

RF/ER-95-00110



PROJECT MANAGEMENT PLAN

ONSITE WASTE MANAGEMENT FACILITY REMEDIAATION WASTE CELL

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September 28, 1995

**RMRS
PROJECT MANAGEMENT PLAN**

**Onsite Waste Management Facility
Remediation Waste Cell**

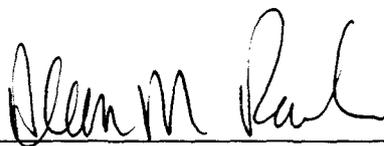
Rev 0

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Onsite Waste Management Facility
Remediation Waste Cell**

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Project Management Plan Approval Sheet

Approved By  9/28/95
RMRS Vice President Date
Environmental Restoration Projects

Approved By  9/28/95
RMRS Project Manager Date

Approved By  9.28.95
RMRS Quality Assurance Project Manager Date

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List of Acronyms

APENS - Air Pollutant Emissions Notification

ARARS - Applicable or Relevant and Appropriate Requirements

CAMU - Corrective Action Management Unit (6CCR 1007-3 §264.552)

CDPHE - Colorado Department of Public Health and Environment

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DOE - Department of Energy

EPA - Environmental Protection Agency

ER - Environmental Restoration

IAG - Rocky Flats Interagency Agreement, January 22, 1991

K-H - Kaiser Hill Company

NEPA - National Environmental Policy Act

NPDES -National Pollutant Discharge Elimination System

OBS - Organizational Breakdown Structure

OU - Operable Unit

PMP - Project Management Plan

RAM - Responsibility Assignment Matrix

RCRA - Resource Conservation Recovery Act

RMRS - Rocky Mountain Remediation Services, L. L. C.

QA - Quality Assurance

WBS - Work Breakdown Structure

WMF - Waste Management Facility

1.0 Introduction

This Project Management Plan (PMP) was developed to set forth the plans, organization, and systems that will be utilized in managing the Onsite Waste Management Facility for remediation waste (WMF). Implementing this plan is intended to ensure sound project management during design and construction phases of the containental cell. The PMP will provide current project data, define the basic elements of the WMF management system, establish a framework for better understanding how the project elements interrelate, and provide a foundation for managing changes during the project life. The PMP contains and cites information to be used for planning, budgeting, process review and improvement, risk management, and performance measurement. It will also be used as a communication and integration tool that unites all project elements by providing a comprehensive picture of the project.

The PMP is a dynamic document to be kept current as the project progresses. Periodic review and updating (at least annually) of the PMP will be conducted by the project staff to ensure that the PMP remains current.

1.1 Overview

Rocky Mountain Remediation Services (RMRS) has been tasked with design, permitting, and construction of an onsite Waste Management Facility (WMF). The New Sanitary Landfill, which is currently under construction, is the first element of the WMF. The final WMF may provide for acceptance of sanitary, low level mixed, straight low level, hazardous and Toxic Substances Control Act (TSCA) wastes.

The current project for the WMF is to provide a repository for remediation waste generated from corrective actions at the site. The baseline site location of the WMF is provided on Figure 1.

1.2 Project Mission and Objectives

The mission of this project team is to construct the remediation waste cell of the WMF on schedule and within budget as approved by the site's work control system.

To fulfill the mission, the project team will plan effectively for, obtain, and manage the resources needed to design and construct a WMF cell to accept remediation waste. The work completed by RMRS on this project will be performed as high quality, technically accurate work, within agreed-upon budgets and schedules. Quality for this project includes the K-H expectation that process will be de-emphasized; that performance measures rather than interim products will be the measure of high quality. Throughout the implementation of the project management plan, effective oversight will be provided to ensure that all project goals and objectives are carried out; performance measures are met, Kaiser-Hill Team agreements and regulatory requirements are upheld, and a high measure of quality is consistently maintained.

1.2.1 Technical Objectives

- Provide the containental site for remediation waste.
- Provide DOE with a net capacity of 100,000 cubic yards of containment space.

1.2.2 Schedule Objectives

- Be ready for operation during Fiscal Year 1998.

1.2.3 Cost Objectives

- Provide a cost effective way to dispose environmental remediation waste.

1.2.4 Individual Waste Stream Objectives

The WMF cell project team objective is to provide a containment site for remediation waste. Each RFETS consignor has individual objectives to fulfill. The choice of remedy for each corrective action at RFETS will follow regulatory requirements. Requirements include establishing the need for action based on risk and regulations, the nine NCP criteria, and public involvement. Alternatives, risk assessments, demonstration of protectiveness, treatment of wastes, and other actions specific to the waste to be disposed will be evaluated by the team performing the corrective action.

1.3 Performance Measures Summary

An objective of the project team is to deliver to K-H the Critical Support Objective deliverables established by K-H and DOE for the cell:

- Deliver a conceptual design report for a WMF cell to accept low level mixed remediation waste for disposal. (Standard Goal, FY95)
- Provide a technical strategy and regulatory basis to support achieving regulatory approval to convert OU 4 funding to the WMF cell. (Stretch Goal, FY95, completed 9/21/95, 95-RM-ER-RF-0087-KH)
- Complete siting and engineering design of the cell. (Standard Goal, 3 Quarters FY96)
- Complete construction and permitting for the cell (Stretch Goal, 3 Quarters FY96 and Standard Goal FY96)
- Begin operation of cell. (Stretch Goal FY96)

1.4 Regulatory Strategy

The regulatory strategy is based on the use of the Quality Action Team (QAT) as a forum to establish goals, select regulatory approaches, obtain agreements and concurrence among the IAG principals, and make assignments to staff members of the principals.

