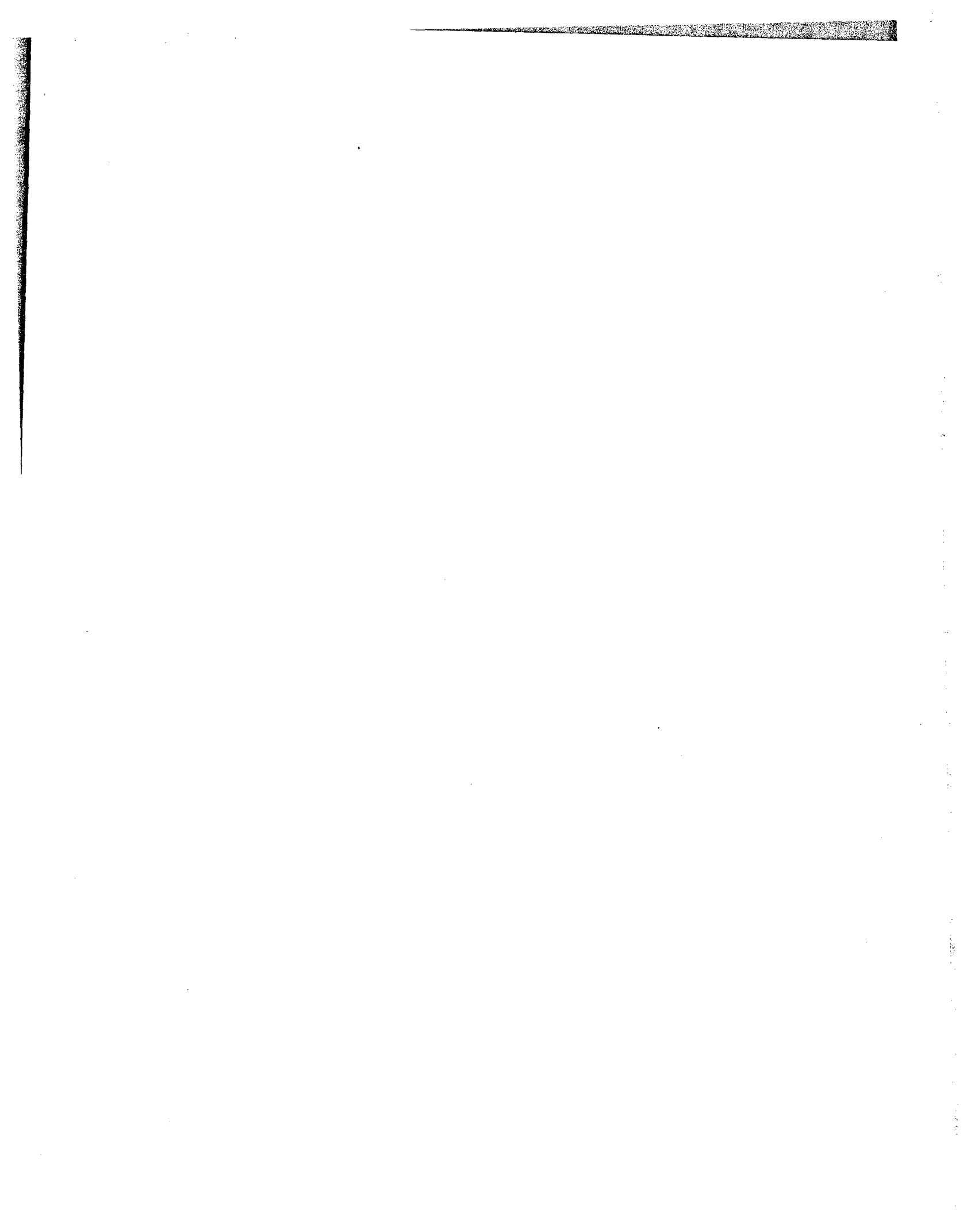


APPENDIX B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
STATEMENT OF WORK FOR RD/RA

OPERABLE UNIT FOUR – WELCH CREEK
DOMTAR (FORMERLY WEYERHAEUSER) COMPANY PLYMOUTH WOOD
TREATING PLANT SITE, NORTH CAROLINA



APPENDIX B

STATEMENT OF WORK FOR OPERABLE UNIT FOUR – WELCH CREEK DOMTAR (FORMERLY WEYERHAEUSER) COMPANY PLYMOUTH WOOD TREATING PLANT SITE, NORTH CAROLINA

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
I. INTRODUCTION	1
II OVERVIEW OF THE REMEDY	1
III. REMEDY COMPONENTS	2
IV. PLANNING AND DELIVERABLES	3
TASK I - Community Relations	3
TASK II - Remedial Design	4
A. Remedial Design Planning	4
B. Conceptual Design	8
C. Prefinal/Final design	9
TASK III - Remedial Action	10
A. Remedial Action Planning	10
B. Preconstruction Conference	16
C. Prefinal Construction Inspection	17
D. Final Construction Inspection	17
E. Interim Remedial Action Report	17
TASK IV – Performance Standards Verification and Operation and Maintenance	18
A. Operation and Maintenance Plan	18
B. Performance Standards Verification Component of the Plan	20
References	22
Summary of Major Deliverables	25



