaluation. Manage PI planning, reporting, and performance. Coordinate the PI plan and activities. Support GW/VZ PI process.
PNNL	Support technical baseline development, planning, and reporting. Management of core projects.	Manage the development and implementation of SAC tools.	Manage S&T planning, reporting, and performance. Develop and implement the S&T Roadmap. Interface with EM-50 and the national laboratories.	Identify opportunities for peer review, and support the peer review process.	Identify PI needs and opportunities. Support the GW/VZ PI process.
FDH	Support technical baseline development, planning, and reporting. Management of core projects.	Support SAC development, implementation, and configuration control.	Support S&T planning and implementation.	Identify opportunities for peer review and support the peer review process.	Identify PI needs and opportunities. Support GW/VZ PI process.
Core Projects	Support technical baseline development, planning, and reporting.	Support SAC development and utilize data and tools in project planning and decisions.	Support S&T planning and implementation. Define S&T needs and incorporate S&T activities.	Identify opportunities for peer review and support the peer review process.	Identify PI needs and opportunities. Support GW/VZ PI process.

2.2.4.2 System Assessment Capability. The Integration Project is responsible for the definition, coordination, and development of data and tools (conceptual and numerical models) to assess the cumulative impacts of all of the Hanford Site wastes. Additionally, the Integration Project will develop and implement the configuration control systems relative to SAC data and modeling activities.

The GW/VZ Team concurs on standards/requirements, as well as the design and the operability of the SAC.

BHI has the role of integrating of the SAC activity and core projects, including the overall scope definition, budget planning, reporting, and performance evaluation.

BHI manages configuration control systems relative to the SAC data and modeling activities. This includes fiscal year planning and reporting, obtaining resources, accountability for performance, review of existing assessment activities, and documentation of standards/requirements for data and modeling.

PNNL manages the development and implementation of the system assessment tools, which includes fiscal year planning and reporting, obtaining resources, accountability for performance, definition of requirements system, design, and implementation of tools.

Core projects provide support (as required), utilize information, and implement the tools and results to support project planning and decisions.

2.2.4.3 Science and Technology. The Integration Project is responsible for developing a S&T Roadmap that responds to the core projects and SAC needs. The Integration Project is also responsible for the management, integration, and implementation of the S&T activities identified in the S&T Roadmap.

The GW/VZ Team is responsible for defining S&T needs, and for concurring on the S&T Plan and Roadmap.

BHI has the role of integrating the S&T and core projects, including budget planning, overall cost and schedule reporting, and performance evaluation of activities. Additionally, BHI acts as the regulatory and stakeholder interface for the Integration Project.

PNNL manages the S&T activities that include fiscal year planning and reporting, obtaining resources, accountability for performance, development and implementation of the S&T Plan and Roadmap, interface with EM-50 and the national laboratories for obtaining resources, and accomplishing work.

The core projects interface with the S&T team to define the project, SAC needs, and to implement appropriate S&T activities.

2.2.4.4 Peer Review. The Integration Project has several peer review activities. These include the Expert Panel, sub-panels of the Expert Panel (to address specific topics), the NAS, and the

Washington Advisory Group (WAG). The core projects may have additional peer review activities that are internal to the project.

The GW/VZ Team is responsible for identifying opportunities for peer review and supporting the peer review process.

BHI administers the Expert Panel and sub-panel, and provides support to DOE to facilitate NAS reviews. PNNL administers the WAG. In these roles BHI and PNNL are responsible for coordination of the meeting logistics, agendas, presenters, background materials, and ensuring that recommendations and/or actions are captured and responded to in a timely manner. Additionally, both are responsible for fiscal year planning (scope, cost and schedule) and reporting, obtaining resources, accountability for performance.

The core projects have a technical support role and are responsible for identifying opportunities for peer review, presentations to the panels, and responding to recommendations and/or actions. Core projects are responsible for funding the Expert Panel and sub-panels when they are used specifically for the project.

2.2.4.5 Public Involvement. The Integration Project is responsible for defining and implementing a public involvement process for establishing project credibility through regulatory, Tribal Nation, public, and stakeholder participation.

The GW/VZ team will support other Hanford Site Projects' public involvement activities, as appropriate. Additionally, the GW/VZ team defines public involvement opportunities and concurs on the PI Plan and press releases.

BHI has the role of integrating the public involvement activity, which includes the overall scope definition, budget planning, reporting, and performance evaluation.

BHI manages public involvement activities that include fiscal year planning and reporting, obtaining resources, accountability for performance, the coordination of press releases and public meetings, development of the Public Involvement Plan, and facilitation of the working groups.

Core projects are responsible for preparation of press releases relative to their projects, identifying PI needs, opportunities, and impacts, and supporting GW/VZ public meetings.

3.0 SYSTEMS ENGINEERING APPROACH

3.1 GENERAL

Systems Engineering (SE) is a structured approach applicable to the management of large, complex, and technically challenging projects. For the Integration Project, SE will be used to achieve coordinated site-wide planning, integration of resource requirements, prioritization of cross-program activities, life-cycle cost improvements, and identification of focused technical needs.

The Integration Project has initiated a series of steps to systematically engineer the Hanford Site subsurface management system. The same systems engineering approach used to integrate the surface facilities at the Hanford Site, and to develop the Hanford Site technical baseline database, will be used to define the scope, logic, interfaces, and functional requirements for the GW/VZ Integration Project. This effort will define the set of decisions that are dependent on Hanford Site groundwater and vadose zone information. The systems engineering effort will also define the information needed to make those decisions, as well as when the information is needed. Formal interface control will be established to ensure the right information is delivered on schedule. From this effort, more detailed and systematically developed plans for the project can be established. The information will be used to develop revisions to the current project specification document and this PMP.