1.4.1 Specific Strategies

Several specific strategies have been developed to achieve compliance with key requirements for the WMF cell:

- The IAG process for a RCRA-lead (State-lead) project will be followed, incorporating the streamlining of documentation as currently practiced successfully. Streamlining includes parallel development of the CDR and Title II designs and deletion of selected documents. This process was chosen since the cell will dispose remediation waste and such waste is primarily generated by corrective actions managed under the IAG; thus the cell for containment of corrective action wastes and the generation of corrective action wastes will use the same process for authorization and public involvement.
- A modification to the site's Part B permit will be sought under CHWA regulations at §264.552, Corrective Action Management Unit (CAMU). The Part 2 Siting Criteria from 6 CCR 1007-2 (which implement the Colorado Solid Wastes Disposal Sites and Facilities Act) will be incorporated into the ARARs as specified in the Colorado CAMU regulations. The use of a permit modification will be consistent with past agreements between the DOE and the State (for example, for a proposed CAMU at OU 4) and is provided for in the IAG process. The application of the CAMU will allow DOE to realize the benefits of a remedy tailored to protectiveness at the RFETS site and for the RFETS remediation waste, rather than the rigid constraints of meeting LDR standards.

- The cell will be designed to meet minimum technical requirements for a RCRA Subtitle C landfill. While this exceeds the minimum requirements for a cell permitted under CAMU, the added expense offers a risk-reduction. The EPA and CDPHE expect to replace the CAMU regulations in the next couple years. Depending on the timing of the regulations and operation of the cell, the cell may need to meet these changing requirements. The added control of meeting minimum technical requirements will improve the adaptability of the cell to changing requirements.
- No Certificate of Designation will be needed. The CD is waived under the CERCLA aspects of the IAG, as has been successfully agreed to by the EPA, CDPHE, and Jefferson County Commissioners for the previous CAMU proposal at OU 4.
- Incorporation of NEPA values into the IM/IRA Decision Document will fulfill NEPA requirements without a separate NEPA analysis or decision document. The DOE, HQ policy for NEPA compliance for CERCLA actions and HQ letter confirming the application of this approach to all IAG corrective actions is the basis. The WMF cell is tied directly to achieving efficient and compliant corrective actions as required by the IAG.

1.4.2 Regulatory Drivers

Specific regulatory drivers will be established through the ARARs process and documented in the IM/IRA Decision Document. While these specific drivers require negotiation to be finalized, several basic drivers establish the approach and decision-making framework for the project:

- RCRA and CERCLA require corrective and remedial action at RFETS; the IAG combines requirements of the two statutes.
- CERCLA governs remedial actions and is incorporated at RFETS, which is listed on the National Priorities List, through the IAG. A substantial effect of the CERCLA involvement is the waiver of all permits except RCRA permits.
- RCRA and the CHWA, with their implementing regulations, provide the basic regulatory framework for the action.
- Colorado regulations from 6 CCR 1007-3 (which implement the CHWA) and the Part 2 Siting Criteria from 6 CCR 1007-2 (which implement the Colorado Solid Wastes Disposal Sites and Facilities Act) substantially drive design criteria.
- NEPA applies to all major federal actions.
- OSHA provides for safety especially in the construction and operation phases of the project.
- DOE Orders provide the basic framework for management of the project, control of the design, and specific health, safety, and quality controls.

Other statutes, regulations, and DOE Orders create requirements for the project, but those listed above are considered the key cost, schedule, and project risk drivers.

2.0 Statement of Work

The WMF project will design, permit, build, and demonstrate readiness to operate a 100,000 cubic yard remediation waste cell at RFETS. For the conceptual design, remediation wastes from several sources have been identified. These remediation wastes are expected to include:

- OU 4 (Solar Ponds) soils, liners, and debris;
- Potential Early Actions soils, sludges, asphalts, and debris; and
- Investigative Derived Material soils and drill cuttings.

This project will be performed during the period of July 1995 to project completion, as shown on the project schedule. Statements of work for each Fiscal Year have been prepared and presented below; the fiscal year an activity is performed in may change as the schedule matures and status is entered. The current working schedule is available from the Project Manager. Detailed listings of activities which will be performed within each Fiscal Year can be found within the Project Schedule and other sections of this Project Management Plan.

2.1 Statement of Work for Fiscal Year 1995 (FY95)

The work plan for FY95 consists of:

- Deliver a Conceptual Design Report for a WMF cell to accept remediation waste. (Draft has been delivered and K-H and DOE comments are being incorporated)
- Prepare draft regulatory documentation for the project as an IM/IRA under the IAG. (In progress)
- Develop and initiate a construction procurement strategy for this project. (Complete, documented in Work Package and revisions to Work Package schedule that are underway)
- Initiate a contract with A-E to prepare Title II design and complete Title II design through 50% completion. (Complete)
- Prepare technical strategy and regulatory basis to support DOE in achieving regulatory approval with EPA and CDPHE. (Complete)

2.2 Statement of Work for Fiscal Year 1996 (FY96)

The work to be performed in FY96 consists of design and initiation of construction on the WMF cell and completion of the Decision Document. Some elements of preconstruction and procurement for the construction subcontract will also be performed. Further detail is available in the FY96 Work Package 12431. The current FY96 Work Package reflects insufficient funding to achieve the performance measure stretch goals, and therefore the work continues into FY97 and FY98.