STATEMENT OF WORK FOR OPERABLE UNIT FOUR – WELCH CREEK
DOMTAR (FORMERLY WEYERHAEUSER) COMPANY PLYMOUTH WOOD
TREATING PLANT SITE, NORTH CAROLINA

I. INTRODUCTION

This Statement of Work (SOW) outlines the work to be performed by Settling Defendant at Operable Unit Four – Welch Creek (OU4) at the Domtar (formerly Weyerhaeuser) Company Plymouth Wood Treating Plant site, Martin County, North Carolina (the Site). The work outlined is intended to implement the remedy as described in the Record of Decision (ROD) for OU4, dated September 26, 2002, and to achieve the Performance Standards set forth in the ROD, Consent Decree and this SOW. The requirements of this SOW will be further detailed in work plans and other documents to be submitted by the Settling Defendant for approval as set forth in this SOW. It is not the intent of this document to provide task specific engineering or geological guidance. The definitions set forth in Section IV of the Consent Decree shall also apply to this SOW unless expressly provided otherwise herein.

Settling Defendant is responsible for performing the Work to implement the selected remedy. EPA shall conduct oversight of the Settling Defendant's activities throughout the performance of the Work. The Settling Defendant shall assist EPA in conducting oversight activities.

Except where otherwise provided, EPA review or approval of a task or deliverable shall not be construed as a guarantee as to the adequacy of such task or deliverable. If EPA modifies a deliverable pursuant to Section XI of the Consent Decree, such deliverable as modified shall be deemed approved by EPA for purposes of this SOW. A summary of the major deliverables that Settling Defendant shall submit for the Work is attached.

II. OVERVIEW OF THE REMEDY

THE OBJECTIVES OF THIS REMEDIAL ACTION INCLUDE:

Human Health Remedial Action Objectives

- Maintain acceptable levels of potential risk to site-specific human receptors.
- Continue progress toward removal of remaining fish consumption advisory in Welch Creek.

Ecological Remedial Action Objectives

- Protect the health of local populations and communities of biota.
- Reduce the dioxin concentrations in whole fish tissues over time, to the extent practicable.
- Achieve surface water concentrations at or below surface water standards, to the extent practicable.
- Limit biological uptake of COCs from the sediment in areas with excess potential risk, to the extent practicable.
- Minimize the adverse effects of remediation activities on the existing aquatic environment and/or wetland habitat, to the extent practicable.

Management of Migration Potential

- Minimize significant migration of COC-containing sediment in delineated areas of concern, to the extent practicable.

III. REMEDY COMPONENTS

A. Components

The major components of the remedy are listed below and further described in Section M, Selected Remedy, of the attached Record of Decision.

- Enhanced Monitored Natural Recovery (eMNR) of sediment contaminated with dioxin above cleanup goals noted in Table M-2 in the upstream reach of Welch Creek through placement of a thin layer sand cap. Mobility monitoring would be performed for the less contaminated sediment in the midstream reach which may be somewhat susceptible to stream bed erosion.
- Long term monitoring and maintenance of the sand cap.
- Long term testing and monitoring of sediment, surface water, and biota to document the performance of the remedy and compliance with cleanup goals noted in Table M-2 of the ROD
- Institutional controls to limit the consumption of fish from Welch Creek, maintain the integrity of the sand cap, maintain the existing fencing which limits access to the Welch Creek area, maintain signs in Welch Creek noting fish advisories and the presence of the sand cover, and to place

deed restrictions to limit land development on the Domtar (formerly Weyerhaeuser) property that could impact the remedy.

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B. Performance Standards

Settling Defendant shall meet all Performance Standards, as defined in the Consent Decree and refined in the Remedial Design, including clean-up levels and Remedial Action Objectives set forth in the attached Record of Decision, and in accordance with the Performance Standards Verification Plan.

C. Compliance Testing

Settling Defendant shall perform compliance testing to ensure that the Performance Standards are met. The sediment, surface water, biota, and wetland soils and water shall be tested in accordance with the Performance Standard Verification Plan and Operation and Maintenance Plan, developed pursuant to Tasks IV and V of this SOW. If monitoring of the various media indicates that the Performance Standards as set forth in Section M of the Record of Decision, the Consent Decree, and the Performance Standards Verification Plan are not being achieved, EPA may reevaluate the effectiveness of the selected remedy.

IV PLANNING AND DELIVERABLES

The specific scope of this work shall be documented by Settling Defendant in a Remedial Design (RD) Work Plan and a Remedial Action (RA) Work Plan. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section XI of the Consent Decree.