As an early SE step, a mission analysis is conducted to identify the top-level functions that must be performed. These top-level functions are then broken down to more detailed functions, to the point where specific activities are identified and defined. Project requirements are extracted from public laws, DOE orders, federal and state agreements, Tribal Nations and stakeholder values, site-wide priorities, technical analyses, and risk assessments. Once defined, these requirements are assigned to functions in order to define how the activities must be performed.

The Integration Project faces a unique integration challenge in that each of the Hanford Site's ongoing programs and projects have, to different degrees, performed a systems analysis independent of one another and independent of this particular GW/VZ system assessment effort. Since all of these activities are required to proceed in parallel (and under separate dedicated RL and contractor management controls), the SE approach for the Integration Project needs to be flexible. Additionally, the constraints on the various GW/VZ functions and activities that establish GW/VZ performance parameters are only partially determined. For these reasons, the SE process will require several iterations to completely identify and specify all essential requirements.

3.2 INTERFACES

The Integration Project team has identified pertinent site-wide functional, physical, and organizational interfaces for the GW/VZ scope of work. The most obvious and interrelated of

these are termed “core” project activities, which include aspects of the ORP, ER, WM, EAP, and S&T programs (see Table 3-1).

The description of these activities includes definition of information, material, and resources that interface with the GW/VZ work scope, along with a clear delineation of programmatic responsibilities. To the fullest practical extent, these interfaces will be captured in Integration Project documentation in order to ensure proper recognition and to promote efficient cooperation. Additionally, where applicable, interface control documents will be developed to ensure that common requirements among projects are clearly documented and communicated.

Table 3-1. Hanford Site GW/VZ-Related Core Activities.

ORP - Hanford Tanks Initiative (HTI)
ORP - Immobilized Low Activity Waste (ILAW)
ORP - Vadose Zone Characterization
Solid Waste Management
Groundwater Monitoring and Modeling
Long-Term Monitoring
Vadose Zone Monitoring
Groundwater Remedial Actions
200 Area Remedial Action Assessments
Environmental Monitoring (Columbia River)

The structure of the project’s technical and administrative work elements have been defined, at a summary level, where close integration of involved programs and organizations is needed. Through this effort, known requirements and critical path activities have been identified and considered in developing technical, cost, and schedule baselines for the integration effort.

3.3 RELATIONSHIP TO HANFORD SITE-WIDE SYSTEMS ENGINEERING

The Hanford Site SE function maintains the *Hanford Site Technical Baseline* and the *Hanford Site Environmental Management Specification*. These documents are both sources of requirements and information for the Integration Project. Basic elements of the Integration Project functions and requirements will be incorporated into the Hanford Site SE in order to document initial interfaces with the overall Hanford Site effort. This will serve to identify high-level functional ties to other site programs and projects.

Initially, GW/VZ-related databases will be maintained separately. Subsequently, they will be shared with others. Site-wide interfaces will be coordinated with the PHMC SE group, and coordinated with the Hanford Site technical database (HSTD).

Since both the Hanford Site SE function and the Integration Project have strong integrating functions for many of the same activities, careful coordination is required to maximize efficiency and effectiveness.

4.0 MANAGEMENT CONTROL SYSTEM AND PROCESSES

4.1 PROJECT CONTROL SYSTEM

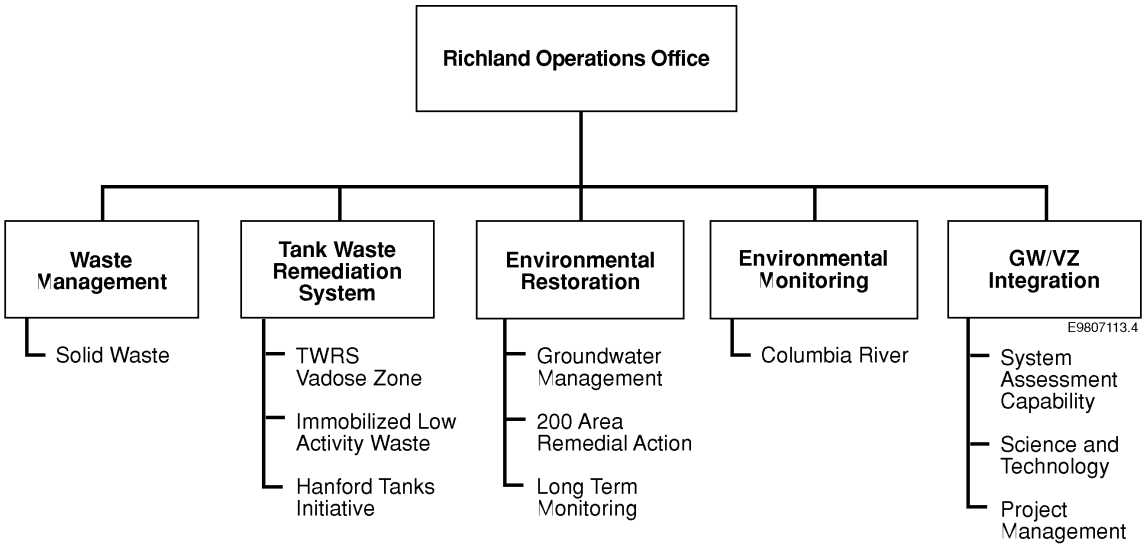
The planning process and control tools implemented through the Hanford Site's ER Project are used as the framework to integrate and manage the GW/VZ technical cost and schedule baselines.