2.3 Statement of Work for Fiscal Year 1997 (FY97)

Complete design early in FY97, permitting, construction, and start of pre-operational testing will be performed.

2.4 Statement of Work for Fiscal Year 1998 (FY98)

Complete readiness review, pre-operational test, and turnover to Waste Management for operations.

3.0 Project Organization and Responsibilities

This section defines the organizational roles and responsibilities of the project team, including the Organization Chart, the Organizational Breakdown Structure (OBS), Responsibility Assignment Matrix (RAM), and a brief description of project interfaces.

3.1 Project Organization Breakdown Structure

The OBS defines the organizational arrangement of the project team. The OBS is used to identify each manager responsible for project work and in developing a RAM. The OBS for this project is shown in Figure 3.

3.2 Responsibility Assignment Matrix

The RAM shows assignments of key personnel to various activities and tasks within the project. The RAM for this project is shown in Figure 2. Detailed description of RAM is presented in Appendix A.

3.3 Key Personnel

Key personnel are empowered to exercise judgment and discretion in implementing the project and controlling the budget. The following is a list of key RMRS personnel (incumbents on October 1, 1995) involved in the project:

D. E. Steffen - Project Manager

Responsible for project . responsible for project interfaces with K-H, DOE, and other stakeholders.

T. P. O'Rourke - Deputy Project Manager

Responsible to assist the project manager. Responsible for consistency with project elements.

E. C. Mast - Lead for Environmental Support

Responsible for technical and regulatory Support for the project.

R. Banister - Waste Management Representative. Responsible for the development of Waste Acceptance Criteria, waste volumes estimate, development of treatment requirements and operating procedures, development and performance of Operational Readiness Review.

TBD - Engineering/Construction Lead

Responsible for engineering, design, and construction elements of project.

D. A. Ringle - Project Support. Responsible for modifying the FY95 and developing FY96 Work Package(s), coordinating the development of the Project Management Plan and Basis of Estimate, and assuring accurate reporting on the expenditures of the project.

Job descriptions for major project positions are provided in the Appendix B.

3.4 Relationship to Project Organization

RMRS is authorized by K-H to perform permitting, design, and construction of the WMF as identified in PAD RMRS-0031. Under the terms of the subcontract with RMRS, K-H has the responsibility for performing oversight of the project activities, including review of the scope, schedule, budget, and expenditures. RMRS is obligated to report project status to K-H on a regular basis.

RMRS and K-H work together to establish the baseline scope, schedule, and budget for the project. Once the baseline has been established, RMRS is responsible for proper execution of the work. K-H will provide oversight and make recommendations for improvement as necessary. Should K-H determine that scope changes are necessary, direction for such changes will be given to RMRS in writing. Such direction will only come from the designated K-H Program Manager to the RMRS Project Manager. The K-H Program Manager is Russel Boyd.; The RMRS Project Manager is Douglas Steffen (incumbents as of October 1, 1995). A determination of change of scope will be made by comparing the scope of the requested change to the description of work contained in the Work Package Basis of Estimate.

K-H is also responsible for interface and negotiation with the DOE; federal, state, and local regulators; governmental entities; and public interest groups and individuals. The degree to which these entities are involved in the project will be determined by K-H. RMRS is responsible for providing technical support and data to K-H in carrying out this part of K-H's responsibilities.

It is clearly understood by all parties involved in the project that RMRS has a contractual relationship only with K-H. Requests by any party other than K-H to perform work or provide data must be made through K-H as defined above.

4.0 Work Breakdown Structure

The purpose of the Work Breakdown Structure (WBS) is to ensure that all project work is identified and defined in a common framework for authorizing, planning, scheduling, budgeting measuring and reporting performance. The WBS consists of two elements: a WBS Diagram and WBS Dictionary.

The WBS Diagram is a hierarchical tree with higher level elements logically broken into lower, more detailed, elements representing discrete work products. The WBS Diagram for the WMF project is presented in Figure 4 and Figure 5, respectively.

The WBS Dictionary provides a description of all the discrete work elements. The WMF WBS Dictionary is presented in Appendix C.

5.0 Project Plans

This section provides general project information. Details are included in other project documents.

5.1 General Assumptions

This project is based on several key assumptions. More activity-specific assumptions are documented in the project Work Packages and bases of estimates. The plan for this project is based on the outcome of K-H team agreements with the Quality Action Team (QAT). The QAT includes representatives from DOE, CDPHE, and EPA Region VIII management. The conclusions of the QAT that are key assumptions for this project include:

- Finding that on-site disposal is substantially more cost-effective than any off-site disposal option,
- Preference to contain solid waste at RFETS at a consolidated location, and
- Commitment for the IAG principals to work together to achieve rapid and efficient authorization and permitting of the WMF cell.