Settling Defendant shall submit a technical memorandum documenting any need for additional data along with the proposed Data Quality Objectives (DQOs) whenever such requirements are identified. Settling Defendant is responsible for fulfilling additional data and analysis needs identified by EPA during the RD/RA process consistent with the general scope and objectives of the Consent Decree, including this SOW.

Settling Defendant shall perform the following tasks with respect to implementation of the remedy specified in the ROD for OU4:

TASK I - COMMUNITY RELATIONS

The development and implementation of community relations activities are the responsibility of EPA. At the Remedial Design stage EPA is required to review the Community Relations Plan developed for the RI/FS, and to amend the plan as appropriate. Although implementation of the community relations plan is the responsibility of EPA, if requested by EPA, the Settling Defendant shall assist EPA by providing information regarding the history of OU4 and participating in public meetings. In addition, upon request by EPA, the Settling Defendant shall prepare a plan (hereinafter referred to as the Technical Assistance Plan or TAP). The Tap shall be prepared, funded, and implemented in accordance with Paragraph 103 of the Consent Decree for RD/RA for OU1.

The extent of the Settling Defendant's involvement in community relations activities is left to the discretion of EPA. In addition to devising and administering the Technical Assistance Plan, all other community relations responsibilities EPA may assign to the Settling Defendant shall be specified in the community relations plan. All community relations activities conducted by Settling Defendant shall be subject to oversight by EPA.

TASK II - REMEDIAL DESIGN

The Remedial Design shall provide the technical details for implementation of the Remedial Action in accordance with currently accepted environmental protection technologies and standard professional engineering and construction practices. The design shall include clear and comprehensive design plans and specifications.

A. Remedial Design Planning

Within 60 days after EPA's issuance of an authorization to proceed pursuant to Paragraph 10 of the Consent Decree, Settling Defendant shall submit a draft RD Work Plan, a Baseline Monitoring Plan, a Sampling and Analysis Plan, and a Health and Safety Plan to EPA. To the extent possible, these plans may use information from the sampling and analysis plan, quality assurance project plan and health and safety plan prepared for the RI/FS activities. The RD Work Plan and the Sampling and Analysis Plan must be reviewed and approved by EPA and the Health and Safety Plan reviewed and commented on by EPA prior to the initiation of field activities. Upon approval of the RD Work Plan, Settling Defendant shall implement the RD Work Plan in accordance with the design management schedule contained therein. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section XI of the Consent Decree. Review and/or approval of design

submittals only allows Settling Defendant to proceed to the next step of the design process. It does not imply acceptance of later design submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

1. RD Work Plan

Settling Defendant shall submit a Remedial Design (RD) Work Plan to EPA for review and approval. The Work Plan shall be developed in conjunction with the Sampling and Analysis Plan, and the Health and Safety Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the additional data collection and evaluation activities to be performed, and the plans and specifications to be prepared. A comprehensive design management schedule for completion of each major activity and submission of each deliverable shall also be included.

Specifically, the RD Work Plan shall present the following:

- a. A statement of the problem(s) and potential problem(s) posed by OU4 and the objectives of the RD/RA.

- e. A background summary that references the approved RI, BERA and FS reports and presents a synopsis of applicable information including:
 - 1) A brief description of OU4 including the geographic location and site features.
 - 2) A brief synopsis of the history of OU4 including past disposal practices.
 - 3) A brief summary of the existing data including physical and chemical characteristics of the contaminants identified and their distribution in environmental media at OU4.

- c. A list and detailed description of the tasks to be performed, information needed for each task, and information to be produced during and at the conclusion of each task. The specific issues to address will include refinement of the existing cover thickness and configuration, an update ground survey and assessment of potential wetlands monitoring locations.

- d. A description of the work products that shall be submitted to EPA. This description shall include the deliverables set forth in the remainder of Task II.

- e. A list of the required drawings, including preliminary sketches and layouts, describing conceptual aspects of the design, as appropriate, along with an outline of the required specifications, including a preliminary discussion of Performance Standards.
- f. A schedule for completion of each required activity and submission of each deliverable required by the Consent Decree and this SOW. This schedule shall also include information regarding timing, initiation and completion of all critical path milestones for each activity and/or deliverable including EPA document review and approval. The schedule shall incorporate the uncertain length of agency review activities by reflecting in the work plan schedule the trigger date for revisions as the date of receipt of agency comments plus a specified number of days to address comments.
- g. A project management plan, including a data management plan, and provision for quarterly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the RD/RA. The data management plan shall address the requirements for project management systems, including tracking, sorting, and retrieving the data along with an identification of the software to be used, minimum data requirements, data format and backup data management. The plan shall address both data management and document control for all activities conducted during the RD/RA.
- h. A description of the community relations support activities to be conducted during the RD in a manner consistent with EPA's community relations plan developed separately. At EPA's request, Settling Defendant will assist EPA in preparing and disseminating information to the public regarding the RD work to be performed.