To facilitate management of this process, Hanford Site contractors provide cost and schedule information to the ER Project, in the same format that is supplied to the various other RL programs. BHI is responsible for consolidating the data in the format required for the Integration Project. Each site contractor is responsible for the timeliness, validity, and accuracy of their data.

4.1.1 Work Breakdown Structure

The Work Breakdown Structure (WBS) for the Integration Project and associated core projects (see Figure 4-1) is based on the current Hanford Site WBS. The Integration Project has been designated as a separate program baseline summary (PBS) by HQ.

Figure 4-1. Work Breakdown Structure for the GW/VZ Integration Project.



4.1.2 Project Baseline Definition

4.1.2.1 Technical Baseline. The project technical baseline is derived from input provided by the Hanford Site contractors that are responsible for GW/VZ-related core activities. The baseline defines the management and integration scope of work to be performed through the lifecycle of the Integration Project, as well as requirements to be satisfied and methods to be used. This information is incorporated in the ER Project *Long-Range Plan* (LRP), and the *Groundwater/Vadose Zone Integration Project Cost and Schedule Baseline* (DOE/RL-98-89).

4.1.2.2 Schedule Baseline. The GW/VZ schedule baseline has been prepared in accordance with applicable laws, regulations, funding constraints, Hanford Site and project prioritization logic, long-range strategy, project goals and objectives, and *Hanford Federal Facility Agreement and Consent Order* (*Tri-Party Agreement*) milestone requirements. Integration Project schedules are developed and issued at three levels: Level 1 (LRP); Level 2 (summary); and Level 3 (detail).

In support of the project schedules, an integrated logic will be developed by the Integration Project team. The logic results from a process that defines the sequence of work execution, and which is used in conjunction with funding guidance as part of an iterative process to sequence work on the LRP.

4.1.2.3 Cost Baseline. The cost baseline was developed from input supplied by Hanford Site contractors that are responsible for GW/VZ integration and for core GW/VZ activities. This baseline includes the life-cycle budgets for the project, at the cost account level, or lower (if available). The integrated life-cycle baseline will be maintained through routine change control processes. The cost information for this scope of work will be integrated into a common report to reflect the total cost of GW/VZ management, integration, and core activities at the Hanford Site. The Integration Project team will review cost reports at the monthly project review meeting.

4.1.3 Project Work Authorization

The Integration Project team's management and integration activities are authorized by the PM, based on the funding process identified in BHI's baseline and funds management procedure manual (BHI-PC-01). Funding to Hanford Site contractors (other than BHI) that perform support activities related to the management of the Integration Project is provided by BHI through the Hanford Site work order process (see Section 5.1).

Core GW/VZ-related activities performed by the other Hanford Site contractors, under their separate contract scopes of work, are authorized through their respective authorization processes.

4.1.4 Change Control

Change action is initiated to address changes to the Integration Project technical, schedule, and/or cost baseline. The Integration Project team will also actively participate in the multi-year

work plan (MYWP) development and change control processes of other Hanford Site programs as they pertain to GW/VZ-related core activities. To ensure that GW/VZ-related project changes are integrated across the Hanford Site, BHI, FDH, and PNNL all have procedures that include requirements for identifying and reviewing inter-project impacts.

4.1.5 Funds Management

The Integration Project team and other Hanford Site contractors are required to stay within their authorized contractual budget. Current fiscal year work plans constitute the authority to perform work, but adequate funding must be provided through contract modifications before work can begin. The budgets and funding for GW/VZ activities reside with the project that is responsible for performing the work. Hanford Site contractors performing Integration Project activities are funded through the Hanford Site work order process, direct financial plans, or through subcontracts.

4.1.6 Reporting Requirements

Annual, mid-year, and monthly progress reports are required to identify the progress, performance, and status of the Integration Project and GW/VZ-related core activities. Hanford Site contractors that are responsible for core GW/VZ scopes of work provide data to the Integration Project team for integration into these reports.

4.2 MANAGEMENT REVIEWS

4.2.1 Routine Meetings

The Integration Project team will conduct routine meetings that include a review of technical aspects of the project, detailed schedules, progress reports, and the status of identified commitment and action items. The meetings will be held on a schedule that is established by the project team.

4.2.2 Performance Status Reviews

The ER Project conducts monthly project review meetings, at which the Integration Project provides a status briefing on progress versus plans, cost performance, and identification of significant issues requiring management action. When required to sufficiently explain the current status of the Integration Project work scope, Hanford Site contractors responsible for GW/VZ core activities will participate in the reviews and report on their activities.

HQ has established a quarterly review in which the Integration Project will participate. This review will be held approximately one month after completion of the quarter.

5.0 PROCUREMENT OF SERVICES

5.1 SUPPORT SERVICES FROM OTHER HANFORD SITE CONTRACTORS

As referenced in Section 4.1.3, Integration Project management support activities performed by Hanford Site contractors other than BHI are supplied to BHI through the Hanford Site work order process. BHI, FDH, and PNNL prime contracts with RL support this accepted practice.

Other GW/VZ-related core activities are typically performed by each contractor through their respective contract work authorization process.

5.2 PROCUREMENT FROM OTHER SOURCES

5.2.1 Subcontracts/Consulting Agreements

Each contractor has a procurement system that has been approved by RL for use in other Hanford Site operations. Procurements to support this project will be made in accordance with the provisions of these approved systems.

5.2.2 Supplemental Corporate Support

BHI, FDH, and PNNL each have approved mechanisms within their respective RL prime contracts to access supplemental support services from within their corporations, whether from a DOE contract at another site or from an element of the parent company that is unrelated to DOE work. Controls and approval requirements for such acquisitions are part of each prime contract agreement.