Key assumptions, which affect scope, cost, and schedule, were developed in planning implementation of the WMF cell:

- Use the IAG process. Activities will comply with ARARs, which are expected to include portions of the Colorado Hazardous Waste Act (CHWA), RCRA, CERCLA, and National Environmental Policy Act (NEPA);
- The project implementation will be scheduled to meet mandated funding profiles, updated at least annually or as funding profiles change;
- The project concept and regulatory strategy are supported by the DOE and regulatory agencies and will be acceptable to the community.
- The project is related to the OU4 closure and corrective action.
- The WMF will accept environmental remediation wastes and building demolition rubble managed for the purpose of implementing corrective actions described in the Rocky Flats IAG with subsequent revisions by principals, and other remediation wastes.
- Separate NEPA documentation will not be required (DOE letter from M. Kleinrock, Director, Office of Environmental Activities, to P. Powell, RFFO, February 27, 1995)
- No interaction with Sitewide EIS will be required.
- Mineral rights issue will not arise.
- Funding for the Fiscal Year 1996 and outcome years will not pose a problem for the implementation of the project activities; funding profiles, schedules, and performance measures will be revised to maintain internal consistency.
- No threatened or endangered species going to be impacted during construction activities on this project.

5.2 Technical Scope

The function of the WMF is to design, permit, and build a repository for the remediation waste generated from corrective actions at the operable units. The facility design will accommodate the possible expansion to adjoining areas.

The cell will have a 100,000 cubic yard capacity and meet RCRA/CHWA Subtitle C requirements. The cell will have a double composite liner, leachate collection and leak detection systems. The leachate collection and leak detection systems will have fluid monitoring sensors and allow for the removal of accumulated liquids.

Survey monuments will be located at the perimeter of the cell to document the location of waste for possible future retrieval.

5.3 Project Cost Plan

The project cost plan is presented in the WMF Work Package. When the cost plan is updated, K-H's change control procedure will be initiated according to process thresholds and criteria; draft changes are managed by the project manager during processing of the change. Costs for the WMF project are linked to and derived from the WMF WBS, technical scope, and project schedule. The WMF cost plan includes current year and out year estimates that extend into the Fiscal Year 1997, the estimated completion of the project. The development of current year cost estimates include regulatory requirements, knowledge of funding needs for applicable work packages, and previous experience with similar work. The development of outyear cost estimate is more difficult due to many uncertainties that are encountered in future years. Outyear estimates are also tied to the WMF WBS, estimated project schedule, and technical scope, where available.

5.3.1 Funding Source

The WMF project uses expense funding from EM 40. One Project Authorization Document (PAD # RMRS-0031) has been provided by K-H. Within the PAD there will be one Work Package per fiscal year. The charge numbers currently active for the project are 989438-00, 989439-00, and 989820-00.

In general, the work planning system will allot a Charge Number at the activity level. Subcontract and RMRS labor will be tracked separately. Depending on the details of how the system is implemented, a Charge Number Suffix may be available to track at lower levels.

5.4 Baseline Project Schedule

The baseline project schedule has been developed from the project WBS. The schedule defines duration's and logical relationships of the work needed to complete the project to the point where operations can begin. Schedule estimates were developed based on best available information, input regarding task duration's secured from all supporting entities, experience from the New Sanitary Landfill, and the judgment of the project management staff.

The baseline project schedule and logic diagram are provided in Appendix E. The schedule is subject to revision and status updates as needed; the current, working schedule is maintained in the work planning system using Primavera.

5.4.1 Selected Schedule Logic

The project logic is documented in the Primavera schedule system; the pure logic plot is available from the project manager. Given the high degree of interest in the project schedule, selected elements of the WMF schedule logic are presented here:

- A Decision Document will be prepared following the IAG process;
- All reviews will be done simultaneously between RMRS, Kaiser-Hill and DOE;
- A standard RCRA Subtitle C cell installed at Cell #4 of new Sanitary Landfill will be selected alternative; - The EPA/CDPHE will review Decision Document prior to the public comment period;
- There will be no substantial comments during public comment period(s);
- A Certificate of Designation will not be needed for this facility;
- The APEN will be submitted prior to the award of the construction contract;

- The construction contract will be awarded to a Firm Fixed Price contractor with experience in constructing landfills;
- The Davis-Bacon determination will be required and will be completed prior to the contract award;
- DOE RFFO is the only DOE entity required to review the construction Request for Proposal;
- Construction contract will be awarded with minimum time for negotiation;
- The Integrated Work Control Package (IWCP) will be streamlined by K-H to allow it to be developed within the time allotted;
- Third party Quality Assurance will be provided by RMRS;
- Title II design subcontractor will provide Title III design services;
- NEPA will be addressed in the Decision Document with no significant concerns;
- Construction schedule will be two shifts, six days a week at ten hours per day;
- The construction subcontractor will supply all major construction equipment and all necessary utilities for night construction;
- There will be no weather delays during construction;
- All reviews and transmittals will occur within the streamlined time allotted within the schedule;
- The Test Fill can occur during the cell excavation period;
- A Safety Analysis Report will not be required.

The project team has prepared a highly aggressive schedule with no reserve incorporated. The chance that milestones will be achieved on-schedule is, correspondingly, lower than would normally be anticipated. When sufficient details are incorporated into the schedule, the schedule risk and reserve needed to decrease that risk can be calculated.

5.4.2 Key Project Milestones

The milestones to be achieved are presented in the appropriate Work Package(s) for the WMF.

Key decision points and preliminary dates are shown below. The latest dates, based on schedule revisions and status, are maintained in the project schedule in the site's work control process.

Start of Conceptual Design (KD-0)	Complete, transmitted to RMRS in FY95 PAD
Start of Title I/II Design (combined KD-1,2)	Complete, transmitted to RMRS in FY95 PAD
Start of Construction (KD-3, requested for Subcontract Award)	see schedule
Begin Operations (KD-4)	see schedule

Acquisition milestones have been established for the construction subcontract, which is estimated to be below \$10 million (unburdened) and therefore to require only local DOE approval. These milestones and activities are included in the project schedule.