2. Baseline Monitoring Plan

Settling Defendant shall submit a Baseline Monitoring Plan (BMP). The purpose of the BMP is to ensure the collection and analysis of data to document current conditions and to provide a baseline to evaluate future performance of the remedy. The BMP shall address contaminant concentrations in appropriate media, including reference locations, as well

as physical conditions in the Welch Creek, including the caps installed during the Feasibility Study pilot test. The BMP shall also include a biota survey and sampling and analysis.

3. Sampling and Analysis Plan

Settling Defendant shall submit a Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP shall include a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The Field Sampling and Analysis Plan shall be written so that a field sampling team unfamiliar with OU4 would be able to gather the samples and field information required. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 300.435 (b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual and with the guidances specified in Section VIII of the Consent Decree.

If a laboratory has not been previously approved for use on the Site, Settling Defendant shall demonstrate in advance and to EPA's satisfaction that the laboratory is qualified to conduct the proposed work and meets the requirements specified in Section VIII of the Consent Decree. EPA may require that Settling Defendant submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples). In addition, EPA may require submittal of data packages equivalent to those generated by the EPA Contract Laboratory

Program (CLP). If a selected laboratory is not currently participating in the CLP, methods consistent with CLP methods that would be used at this site for the purposes proposed and QA/QC procedures approved by EPA, shall be used.

4. Health and Safety Plan

A Health and Safety Plan shall be prepared in conformance with Settling Defendant's health and safety program, and in compliance with OSHA regulations. The Health and Safety Plan shall include an appropriate health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and provisions for site control. EPA will not approve Settling Defendant's Health and Safety Plan, but rather EPA will review it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

B. Conceptual Design

Conceptual Design shall begin with data collection activities and shall end with the plan for satisfying permitting requirements as detailed below. At this stage, Settling Defendant shall field verify, as necessary, the existing conditions of OU4. The technical requirements of the Remedial Action shall be addressed and outlined so that they may be reviewed to determine if the final design will provide an effective remedy. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the project. EPA approval of the Conceptual Design is required before proceeding with further design work, unless specifically authorized by EPA. In accordance with the design management schedule established in the approved Remedial Design Work Plan, Settling Defendant shall submit to EPA the Conceptual Design submittal which shall consist of the following:

1. Results of Data Acquisition Activities

Data gathered during the project planning phase, if any, shall be compiled, summarized, and submitted along with an analysis of the impact of the results on design activities. In addition, surveys conducted to establish topography, rights-of-way, easements, and utility lines shall be documented. Utility requirements and acquisition of access, through purchases or easements, that are necessary to implement the RA shall also be discussed.

2. Design Criteria Report

The concepts supporting the technical aspects of the design shall be defined in detail and presented in this report. Specifically, the Design Criteria Report shall include the preliminary design assumptions and parameters, including:

- a. Cover system configuration
- b. Area of sediment requiring containment
- c. Materials and equipment
- d. Performance Standards
- e. Long-term monitoring requirements

3. Basis of Design

The evaluations conducted to select the design approach shall be described. Design calculations shall be included.

4. Plan for Satisfying Permitting Requirements

All activities must be performed in accordance with the requirements of applicable federal and state laws and regulations. Any off-site disposal shall be in compliance with the requirements set forth in Paragraph 16 of the Consent Decree. The plan shall identify any off-site disposal/discharge permits that are required, the time required to process the permit applications, and a schedule for submittal of the permit applications.

C. Prefinal/Final Design

The Settling Defendant shall submit the Prefinal Design when the design work is approximately 90 percent complete in accordance with the approved design management schedule. The Prefinal Design shall function as the draft version of the Final Design. The Prefinal Design shall consist of a continuation and expansion of the Preliminary Design submittal as may be modified by any value engineering recommendations adopted by Settling Defendant. Any additional value engineering recommendations adopted by Settling Defendant shall be summarized in a report submitted with the Prefinal Design. EPA comments on the Preliminary Design and a memorandum indicating how EPA's comments were incorporated shall be included in the Prefinal/Final Design. After EPA review and comment on the Prefinal Design, the Final Design shall be submitted along with a memorandum indicating how the Prefinal Design comments were incorporated into the Final Design. All Final Design documents shall be certified

by a Professional Engineer registered in the State of North Carolina. EPA written approval of the Final Design is required before initiating the RA, unless specifically authorized by EPA. The following items shall be submitted with or as part of the Prefinal/Final Design:

1. Complete Design Analyses

The selected design shall be presented along with an analysis supporting the design approach. Design calculations shall be included.