The term “Off-Site Services” (which is unique to the BHI contract) refers to the procurement of services by BHI from other Bechtel entities. Other contractors may use such terms as “Interdivisional Transfers” in reference to accessing such services. When Integration Project requirements indicate that a service of this type is needed, the respective contractor’s lead manager takes action to obtain the necessary support following the processes and procedures stipulated in the prime contract.

6.0 DOCUMENT CONTROL AND RECORDS MANAGEMENT

BHI Document and Information Services (DIS) processes, distributes, indexes, files, and collects Integration Project record information as it is generated and received. DIS uses an electronic document management system (EDMS), consisting of the Document and Records Tracking System (DARTS) and the Document Organization and Control System (DocsOpen), to index and track project documents.

6.1 RECORDS/DOCUMENTS GENERATED BY THE GW/VZ INTEGRATION PROJECT

Distribution of documents for the project is performed using hard copy or electronic formats. The Integration Project team provides DIS with unique retrieval data, including a designated alphanumeric project code, an associated Operable Unit (OU) identifier, and a subject code. Some documents are also placed on the ER Project's Internet web site after issuance. DIS submits required project documentation to the Hanford Site Administrative Record in support of *Tri-Party Agreement* commitments. DIS retires Integration Project records per RL Records Officer direction and per Records Inventory and Disposition Schedules (RIDS).

The RL Project Director approves the formal documentation that is issued to outside entities (such as regulators and other stakeholders). The BHI Project Manager, with concurrence from PNNL and FDH, approves formal documents issued to RL in support of the project. If PNNL or FDH issue formal correspondence to the RL/AME or BHI pertaining to the project, their respective project lead representatives (or other corporate officials, as appropriate) have approval authority for those documents, with concurrence from the BHI PM.

6.1.1 Correspondence

Project correspondence consists of any project-related letter, interoffice memorandum, facsimile transmittal, significant electronic mail/telecon (etc.) that is pertinent to the Integration Project and which is submitted to DIS for processing. A "significant" electronic mail/telecon is any item that requires a written response; responds to an action item; documents inspections or findings resulting from project or field reviews; includes a commitment; provides direction; and/or requires changes to previously documented or approved information on project cost, design, quality, safety, or schedule.

If project participants receive correspondence that has not been previously submitted to DIS, this correspondence must be submitted to DIS for processing at the earliest opportunity. Electronic mail may be submitted to DIS using the address *^BHI Document and Information Services*.

6.1.2 Documentation Other than Correspondence

Other forms of important project-related documentation include reports (both technical and non-technical), design engineering documents, publications, and related backup materials appropriate

for retention in project files. All pertinent backup data are submitted to DIS for processing and for issuance prior to distribution. DIS assigns document and revision numbers for these types of documents to assure retrievability and configuration control. Documents identified as being related to the Integration Project are captured in the project-specific fields in the DARTS database.

6.2 RECORDS/DOCUMENTS GENERATED OFF-PROJECT

Correspondence and other documents generated by off-project entities that are not directly involved in or funded under the Integration Project, but which are sent to the Integration Project team for information and/or use, are submitted to DIS for retention. The project team assists DIS with retrieval information, such as the appropriate project code, operable unit identifier, subject code (etc.). Documents that are generated off-project do not need to be submitted to DIS in hard copy format. Electronic files are acceptable and may be sent to DIS via the following e-mail address: *^BHI Document and Information Services*. For documents generated off-project that require submittal to the Administrative Record, the originating organization has the responsibility for the submittal.

7.0 GENERAL COMMUNICATIONS AND MEDIA RELATIONS

This section of the PMP addresses information queries/responses, announcements, and general (non-correspondence) communications relative to or on behalf of the Integration Project mission; RL organizations and Hanford Site contractors associated with this work scope; other DOE entities and affiliated contractors; other local, state, and federal government agencies, offices, and committees; representatives of public or private interest, advocacy, or business groups; and communication media organizations.

7.1 SITE INFORMATION ANNOUNCEMENTS

Integration Project activities may require periodic announcements and dissemination of information, such as all-employee messages and *Hanford Reach* articles, to Hanford Site employees. The BHI Public Involvement Lead is the primary point of contact for such site-wide information for the Integration Project. Individual projects may disseminate information and announcements through their organizational mechanisms, but must coordinate such actions with the BHI Public Involvement Lead.

The BHI Public Involvement Lead is responsible for reviewing the need for site information and presenting a recommendation to the BHI Project Manager and RL Project Director. Within the Integration Project team, the RL Project Director has final approval for GW/VZ-related Hanford Site announcements. Activities required for making approved site announcements are coordinated through the BHI Public Involvement Lead, who in turn processes such announcements through BHI External Affairs and the RL Office of External Affairs (OEA).

7.2 NEWS RELEASES AND MEDIA RELATIONS

News releases and media briefings are used to provide accurate, timely, and consistent information about the activities of the Integration Project.

All media contacts concerning the Integration Project scope, both planned and reactive, must be coordinated with the BHI GW/VZ Public Involvement Task Lead. The BHI Public Involvement Lead is responsible for coordinating media activities or requests, and for recommending appropriate courses of action to the BHI Project Manager and RL Project Director. Final approval for news releases and media relations is made by the DOE OEA Director.

Activities required to develop and distribute news releases, or to arrange media briefings, are coordinated through the BHI Public Involvement Lead. The BHI Public Involvement Lead, in turn, coordinates all news releases and media briefings through BHI External Affairs and the RL OEA.