6.0 Project Systems

As a first tier contractor on the K-H team, RMRS uses the site systems specified and provided by the K-H team. In particular, work planning control and document/records systems will be used by this project. Detailed descriptions of these systems are general to the site and are not included in this PMP.

6.1 Project Performance Criteria

Performance Criteria have been developed by K-H and DOE and documented as Critical Support Objective #4. The measurement of these criteria are shown below:

- Deliver a conceptual design report for a WMF cell to accept low level mixed remediation waste for containment. (Standard Goal, FY95)
- Provide a technical strategy and regulatory basis to support achieving regulatory approval to convert OU 4 funding to the WMF cell. (Stretch Goal, FY95, completed 9/21/95, 95-RM-ER-RF-0087-KH)
- Complete siting and engineering design of the cell. (Standard Goal, 3 Quarters FY96)
- Complete construction and permitting for the cell (Stretch Goal, 3 Quarters FY96 and Standard Goal FY96)

Begin operation of cell. (Stretch Goal FY96)

6.2 Risk Management/Analyses

6.2.1 Project Team Assessment

Project risks arise from any event or condition that could potentially cause delays, cost overruns, or technical performance deficiencies. Technical impacts can be translated into cost and/or schedule impacts. By assuming the response to any technical impact is to rework that portion of the project until the deficiency is corrected, and the time/cost of the rework represents the impact. The risk analysis in this section represents a subjective evaluation of project risk by broad participation of knowledgeable and experienced project team members.

The WMF project plan currently incorporates no contingency and no schedule reserve, so any impact will lead to cost overruns and schedule delays. The risk of delays and overruns under these conditions is certain. (For example, the FY96 budget constraints have already created a three month delay of project milestones as measured against the Performance Measures.)

To evaluate the significance of the risks, a survey of the RMRS project team was conducted using the following steps:

- Events or conditions (risks) that could impact the project were listed based primarily on project assumptions included in the PMP and Work Package.
- Team members independently evaluated the probability the risks will occur, and
- Evaluated the severity of the impact if the risk occurs.
- The results were combined to provide an aggregate team assessment.

Low, medium, and high impacts were defined as:

- Low impact - Schedule delay for non-critical path items only would occur.
- Moderate impact - Schedule delay on the critical path of three months or less would occur.
- High impact - Schedule delay on the critical path of greater than three months.

Low, medium, and high cost impacts were defined as:

- Low impact - A cost increase of less than \$1 million.
- Moderate impact - A cost impact of \$1 million to \$2 million.
- High impact - A cost impact of over \$2 million.

Low and high probability of occurrence were defined as:

- Low probability is nearly impossible to occur.
- High probability is nearly certain to occur.

The details of the risk assessment are available from the Project Manager. A summary of the results is discussed below.

The risk of twenty eight factors was assessed for potential cost and schedule impacts; a total of fifty-six potential impacts. Of these, about 60% were judged to be no more than moderately likely to cause moderate impacts. These risks would generally be controlled by providing the Project Manager with cost contingency and schedule reserve and are not detailed in this PMP. Mitigation plans will be developed for those risks most likely to yield to team efforts and implemented where within RMRS authority as specified in the PAD. Cost and schedule changes to allow RMRS to respond to these risks, should they occur, will be requested through the site work planning system.

About 40% of the factors were judged to be of moderate to high risk. These risks included:

- Schedule risks due to major design changes,
- Cost and schedule risks due to stakeholder rejection of the project,
- Cost and schedule risks due to changing the site for the WMF cell,
- Schedule risk due to the WMF permit being delayed, and
- Schedule risk due to untimely decisions. The project team assigned the highest risk to this factor.

These moderate to high risks include aspects outside of RMRS control. The Project Manager will work with K-H to develop mitigation plans where possible, but the risk inherent in these factors should be understood by all parties to the WMF project.

6.2.2 Schedule Float Analysis

A second analysis of the project schedule was also performed. This analysis assesses the threat to on-time project completion based on characteristics of the project schedule rather than team judgment. (The analysis was performed while preparing the schedule in Appendix E. The calculations can be repeated as the schedule is refined.)

The analysis model uses some specific project management language and concepts that are briefly described: A project schedule's total duration is established by the critical path, which is the sum of the duration of activities that must occur in sequence to complete the project. Non-critical path activities are needed to complete the project, but have "float" available. Float is the amount of time the activity completion may be delayed before the project completion is delayed. The assessment presumes that the most definitive characteristic of any activity is float. As a refinement, the complexity of the schedule is also considered. For a project such as the WMF with multiple external interfaces, non-routine permitting, and unvalidated assumptions, up to a month of float in an individual activity is considered unlikely to ensure that activity will not delay project completion. Using the float concept, a schedule with a large percentage of activities on the critical path is more likely to fail than a schedule with a small percentage of tasks on the critical

path and would require more schedule to improve the likelihood of success. Schedule reserve is time added to the critical path to allow response to project risks; schedule reserve extends the project completion date.

For the WMF project, about 25% of the tasks are critical path activities. The model considers that only 10% of the activities should be on the critical path for an acceptable confidence to support external commitments. The model calculates an additional 115 days of schedule reserve should be added to achieve commitment-level confidence in the schedule.