2. Final Plans and Specifications

A complete set of construction drawings and specifications shall be submitted which describe the selected design. All plans and specifications shall conform with the Construction Specifications Institute Master Format, and the scope of the technical specifications shall be outlined in a manner reflecting the final specifications.

3. Final Construction Schedule

Settling Defendant shall develop a Construction Schedule for construction and implementation of the remedial action which identifies timing for initiation and completion of all critical path tasks. Settling Defendant shall identify estimated schedules for completion of the project and major milestones. Settling Defendant shall submit the construction schedule to EPA for approval.

TASK III - REMEDIAL ACTION

Remedial Action shall be performed by Settling Defendant to implement the response actions selected in the ROD.

A. Remedial Action Planning

Within thirty (30) days of EPA approval of the Final Design, Settling Defendant shall submit a draft Remedial Action (RA) Work Plan, Capping Operations Plan, Project Delivery Strategy, a Construction Management Plan, a Construction Quality Assurance Plan, and a Construction Health and Safety Plan/Contingency Plan. The RA Work Plan, Project Delivery Strategy, Construction Management Plan, and Construction Quality Assurance Plan must be reviewed and approved by EPA and the Construction Health and Safety Plan/Contingency Plan reviewed by EPA prior to the initiation of the Remedial Action.

Upon approval of the RA Work Plan, Settling Defendant shall implement the RA Work Plan in accordance with the construction management schedule. Significant field changes to the RA as set forth in the RA Work Plan shall not be undertaken without the approval of EPA. The RA shall be documented in enough detail to produce as-built construction drawings after the RA is complete. Deliverables shall be submitted to EPA for review and approval in accordance with Section XI of the Consent Decree. Review and/or approval of submittals does not imply acceptance of later submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

1. RA Work Plan

A Work Plan which provides a detailed plan of action for completing the RA activities shall be submitted to EPA for review and approval. The objective of this work plan is to provide for the safe and efficient completion of the RA. The Work Plan shall be developed in conjunction with the Project Delivery Strategy, Construction Management Plan, the Construction Quality Assurance Plan, and the Construction Health and Safety Plan/Contingency Plan. These plans may be appended or delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed and the Final Construction schedule for completion of each major activity and submission of each deliverable.

Specifically, the RA Work Plan shall present the following:

- a. A detailed description of the tasks to be performed and a description of the work products to be submitted to EPA. This includes the deliverables set forth in the remainder of Task III.
- b. A schedule for completion of each required activity and submission of each deliverable required by this Consent Decree, including those in this SOW.
- c. A project management plan, including provision for monthly reports to EPA during construction. EPA's Project Coordinator and the Settling Defendant's Project Coordinator will meet, at a minimum, on a quarterly basis, unless EPA determines that such meeting is unnecessary.

- d. A description of the community relations support activities to be conducted during the RA, consistent with the EPA prepared community relations plan. At EPA's request, Settling Defendant shall assist EPA in preparing and disseminating information to the public regarding the RA work to be performed.

2. Capping Operations Plan

Settling Defendant shall submit a document to EPA for review and approval which includes the following items:

- Areas for cap placement
- Equipment and placement methods
- Sequence of placement
- Logistics
 - Source of cap material
 - Transport of cap material
 - Access and staging areas
 - Scheduling and time constraints
 - Construction Monitoring

3. Project Delivery Strategy

Settling Defendant shall submit a document to EPA for review and approval describing the strategy for delivering the project. This document shall address the management approach for implementing the Remedial Action, including procurement methods and contracting strategy, phasing alternatives, and contractor and equipment availability concerns. If the construction of the remedy is to be accomplished by Settling Defendant's in-house resources, the document shall identify those resources.

4. Construction Management Plan

A Construction Management Plan shall be developed to indicate how the construction activities are to be implemented and coordinated with EPA during the RA. Settling Defendant shall designate a person to be a Remedial Action Coordinator and its representative on-site during the Remedial Action, and identify this person in the Plan. This Plan shall also identify other key project management personnel and lines of authority, and provide descriptions of the duties of the key personnel along with an organizational chart. In addition, a plan for the administration of

construction changes and EPA review and approval of those changes shall be included.

5. Construction Quality Assurance Plan

Settling Defendant shall develop and implement a Construction Quality Assurance Program to ensure, with a reasonable degree of certainty, that the completed Remedial Action meets or exceeds all design criteria, plans and specifications, and Performance Standards. The Construction Quality Assurance Plan shall incorporate relevant provisions of the Performance Standards Verification Plan (see Task V). At a minimum, the Construction Quality Assurance Plan shall include the following elements:

- a. A description of the quality control organization, including a chart showing lines of authority, identification of the members of the Independent Quality Assurance Team (IQAT), and acknowledgment that the IQAT will implement the control system for all aspects of the work specified and shall report to the project coordinator and EPA. The IQAT members shall be representatives from testing and inspection organizations and/or the Supervising Contractor and shall be responsible for the QA/QC of the Remedial Action. The members of the IQAT shall have a good professional and ethical reputation, previous experience in the type of QA/QC activities to be implemented, and demonstrated capability to perform the required activities. They shall also be independent of the construction contractor.
- b. The name, qualifications, duties, authorities, and responsibilities of each person assigned a QC function.
- c. Description of the observations and control testing that will be used to monitor the construction and/or installation of the components of the Remedial Action. This includes information which certifies that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards. Any laboratories to be used shall be specified. Acceptance/Rejection criteria and plans for implementing corrective measures shall be addressed.