7.3 PUBLICATIONS, PAPERS, AND PRESENTATIONS

Providing technical publications, papers, and presentations about the Integration Project to external audiences is an important part of the project's openness approach. The three principal contractors and RL will apply their respective controls for the development and approval of such technical materials. The contractor lead representatives will advise the BHI Public Involvement Task Lead of proposed publications, papers, and presentations as early as possible in order to enable the project to coordinate its information efforts. To assure consistency and accuracy of information, the content of these materials will be coordinated through the Integration Project and the RL Project Director.

Non-technical information materials regarding the Integration Project will be prepared for various internal and external entities. When requests are received or information needs are determined, RL or the contractor lead representatives will advise the BHI Public Involvement Task Lead as soon as possible to enable the project to coordinate its information efforts. Similar to the approval process for technical information, the content of non-technical publications and presentations will be coordinated through the Integration Project and the RL Project Director.

8.0 TECHNICAL PEER REVIEW

The Integration Project employs several review processes to ensure project technical success and validity. One of these processes involves external technical peer review. RL established a site-wide GW/VZ External Technical Peer Review Panel (Panel) to provide recommendations on the scope and nature of the technical activities that are part of the Integration Project's scope. The Panel's charter, structure, processes, meeting and reporting protocols are described in Appendix B. Additionally, the WAG and a committee of the NAS will provide external peer review of the GW/VZ Integration activities, with particular emphasis on the application and integration of S&T.

The Integration Project team and the core projects also conduct internal peer reviews. These reviews are conducted to evaluate the technical elements and to determine compliance with project requirements; applicable DOE orders; or other government agency, regulatory, program, or contract requirements.

9.0 REFERENCES

Ecology, EPA, and DOE, 1994, *Hanford Federal Facility Agreement and Consent Order*, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

BHI-PC-01, *Baseline and Funds Management System*, Bechtel Hanford, Inc., Richland, Washington.

DOE-RL, 1998, *Groundwater/Vadose Zone Integration Project Cost and Schedule Baseline*, DOE/RL-98-89, Draft A, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 1998, *GW/VZ Integration Project Specification*, DOE/RL-98-48, Draft C, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 1998, *GW/VZ Project Tribal Government and Public Consultation Plan*, DOE/RL-98-65, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 1998, *Hanford Site Environmental Management Specification*, DOE/RL-97-55, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington

DOE-RL, 1998, *Management and Integration of Hanford Site GW/VZ Activities*, DOE/RL-98-03, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

APPENDIX A

HANFORD LETTER ON SITE-WIDE GROUNDWATER/VADOSE ZONE INTEGRATION

AND

HANFORD LETTER OF DIRECTION FOR INTEGRATION PROJECT AUTHORITY

APPENDIX A

Hanford Letter on Site-wide Groundwater/Vadose Zone Integration

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

053845

DEC 3 1997

Mr. S. D. Liedle, President
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, Washington 99352-1666

RECEIVED
DEC 0 3 1997
BY DIS

Dear Mr. Liedle:

CONTRACT DE-AC06-93RL12367 - SITEWIDE GROUNDWATER/VADOSE ZONE INTEGRATION

In order to manage the integration of activities and issues associated with the protection of Hanford groundwater and vadose zone contamination (existing and postulated future releases), the Office of the Assistant Manager for Environmental Restoration (AME) has been directed to lead the effort for sitewide integration of vadose zone activities and coordination of vadose zone activities with groundwater activities. AME will work in close cooperation with the offices of Tank Waste Remediation System (TWRS) and Waste Management (AMW), respectively, to ensure that respective programmatic responsibilities and milestones are met within the sitewide integrated program. In this action, the responsibility for the development of sitewide program planning necessary to perform sitewide integration of vadose zone activities and the coordination of vadose zone activities with groundwater activities is assigned to Bechtel Hanford, Inc. (BHI).

There has been a heightened awareness of the potential for vadose zone contamination impacting the groundwater and requests from regulators and other participants, e.g., the Columbia River Comprehensive Impact Assessment and the Defense Nuclear Facilities Safety Board, to assess the cumulative impact of all waste sources from Hanford to the groundwater and the Columbia River. Hanford's strategic approach to assure groundwater and Columbia River Protection is articulated in the Hanford Groundwater Protection Management Plan (GPMP). The GPMP will require revision to incorporate vadose zone integration and other updates. It is imperative, at this time, to coordinate groundwater and vadose zone activities into a single planning effort, focusing on minimizing the potential for existing and future vadose zone contamination to impact groundwater and the Columbia River. A major component of this effort must be early and meaningful participation of the Hanford contractors, stakeholders, Tribes, and regulators in the development of Hanford's approach to managing vadose zone contamination issues and groundwater protection.

The initial specific scope of work assigned to BHI in the performance of this assigned role is listed below:

(1) Coordinate the necessary revisions to the GPMP to serve as the basis for the management of vadose zone contaminant issues and the management of groundwater resources. BHI will lead this effort with participation by the other site contractors with assignments aligned to established work scope. The revision will include early participation by our partners and the opportunity for public comment, Tribal consultation, and regulatory review of the draft product.

Mr. S. D. Liedle -2- DEC 3 1997

053845

(2) Develop a long-range plan, project management plan, and integrated program baseline with the assistance of other directly affected contractors, that integrates TWRS, AMW, and AME activities that characterize, monitor, predict, or impact vadose zone and/or groundwater contaminants or transport. The initial step is to identify the existing sitewide baseline activities that characterize, monitor, predict, or impact vadose zone and/or groundwater contaminant levels or transport, identify programmatic disconnects and recommend management alternatives to the U.S. Department of Energy, Richland Operations Office (RL).

(3) Development of a public involvement and Tribal consultation plan for sitewide vadose zone and groundwater coordination issues and assist RL in public, Tribal, and regulatory interfaces.