The model and basis used to calculate the schedule reserve above is available from the Project Manager. Adding 115 days of schedule reserve would produce a reasonable standard goal for the project, with stretch goals defined as earlier completion.

6.3 Quality Assurance

RMRS is currently drafting the following ER level documents: 95 QAP-001, Quality Assurance Plan, based on DOE Order 5700.6C and 10 CFR 830.120.

A project Specific Quality Assurance Plan will be developed and implemented in accordance with plant policies and procedures as a part of the Title II Detailed design.

Design/Construction compliance with Quality Assurance Program will be accomplished by compliance with the following specific criteria:

- All the requirements outlined within Interagency Agreement (IAG),
- The Quality Assurance Project Plan,
- RFETS Quality Assurance Manual,
- NEPA requirements,
- Project HASP, and
- RFETS Health and Safety Manual.

6.4 Health and Safety

There will be no unresolved safety questions associated with this project. A comprehensive Health and Safety Plan will be prepared by the construction subcontractor specific to construction activities, and reviewed and approved by RMRS. Prior to the start of construction the subcontractor's safety plan will be reviewed and approved by RMRS. All construction activities will be performed by the subcontractor in accordance with the Health and Safety Plan. During construction, proper oversight will be provided to ensure safety is achieved.

6.5 Configuration Management

Once approved, this Project Management Plan will be issued as a Controlled Document. Therefore, all requirements applicable to Controlled Documents at RMRS will be applied to the PMP. Changes to this Project Management Plan will be made in accordance with RMRS document control procedures to comply with DOE Order 4700.1, Project Management. An annual revision is described in the DOE Order, and more

frequent revisions will only be made if deemed necessary by the Project manager. A Document Control Notice (DCN) will be issued to revise this PMP. All DCN's will be reviewed and approved by RMRS Project Manager (authority may be delegated) prior to approval

All funding allocated to the project is controlled and accounted for by the RMRS Project Manager. Changes in scope or cost outside RMRS authority, as defined in PAD #RMRS-0031, will be presented and approved through the site's work planning process and Change Control Board. In the event a Process Improvement is identified within the project, appropriate documentation will be completed and submitted to the Change Control Board along with the proper justification.

Schedule changes within RMRS authority will be controlled by the project management and will be entered in the RFETS work planning system. All status information is within RMRS authority and will be routinely entered into the schedule. Logic ties, activity breakdowns, resource allocations, and activity duration's are also generally within RMRS authority as defined in the PAD .

Schedule logic and remaining duration's of the project activities will be reviewed by the Project Manager as needed, probably monthly. Based on this review, the schedule will be updated to reflect actual conditions and progress.

Key documents are shown in Table 2. The Project Manager will ensure each project document is consistent with prior documents or that changes are authorized. In general, prior documents do not require revision when subsequent changes are made. Should an inconsistency between key documents arise, the most recent document bearing a K-H approval/acceptance/concurrence will take precedence until otherwise determined by the Project Manager, his deputy, or his delegated representative.

6.6 Reporting

RMRS and K-H are finalizing reporting requirements that are expected to be applied uniformly across site projects, including the WMF cell project. The project support work element has been estimated based on professional judgment and anticipating a decrease in the number of reports and formats that must be prepared on a routine and exception basis. Future agreements and practices may require revisions of this element. It is expected that, in keeping with the K-H emphasis on outcome over process, that reporting will be content-oriented with little resource expended on formats and visual presentation.

RESPONSIBLE ASSIGNMENT MATRIX

<i>RESPONSIBLE POSITION</i>	Bannister, R.	Campbell, B.	Franchuk, M.	Hopkins, J.	Mittlestadt, D.	O'Rourke, T.	Schmuck, J.	Steffen, D.
ACTIVITY								
Conceptual Design Report		•						
Title II		•						
Decision Document						•		
Regulatory Permitting							•	
Construction/Procurement					•			
Preconstruction	•							
Waste Acceptance Criteria	•							
Quality Assurance			•					
Site Plans				•				
Site Surveys				•				
Subcontractor Training					•			
IWCP					•			
Permits					•			
Mobilization					•			
Readiness Review			•					
Test Fill		•						
Construction								
Operations	•							
Operations Testing	•							
Operations Training	•							
Operating Procedures	•							
Operations Readiness Review	•							
Project Closeout		•						
Project Management								•

Key job descriptions follow. WBS element responsibility is noted only for the top two levels of the project WBS.:

Project Manager

With overall, first-line responsibility for successful execution of the project, the Project Manager is empowered to exercise judgment and discretion in implementing all aspects of the project. The Project Manager takes the lead in defining those activities necessary for the project, coordinates and facilitates their execution by others, and reports on project status and performance throughout. The Project Manager is knowledgeable and up to date on the project in terms of technical scope, schedule, and budget. Problem situations are anticipated and identified before they arise. Corrective measures are addressed timely to minimize problem impact.

The Project Manager has responsibility for the top level of the project WBS.

Deputy Project Manager

Assist the Project Manager as assigned, represent the Project Manager and exercise decision-making authority in Project Manager's absence.

Lead for Environmental Support

Responsible to assure that the Decision Document complies with all required regulations. Review the document for compliance. Provide guidance for the Decision Document preparation from the compliance stand point. Prepares all necessary documentation for the support of required permits applicable to the project. Assures that project complies with all applicable regulations and laws, and DOE orders during the life of the project. Supports project manager by providing research on the regulatory issues during the life of the project.