- d. A schedule for managing submittals, testing, inspections, and any other QA function (including those of contractors, subcontractors, fabricators, suppliers, purchasing agents, etc.) that involve assuring quality workmanship, verifying compliance with the plans and specifications, or any other QC objectives. Inspections shall verify compliance with all environmental requirements and include, but not be limited to, air quality particulate monitoring records and waste disposal records, etc.
- e. Reporting procedures and reporting format for QA/QC activities including such items as daily summary reports, schedule of data submissions, inspection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation.
- f. A list of definable features of the work to be performed. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements.

5. Construction Health and Safety Plan/Contingency Plan

Settling Defendant shall prepare a Construction Health and Safety Plan/Contingency Plan in conformance with Settling Defendant's health and safety program, and in compliance with OSHA regulations. The Construction Health and Safety Plan shall include a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. EPA will not approve Settling Defendant's Construction Health and Safety Plan/Contingency Plan, but rather EPA will review it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment. This plan shall include a Contingency Plan and incorporate Air Monitoring and Spill Control and Countermeasures Plans if determined by EPA to be applicable for OU4. The Contingency Plan is to be written for the on-site construction workers and the local affected population. It shall include the following items:

- a. Name of person who will be responsible for coordinating responses in the event of an emergency incident.

- b. Plan for initial OU4 construction safety indoctrination and training for all employees/contractors, etc., participating in the RA, name of the person who will give the training and the topics to be covered.
- c. Plan and date for a pre-construction meeting or conference call to brief the local community, including local, state and federal agencies involved in the cleanup, as well as the local emergency squads and the local hospitals, regarding the schedule and expected activities to be conducted on-site.
- d. A list of the first aid and medical facilities including, location of first aid kits, names of personnel trained in first aid, a clearly marked map with the route to the nearest medical facility, all necessary emergency phone numbers conspicuously posted at the job site (i.e., fire, rescue, local hazardous material teams, National Emergency Response Team, etc.)
- e. Plans for protection of public and visitors to the job site.
- f. A Spill Control and Countermeasures Plan which, if determined to be applicable by EPA, shall include the following:
 - 1) Contingency measures for potential spills and discharges from materials handling and/or transportation.
 - 2) A description of the methods, means, and facilities required to prevent contamination of soil, water, atmosphere, and uncontaminated structures, equipment, or material by spills or discharges.
 - 3) A description of the equipment and personnel necessary to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. This collected spill material must be properly disposed of.
 - 4) A description of the equipment and personnel to perform decontamination measures that may be required

for previously uncontaminated structures, equipment, or material.

B. Preconstruction Conference

A Preconstruction Conference shall be held after selection of the construction contractor but before initiation of construction. This conference shall include Settling Defendant, EPA and NCDENR and may include other appropriate federal, state and local government agencies. The conference shall:

1. Define the roles, relationships, and responsibilities of all parties;
2. Review methods for documenting and reporting inspection data;
3. Review methods for distributing and storing documents and reports;
4. Review work area security and safety protocols;
5. Review the Construction Schedule;
6. Conduct a site reconnaissance to verify that the design criteria and the plans specifications are understood and to review material and equipment storage locations.

The Preconstruction Conference must be documented, including names of people in attendance, issues discussed, clarifications made, special instructions issued, etc.

C. Prefinal Construction Inspection

Upon preliminary project completion Settling Defendant shall notify EPA for the purpose of conducting a Prefinal Construction Inspection. Participants should include the Project Coordinators, Supervising Contractor, Construction Contractor, Natural Resource Trustees and other federal, state, and local agencies with a jurisdictional interest. The Prefinal Inspection shall consist of a walk-through inspection of the OU4 project site. The objective of the inspection is to determine whether the construction is complete and consistent with the Consent Decree. Any outstanding construction items discovered during the inspection shall be identified and noted on a punch list. Additionally, treatment equipment shall be operationally tested by Settling Defendant. Settling Defendant shall certify that the equipment has performed to effectively meet the purpose and intent of the specifications. Retesting shall be completed where

deficiencies are revealed. A Prefinal Construction Inspection Report shall be submitted by Settling Defendant which outlines the outstanding construction items, actions required to resolve the items, completion date for the items, and an anticipated date for the Final Inspection.