BHI has been directed to provide to AME a plan to accomplish the direction contained herein, with alternatives and recommendations to implement this direction within 60 days of receipt of this letter. Resources required to prepare the plan will be identified through a baseline change proposal. Fluor Daniel Hanford, Inc. is directed to provide support to BHI throughout the integration process and preparation of the specified plans and documents, including concurrence. If support activities are identified which require additional funding, a change request should be submitted to the appropriate program office.

If you want to discuss this matter further or require additional information, please contact Mr. K. Michael Thompson at 373-0750.

Sincerely,

Linda K. Bauer, Assistant Manager
for Environmental Restoration

GWP:KMT

Hanford Letter of Direction for Integration Project Authority

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

064070

NOV 25 1998

Mr. S. D. Liedle, President
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, Washington 99352

Dear Mr. Liedle:

ROLES AND RESPONSIBILITIES FOR THE HANFORD GROUNDWATER/VADOSE ZONE PROJECT

Last year the U.S. Department of Energy (DOE), Richland Operations Office (RL) decided to integrate Hanford Site groundwater and vadose zone work scope under the Assistant Manager for Environmental Restoration (AME). This agreement was documented in the RL memorandum "Changes to the Memorandum of Agreement (MOA) to Integrate Vadose Zone Work," dated August 13, 1997. On December 3, 1997, RL assigned Bechtel Hanford, Inc. (BHI) as the lead contractor for this activity. Subsequently, BHI established a multi-contractor project team to manage and integrate the groundwater and vadose zone work. On April 30, 1998, RL approved the multi-contractor plan (DOE/RL-98-03, "Management and Integration of Hanford Site Groundwater and Vadose Zone Activities") to manage this work. The purpose of this letter is to clarify basic roles and responsibilities for management of the integration project.

Consistent with the RL decision, the RL AME Project Manager for the Groundwater/Vadose Zone Integration Project has been assigned the responsibility to develop the required data and numerical tools for performing effects assessments for Hanford remedial action proposals to regulators. This responsibility includes the integrated planning, authorization, and implementation of required work scope; technical and project change control related to both development and use of the data and numerical tools; and interaction with regulators, stakeholders, and tribes to accomplish the mission. The authority to accomplish this mission is embodied in the existing delegation to AME to direct the work of the project integrating contractor, Bechtel Hanford, Inc., and in this letter which establishes the roles and responsibilties of AME and BHI in working with other site projects through the appropriate RL office. Issues that arise in implementation of this letter will be brought to the project Executive Council (which consists of senior RL and contractor managers) for resolution. Should the Council not reach agreement, the issue will be referred to the RL Site Management Board or to me for a final decision.

The attached table provides further definition of the roles and responsibilities for the AME organization and BHI as the integrating contractor as well as the "core projects" which are DOE Hanford projects performing work scope included in the integration effort. The Groundwater/Vadose Zone Project Management Plan and associated project procedures will provide details on how AME, BHI, and the multi-contractor project team will perform the duties assigned to them in this matrix as well as how the core projects will interact with the team. All duties assigned will be conducted consistent with the current site contracts.

064070

Mr. S. D. Liedle -2- NOV 25 1998

RL is managing the site as a set of major projects with a defined mission. Each of the core projects has some direct or indirect association with the Groundwater/Vadose Zone effort and some of these projects directly support one of the Hanford Site major projects. RL believes that it is necessary that those projects directly supporting a major project continue to be directly managed by the project which they support. In those areas where groundwater/vadose zone decisions are being made or site impacts are being assessed, AME and BHI will provide necessary direction through the appropriate RL project office consistent with current site contracts.

This management structure requires close cooperation among RL and contractor staff. I am holding each of you and your contractors accountable to work together and, where necessary, overcome contract and lines of authority constraints in finding ways to make this effort successful. I will be reviewing progress and issues in weekly meetings with the project team. This activity has a high priority on the Hanford Site and is one of the key components in completing site remediation.

Please provide a copy of this letter and attachment to your staff and subcontractors involved in groundwater/vadose zone integration activities. If you have any questions, contact me or your staff may contact Mr. Rich Holten on 376-3963.