The Environmental lead has responsibility for the WBS element of Regulatory Permitting.

Waste Management Representative

Represent the functional group with responsibility for cell operations. Provide waste acceptance criteria. Ensure readiness review covers all operational and turn-over needs.

Engineering/Construction Lead

Responsible for timely preparation of the design. Assigns responsibilities to support personnel, coordinates preparation of the document, guidelines, oversees and coordinates work of subcontractor during preparation of the document. Coordinates all assignments to assure timely issue of the prepared document. Attends public meetings, performs review of the documents, coordinates comment incorporation, attends project status meetings to update Project Manager on the current status, and timely delivery of the document.

Prepares all documentation necessary to assure that subcontracts are properly awarded and that all work within the contractual agreement is performed. Submit requests for the proposals, complete negotiations with subcontractor, resolve contractual issues during subcontract performance, perform closing of the subcontract. Assigns to the procurement cost estimator perform independent cost estimate and review of the subcontractor's proposed cost prior to the award of the subcontract.

Oversees all construction activities. Supports subcontractor and provides direction to the subcontractor during construction. Assures compliance with all requirements during construction activities. Act as Subcontract Technical Representative.

Responsible for the Conceptual design, Title II Design, Test Fill, and Construction elements of the WBS.

Project Support Lead

Direct responsibility for a broad spectrum of work to be performed by individuals and/or virtual teams in support of project activities. Project Support personnel are required to interface with and satisfy the demands of a variety of internal and external customers, usually on short notice, in an efficient and proficient manner. Project support activities include managing, developing, coordinating, and implementing the following: Work Packages, Project Management Plan, Configuration Change Control System for baseline changes, technical support, regulatory and system management, and provide appropriate matrix personnel in support and maintenance of project costs and schedules.

Other job descriptions follow:

Administrative Support - has overall support responsibility for the assurance of production of documents in accordance with RFETS standards, compliance with RFETS correspondence standards during issue of correspondent memorandums and letters to all project support personnel from the project manager in regard to the project. Timely and accurate distribution of all correspondence related to the project. Assurance of correct filing of all correspondence documentation. Support Project Manager and project personnel in preparation of presentations for the public meetings.

Duality Assurance Support - Responsible to assure that appropriate QA program elements are adequately applied and implemented during the life of the project.

Some specific job descriptions are broken down by activity for this project are presented below. This provides better and easier accessibility and utilization of this document by management.

Conceptual Design/Title II Job Descriptions: Engineer - Responsible for timely preparation of the Conceptual Design/Title II document. Lead for this activity. Assigns responsibilities to support personnel, coordinates preparation of the document. Oversees and supports preparation of the document. Coordinates all assignments to assure timely issue of the prepared document. Attends public meetings, performs review of the documents, coordinates comment incorporation, attends project status meetings to update Project Manager on the current status, and timely delivery of the document.

Decision Document Job Descriptions: Lead Engineer - Responsible for timely preparation of Decision Document. Lead for this subactivity. Assign responsibilities for support personnel, coordinate preparation of the document. Oversee and support preparation of the document. Coordinate all assignments to assure timely issue of the prepared document. Attend public meetings, review documents, coordinate comment incorporation, attend project status meetings to update Project Manager on the current status, and timely delivery of the document.

Engineers/Senior Engineers will be assigned full time to write the Decision Document, and support Lead during preparation of the document, public meeting preparation and incorporation of comments.

Senior Engineers and Lead personnel will review the Decision Document on part time basis. Assuming 4 hours for review of the document per person.

Support personnel will type the draft and final document assure that the final document is consistent and complies with document format, reproduce draft and final document, and distribute this document. Prepare

all slides required for the Public meeting. Support engineers during issue of comment resolution, by providing typing, coping, and distribution of the comment-resolution.

Construction Procurement Job Descriptions: Procurement Support Personnel

Procurement QA - Perform QA review of the procurement documents to ensure incorporation of QA procurement requirements. Ensures purchased services, equipment, and materials comply with DOE and regulatory requirements.

Preconstruction Job Descriptions: Engineer - Prepares Integrated Work Control Package based on the information obtained from Design Package (Title II Design), subcontractor's Health and Safety plan, and inspection criteria.

Test Fill Job Descriptions: Project Engineer - Oversees and approves all activities related to Test Fill. Provides technical and administrative support to subcontractor.

QA Coordinator - Performs QA surveillance and inspections to Test Fill activities. Identifies and track deficiencies.

Construction Job Descriptions: Subcontractor - Perform all construction activities under the direction and guidance from RMRS. Supplies all equipment necessary to perform construction at RFETS. Supplies all personnel necessary for the performance of the construction activities in two shifts, six days a week ten hours a day. Assures health and safety of the workers during construction activities. Performs work under budget and within the schedule to comply with negotiated agreement.

Health and Safety Engineer - Performs Health and Safety audits during construction activities. Provide support and guidance to subcontractor during construction activities on Health and Safety issues. Assures that all Health and Safety documentation (such as Health and Safety Plan and all the training by the subcontractor and RMRS personnel is complied with).

Readiness Review Coordinator - Coordinates all activities associated with preparation to and conduction of Readiness Review process. Develops Readiness Review checklist, ensures timely compilation of all Readiness Review checklist items.

Operations Testing, Training, Procedures Job Descriptions: ER Training and Qualification Support Personnel - Ensures personnel are properly trained and qualified to perform construction activities. Ensures that all necessary procedures are readily available.