D. Final Construction Inspection

Upon completion of all outstanding construction items, Settling Defendant shall notify EPA for the purpose of conducting a Final Construction Inspection. The Final Construction Inspection shall consist of a walk-through inspection of the OU4 project site. The Prefinal Construction Inspection Report shall be used as a check list with the Final Construction Inspection focusing on the outstanding construction items identified in the Prefinal Construction Inspection. All tests that were originally unsatisfactory shall be conducted again. Confirmation shall be made during the Final Construction Inspection that all outstanding items have been resolved. Any outstanding construction items discovered during the inspection still requiring correction shall be identified and noted on a punch list. If any items are still unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Inspection Report and subsequent Final Construction Inspection.

E. Interim Remedial Action Report

Within sixty (60) days following the conclusion of the Final Construction Inspection, Settling Defendant shall submit an Interim Remedial Action (RA) Report. EPA will review the draft report and will provide comments to Settling Defendant. The Interim RA Report shall be generally consistent with EPA guidance for preparing the report (*Close Out Procedures for National Priorities List Sites*, EPA, OSWER Directive 9320.2-09A-P) and include the following:

1. Introduction, providing a brief history and description of the site
2. Operable Unit Background
3. Construction Activities
4. Chronology of Events, including a projection of when clean-up levels for the wetlands and groundwater will be achieved
5. Performance Standards and Construction Quality Control
6. Final Inspection and Certifications

7. Operation and Maintenance Activities

After EPA review, Settling Defendant shall address any comments and submit a revised report. The Remedial Action shall be complete when EPA approves the Interim RA Report.

TASK IV - PERFORMANCE STANDARDS VERIFICATION AND OPERATION AND MAINTENANCE

Settling Defendant shall submit a Performance Standard Verification and Operation and Maintenance Plan (PSV/OM Plan) 30 days after EPA approval of the RA workplan. The plan shall address compliance with performance standards and remedial action objectives noted in the ROD. The plan shall also address the performance of the cap including the degree of intermixing with underlying contaminated material, settlement, and stability based on normal water flows and higher flows/water levels associated with significant rainfall events/storms/hurricanes. The plan shall also address mobility monitoring in the midstream reach.

The PSV/OM Plan must be reviewed and approved by EPA prior to initiation of Operation and Maintenance activities. If necessary, the PSV/OM Plan shall be modified to incorporate any design modifications implemented during the Remedial Action. Performance Standard Verification and Operation and Maintenance shall be performed in accordance with the approved PSV/OM Plan.

Upon approval of the PSV/OM Plan, Settling Defendant shall implement the PSV/OM Plan in accordance with the schedule contained therein. This plan shall describe start-up procedures, operation, troubleshooting, training, and evaluation activities that shall be carried out by Settling Defendant. The plan shall address the following components:

A. Operation and Maintenance Plan

- 1) Description of normal operation and maintenance;
 - a. Description of tasks required for barrier and cap system maintenance;
 - b. Schedule showing the required frequency for each O&M task.

2. Description of potential operating problems;
 - a. Description and analysis of potential maintenance problems;
 - b. Sources of information regarding problems; and
 - c. Common remedies or anticipated corrective actions.

3. Safety Plan;
 - a. Description of precautions to be taken and required health and safety equipment, etc., for site personnel protection.

4. Description of equipment;
 - a. Equipment identification;
 - b. Installation of monitoring components;
 - c. Maintenance of site equipment; and
 - d. Replacement schedule for equipment and installation components.

5. Records and reporting;
 - a. Laboratory records;
 - b. Records of operating cost;
 - c. Mechanism for reporting emergencies;
 - d. Personnel and Maintenance Records; and
 - e. Quarterly reports to State/Federal Agencies.

6. Description of monitoring and laboratory testing;
 - a. Description of monitoring tasks, (including performance standards verification as described in the following section)

- b. Description of required laboratory tests and their interpretation;
- c. Required QA/QC; and
- d. Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.

B. Performance Standards Verification Component of the Plan

Performance monitoring shall be conducted to ensure that both short-term and long-term Performance Standards for the Remedial Action are met. Guidances used in developing the Sampling and Analysis Plans during prior RI/FS or RD activities at the Site shall be used. Once approved, Settling Defendant shall implement the Performance Standards Verification monitoring on the approved schedule. The Performance Standards Verification Component of the Plan shall include:

1. Direction for all fieldwork by defining in detail the sampling and data gathering methods to be used. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The information shall be written so that a field sampling team unfamiliar with OU4 would be able to gather the samples and field information required.
2. Description of the quality assurance and quality control protocols which will be followed in demonstrating compliance with Performance Standards. Quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 300.435 (b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual and with the guidances specified in Section VIII of the Consent Decree. If a laboratory has not been previously approved for use on the Site, Settling Defendant shall demonstrate in advance and to EPA's

satisfaction that the laboratory is qualified to conduct the proposed work and meets the requirements specified in Section VIII of the Consent Decree. EPA may require that Settling Defendant submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples). In addition, EPA may require submittal of data packages equivalent to those generated by the EPA Contract Laboratory Program (CLP). If a selected laboratory is not currently participating in the CLP, methods consistent with CLP methods that would be used at this site for the purposes proposed and QA/QC procedures approved by EPA, shall be used.