Sincerely,

John D. Wagoner
Manager

RP:RAH

Attachment

GROUNDWATER/VADOSE ZONE INTEGRATION PROJECT
AUTHORITY MATRIX

Rev 2, 10/26

ACTIVITY	CORE PROJECT	GW/VZ PROJECT (DOE AME + BHI)	BASIS FOR GW/VZ ACTION
PROJECT SCOPE/COST/SCHEDULE			
Sitewide Integrated Priority List	Pariticipates/reviews/SMB approves	Participates/reviews	
Project Priority List	Prepares&submits/SMB approves	Concurs	Concurs consistent with GW/VZ LRP/Baseline & Gaps/Deficiency Prioritization
Work Plan Guidance	DOE Project prepares/approves	Concurs	Concurs consistent with GW/VZ LRP/Baseline & Gaps/Deficiency Prioritization
Core Project Detailed Work Plan	Prepares/DOE project approves	Participates/concurs	Schedule consistent with LRP Technical review per criteria
Core Project Change Requests	Prepares/DOE project approves	Concurs	Level of detail TBD; Concurrence basis same as for Detailed Work Plan plus consideration of acceptability of sitewide impacts
Core Project Baseline/MYWP	Prepares/DOE project approves	Participates/concurs	Concurs consistent with GW/VZ LRP/Baseline
Technology Proposals	Co-Prepares/concurs	Approves	Approval consistent with S&T roadmaps/LRP
GW/VZ Long Range Plan/Baseline	Co-Prepares/concurs	Approves	
GW/VZ Integrated DWP	Co-prepares/concurs	Approves	Prepared to level of detail set by GW/VZ
GW/VZ Project Monthly Report	Co-prepares/concurs	Approves	Prepared to level of detail set by GW/VZ
TECHNICAL CONTROL			
Conceptual Model - Sitewide	Participates/concurs	Approves	
Conceptual Model - Site Specific	Prepares/approves	Participates/concurs	
GW/VZ Specification	Participates/concurs	Approves	
System Assessment Capability	Participates/concurs	Approves	
Sitewide Parameter Database	Participates/concurs	Approves	
Science & Technology Road Maps	Participates/concurs	Approves	
Sitewide Impact Analyses	Co-prepares/concurs	Submits/Reg approves	
Site specific parameters	Prepares/concurs	Participates/approves	Concurs for consistency with conceptual model/sitewide parameters and technical basis
Core Project Impact Analyses	Prepares/submits/Reg approves	Concurs	Same as above plus concurs on which numerical model used and how model used
Core Project Primary Documents	Prepares/submits/Reg approves	Concurs	Concurrence based on consistency with sitewide regulatory approach, technical basis, and consistency with sitewide knowledge base
Other Core Project Technical Documents	Prepares/approves	Reviews	
INTERFACES (Related to GW/VZ)			
Sitewide issues/interactions	Supports	Leads	
Core project issues/interactions	Leads	Reviews/supports	
TPA negotiations/issues	Prepares/submits/Reg approves	Concurs	Concurs for consistency with sitewide regulatory approach and LRP/baseline
Expert Panel interactions	Supports	Leads	
National Laboratory Interactions/support	Supports	Leads	

APPENDIX B

GW/VZ INTEGRATION PROJECT
EXTERNAL TECHNICAL PEER REVIEW PANEL

APPENDIX B

GW/VZ INTEGRATION PROJECT EXTERNAL TECHNICAL PEER REVIEW PANEL

As noted in Section 8.0, The GW/VZ Integration Project employs several review processes to ensure project technical success and validity. One of these processes involves an External Technical Peer Review Panel (Panel), which provides recommendations on the scope and nature of the technical activities that are part of the GW/VZ Project's scope. This appendix delineates the Panel's charter, structure, processes, and other related protocols.

Charter

The purpose of the Panel is to provide RL with technical observations and recommendations regarding the planning and performance of work, interpretation of study results, and effectiveness of the GW/VZ Project. The charter is to perform technical reviews focusing on the overall assessment and remediation of Hanford Site wastes, and their potential impact to groundwater and the Columbia River. The Panel reviews technical areas related to the inventory of contaminants, their chemical and physical nature, and the interaction of contaminants with and transport through the natural environment, to include the following:

- Unsaturated (vadose) zone.
- Saturated zone.
- Discharge of groundwater to the Columbia River.
- Fate and transport of contaminants in the Columbia River.
- Environmental and public health consequences of that discharge.

Areas of greatest importance for review include topics that (1) have high technical uncertainty; (2) pose a significant impact to project outcomes; and (3) represent unresolved issues (e.g., technical interpretation controversy).

The Panel is commissioned by the RL Manager, and meets approximately four times per year. RL is responsible for approaching each review with clear objectives, scope, schedule, and budget. The RL Project Director identifies, prioritizes, and tracks the technical subject areas for Panel review. This process includes Tribal Nation, stakeholder, and regulator input. The GW/VZ Integration Project manages Panel costs and provides support as necessary.

Structure

The Panel consists of eight permanent members, including one member designated as the Panel Chairperson. In order to accommodate the range of topics that may need technical review, sub-panels incorporating additional members (as necessary) may be established based on project requirements. When this need is identified by the Panel or the GW/VZ Project team, RL establishes the appropriate sub-panels. Sub-panels are disbanded when their assigned task is complete.

Panel Member Selection Process

The Presidents of the University of Washington and the University of Oregon assisted RL by forming a screening committee to review potential candidates and to make recommendations to RL on the initial Panel make-up. As a group, the Panel candidates broadly embody the following areas of expertise:

- Application of S&T to characterization and cleanup of radiologically and chemically contaminated sites, including technology insertion into cleanup.
- Familiarity with public policy issues relevant to cleanup of federal sites.
- Cleanup/regulatory environmental requirements, and their application.
- Knowledge of the DOE complex's environmental cleanup issues (e.g., funding, scientific, and technological capabilities, remediation approaches, strengths and weaknesses of federal contracting mechanisms).
- Understanding of the role of Tribal Nations and stakeholder involvement in federal cleanup decisions.
- Decision analytical techniques (e.g., value of information, use of models).
- Use of scientific methods (e.g., mathematics and statistics, technical, scientific and programmatic uncertainty).
- Leadership and environmental stewardship.
- Ability to work in a diverse team.
- Ability to communicate technical ideas/issues to non-technical people.

RL, with HQ's concurrence, made the final selection from the candidates provided by the screening committee, including designation of one member as Panel Chairperson. Future replacements of Panel members will be provided through this same process.

Sub-Panel Member Selection Process

In order to accommodate the range of topics that may need technical review, sub-panels (incorporating additional members, as necessary) are established based on GW/VZ Project needs. When this need is identified by the Panel or the GW/VZ Project team, RL establishes the required sub-panels in consultation with the Panel. In such cases, RL will develop a pool of candidates for the sub-panel(s), based on the technical expertise required, and will seek recommendations from Tribal Nations, stakeholders, and regulators.

Candidates are evaluated and selected on the basis of education, experience in the appropriate areas of expertise, peer (national) recognition, contributions to the profession associated with their expertise, problem solving abilities, their current understanding of Hanford GW/VZ issues, and the desire and availability to serve on the Panel. Additional evaluation and selection criteria may be added as necessary to achieve technical review project objectives.