3. Specification of those tasks to be performed by Settling Defendant to demonstrate compliance with the Performance Standards and a schedule for the performance of these tasks.

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RD/RA process. Settling Defendant shall review these guidances and shall use the information provided therein in performing the RD/RA and preparing all deliverables under this SOW.

1. "National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule", Federal Register 40 CFR Part 300, March 8, 1990.
2. "Remedial Design/Remedial Action Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1995, OSWER Directive No. 9355.O-4B.
3. "Interim Final Guidance on Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties," U.S. EPA, Office of Emergency and Remedial Response, February 14, 1990, OSWER Directive No. 9355.5-01.
4. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 355.3-01.
5. "Interim Final Guidance on Data Quality Objectives Process for Superfund," U.S. EPA, Office of Solid Waste and Emergency Response, EPA/540/G-93/071, September 1993, OSWER Directive No. 9335.9-01.
6. "Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.
7. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.
8. "Environmental Investigations Standard Operating Procedures and Quality Assurance Manual," U.S. EPA Region IV, Science and Ecosystem Support Division, November 2001, (revised periodically).

9. "USEPA Contract Laboratory Program Statements of Work for Inorganics Analysis (ILM05.4) and Organics Analysis (SOM01.1)," U.S. EPA, Office of Emergency and Remedial Response.
10. "Quality in the Constructed Project: A Guideline for Owners, Designers, and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment," American Society of Civil Engineers, May 1988.
11. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
12. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
13. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.
14. "Guide for Conducting Treatability Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, Pre-publication Version.
15. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
16. "Standard Operating Safety Guides," U.S. EPA, Office of Emergency and Remedial Response, November 1984.
17. "Standards for General Industry," 29 CFR Part 1910, Occupational Health and Safety Administration.
18. "Standards for the Construction Industry," 29 CFR 1926, Occupational Health and Safety Administration.
19. "NIOSH Manual of Analytical Methods," 2d edition. Volumes I - VII, or the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
20. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," National Institute of Occupational Safety and

Health/Occupational Health and Safety Administration/United States Coast Guard/ Environmental Protection Agency, October 1985.

21. "TLVs - Threshold Limit Values and Biological Exposure Indices for 1987 - 88," American Conference of Governmental Industrial Hygienists.
22. "American National Standards Practices for Respiratory Protection," American National Standards Institute Z88.2-1980, March 11, 1981.

SUMMARY OF THE MAJOR DELIVERABLES FOR THE
 REMEDIAL DESIGN AND REMEDIAL ACTION AT WELCH CREEK (OU4)
 DOMTAR (FORMERLY WEYERHAEUSER) COMPANY PLYMOUTH WOOD
 TREATING
 PLANT SITE, NORTH CAROLINA

<u>DELIVERABLE</u>	<u>EPA RESPONSE</u>
<u>TASK I COMMUNITY RELATIONS</u>	
Technical Assistance Plan	Review and Approve
<u>TASK II REMEDIAL DESIGN</u>	
RD Work Plan (4)	Review and Approve
Baseline Monitoring Plan (4)	
Sampling and Analysis Plan (4)	Review and Approve
Health and Safety Plan (1)	Review and Comment
Conceptual Design	
Results of Data Acquisition Activities (4)	Review and Approve
Design Criteria Report (4)	Review and Approve
Basis for Design (4)	Review and Approve
Plan for Satisfying Permitting Requirements (4)	Review and Approve
Prefinal/Final Design	
Complete Design Analyses (4)	Review and Approve
Final Plans and Specifications (4)	Review and Approve

Final Construction Schedule (4) Review and Approve

TASK III REMEDIAL ACTION

RA Work Plan (4) Review and Approve

Capping Operations Plan Review and Approve

Project Delivery Strategy (4) Review and Approve

Construction Management Plan (4) Review and Approve

Construction Quality Assurance
Plan (4) Review and Approve

Construction Health and Safety
Plan/Contingency Plan (4) Review and Comment

Prefinal Construction
Inspection Report (4) Review and Approve

Interim RA Report (5) Review and Approve

TASK IV
PERFORMANCE STANDARD VERIFICATION
AND OPERATION AND MAINTENANCE

Performance Standard Verification and
Operation and Maintenance
Plan (4) Review and Approve

* NOTE: The number in parenthesis indicates the number of copies to be submitted by Settling Defendant. Additional copies to be provided if requested by EPA, including transmittal of copies directly to USFWS, NOAA, and NCDENR.