Procurement of Panel Members

BHI arranges for, processes, and manages the subcontracts with the selected Panel and sub-panel members. The subcontract(s) provide for travel and compensation for work, and contain appropriate terms, conditions, and termination language to protect DOE, BHI, and the Panel members.

Conflict of Interest

While conflict of interest (COI) is undesirable, complete absence of it is not an absolute requirement for Panel or sub-panel membership. Potential instances of COI are, however, considered during the member selection process. A fully independent peer review is performed by the National Academy of Sciences (NAS). Furthermore, it is expected that Panel and sub-panel members will be asked to provide recommendations to the Project in developing approaches and solutions. Panel members will return to evaluate the implementation and results of those same approaches and solutions. Full independence is lost in such cases. Therefore, Panel/sub-panel members are required to fully disclose any real or apparent COI. These disclosures will be made publicly available at the beginning of each peer review meeting.

PROTOCOL FOR REVIEW MEETINGS

Meeting Format

All meetings are open to the public, and all Panel and sub-panel formal business and technical issues will be discussed in these open meeting forums. The Panel or sub-panel chairperson is responsible for guiding panel discussion, and for ensuring that the review report is submitted on schedule.

The Panel members may deliberate among themselves in private, but private meetings between reviewers and interested parties are not appropriate. Interested parties may present views related to the subject under review by the panel, but must do so only in a public forum. If individuals do not wish to bring up technical topics or information during the discussion periods, they are welcome to submit written materials (either signed or anonymous) to the panel. Time permitting, such materials will be discussed during the review session. Submitted materials should be relevant to the technical topic under review by the panel, and should not contain complaints or allegations of wrong-doing against individuals.

Agenda Development and Topics

Selection of review topics is the responsibility of the RL Project Director. The BHI Project Manager develops a list of review topics in order of relative priority. The DOE Project Manager makes the final decision on topics, but with input from interested parties (e.g., Tribal Nations, stakeholders, regulators, and HQ). The proposed agenda list must also include a clear objective for each review session (e.g., information, assessments, and recommendations from the panel).

The RL Project Director develops and maintains a schedule of Panel (and sub-panel) reviews, with a 6-month to 1-year look-ahead. In establishing the schedule, RL and the GW/VZ Integration Project team identify any scheduling constraints for specific topics and work with the Panel (or sub-panels) to assure that sufficient time is allowed for them to gather needed information.

The RL Project Director works with the Panel Chairperson to develop a basic agenda for each scheduled review meeting, and provides pertinent technical and other related background information to the Panel members well in advance of the meeting(s). The objective of the agenda and material presented is to facilitate an efficient and effective technical evaluation of groundwater, vadose zone, and Columbia River protection issues, approaches, and desired results in the topical area to be reviewed. Agendas identify presenters and participants from the DOE, their contractors, and other entities, as well as the allotted time for presentation and discussion. The agenda also includes a close-out session during which time the panel members present their preliminary findings and offer appropriate critiques to improve the next meeting.

Meeting Conduct and Participant Responsibilities

All meetings are conducted in a professional manner that respects individual opinions and differences. All persons present at the meetings are expected to follow the responsibilities described below.

Chairperson or Designated Meeting Leader. The Chairperson calls the meeting to order, announces presentations, ensures that schedule is adhered to, and facilitates discussions (especially for issues that may prove difficult to resolve or where parties to the discussion do not appear to be communicating). The Chairperson ensures that the panel members have adequate time to discuss the technical issues with presenters prior to opening the discussion to the audience (see audience responsibilities below).

Panel Members. Panel members shall listen to presenters, asking questions of clarification during and after the presentations. In depth discussion is expected and should occur primarily after each presentation is complete. Discussion is initially between panel members and the presenter, and individuals in the audience that the presenter chooses to ask for assistance in answering questions. If panel members wish clarification from members of the audience, they may request it, but only after the discussion has been opened to audience participation.

Presenters. Presenters orally address scheduled topical materials to the panel and answer panel member questions during and immediately after the presentation, while adhering to the agenda

time allotted. Presenters may ask for assistance from audience members in answering questions. Presentations need to focus on the technical information that the panel has been requested to review.

Audience. The audience is expected to remain silent during the presentations and discussion between the presenter and panel members, unless specifically asked to comment by a presenter. Once the panel members have completed their discussions with the presenter, the Chairperson or meeting leader opens the discussion to the audience for comments and questions. Audience members who would like to discuss specific topics privately with other audience members must leave the meeting room to do so.

REPORTING PROCESS

Following each review session, the Panel and sub-panels produce a report containing the outcome of the review(s). Each reviewer is expected to contribute to the development of the reports. The Chairperson is responsible for developing a single consensus report containing the following elements: (1) a description of the topic and materials reviewed; (2) observations of the panel on the technical aspects of the material under review; (3) recommendations of the panel; and (4) an appendix containing significant observations not otherwise captured in the report, along with minority opinions and disagreements (as appropriate).

Timeliness in producing the report is particularly important. Each external technical review report shall be completed and provided to DOE no later than three weeks after the end of the review meeting.

PROJECT RESPONSE

The GW/VZ Project prepares a response to each Panel or sub-panel report. The response includes the specific actions the Project intends to take, and the justification or basis for those actions. The Project's response shall be completed in time for reporting to and discussion with the Panel or sub-panel at their next meeting. Actions taken by the Project in response to Panel or sub-panel recommendations shall be implemented in a timely fashion, taking into consideration project schedules, budget, and other constraints.

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