Project Closeout Job Descriptions: Project Engineer - Ensures all technical requirements have been satisfactory completed. Reviews and approves final project closure documentation. Submits complete documentation to the record center for achieves.

QA Coordinator - Performs a QA review of project closure documentation. Identifies and tracks outstanding deficiencies through closure.

APPENDIX C

**WORK BREAKDOWN STRUCTURE DICTIONARY (“ACTIVITY NUMBER” REFERS
TO PRIMAVERA SCHEDULE; “LEVELS REFER TO LEVELS WITHIN THE
PROJECT WBS)**

LEVEL 1 PROJECT

Activity Number: (See Primavera Schedule)

Activity Title: **Onsite Waste Management Facility**

Definition: The Projects Group has been tasked with design and construction of a disposal cell at the RFETS. The function of the disposal cell is to provide a repository for the remediation waste generated from the closure of Environmental Restoration projects. The first priority of the disposal cell is to dispose of OU4s remediation waste in order to complete closure of OU4. The disposal cell has been designated as the Onsite Waste Management Facility.

The following are specific content for the Onsite Waste Management Facility deliverables

- Deliver a conceptual design report and modify the existing Sanitary Landfill Title II design to convert a portion of cell 4 to accept remediation waste which is also mixed hazardous waste for disposal.
- Identify regulatory requirements for construction and design of a disposal cell.
Develop a Decision Document that incorporates all regulatory requirements and establishes a mode of operation for all phases of the Onsite Waste Management Facility.
- Deliver a Title II Design report for construction of the disposal cell. The Onsite Waste Management Facility shall be designed to "RCRA Subtitle C" standards, in accordance with the Colorado Hazardous Waste Regulations (6 CCR 1007-3), the Rules and Regulations Pertaining to Solid and Hazardous Wastes (6 CCR 1007-2, Part 2), and the Resource Conservation and Recovery Act (40 CFR 264).
- Procure construction services.
- Ensure that all preconstruction activities are completed prior to construction (i.e., develop waste acceptance criteria, prepare Quality Assurance Plan, prepare Health and Safety Plan, perform necessary subcontractor training, obtain all necessary permits, perform a graded readiness review for construction activities, etc.)
- Construct the Onsite Waste Management Facility.
- Prepare all required documentation for operation of the disposal cell after construction (i.e., Emergency Operation Plan, Operating Procedures, Health and Safety Plan, Safety Analysis Report, etc.) and perform a system operational test of the disposal cell.
- Perform project close-out prior to delivering "Onsite Waste Management Facility" over to Waste Management for operation (i.e., beneficial occupancy, obtaining as-built drawings from engineering, turnover of the Operations and Maintenance Manual to Operations personnel, perform operational start-up)

Provide project support in order to maintain control of the project as required, to evaluate the associated costs to stay within the budget and on schedule. Interface with K-H and regulators as necessary. Prepare contracts and attend all contract negotiations. Perform field supervision as necessary during construction and system operational testing. Provide administrative support as necessary to all areas of the project in order to produce deliverables as scheduled.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Conceptual Design**

Definition: The formative engineering stage in the design of a system, process, or facility. The conceptual design is prepared using operating funds for the purpose of developing and quantifying the physical construction requirements of the project, a quality cost estimate, and a schedule of key design and construction activities.

This activity includes tasks for preparation of the Conceptual Design Report by RMRS Engineering, Cost Estimating, and Delivery of a Final Conceptual Design Report.

The following are specific objectives for the Conceptual Design Report:

- Prepare a conceptual design report for the OWMF that meets RCRA Subtitle C standards.
- Provide accurate technical input to produce a conceptual design that complies with all applicable engineering standards, and Rocky Flats Environmental Technology Site requirements.
- Prepare a rough of order of magnitude estimate for project costs from the Conceptual Design Report.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Operational Readiness Document Preparation**

Definition: A detailed question and answer list of items completed by the project manager or designee which should be considered prior to the start of definitive design. The level of detail must be adequate for the Project Manager and Engineering to approve so that the design can be initiated.

Objective: This task includes preparation of an ORD directing engineering to produce a conceptual design report for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Conceptual Design Report Preparation**

Definition: The CDR contains the baseline project description and justification. Signature approval by the DOE is required for the scope and concept of work to be submitted for funding consideration. This task includes report preparation by RMRS Engineering, word processing and reproduction services by RMRS Administrative Support, document review by project support personnel, and cost estimating.

Objective: The objective of this task is to prepare a CDR for review by Kaiser-Hill, and RMRS support personnel for transmittal to the Department of Energy (DOE) for approval.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Title II Design**

Definition: Title I has been partially performed during the Conceptual Design phase of the project. Title I determines the requirements and criteria which will govern Title II design. Tasks include preparation of preliminary planning and engineering studies, preliminary drawings and outline specifications, life-cycle cost analysis, preliminary cost estimates, and scheduling for project completion. Preliminary design provides identification of long lead procurement items and analysis of risks associated with continued project development. Title II design continues the development of the project based on approved Title I (preliminary) design. Definitive design includes any revisions required of the Title I effort; preparation of the final working drawings, specifications, bidding documents, cost estimates, and coordination with all parties which might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids. Title II Design will be performed by Merrick with input from RMRS Project Management and RMRS Engineering Support personnel.

The following are specific objectives for the Title II Design:

- Prepare a design subcontract requesting engineering services for Title II Design.
- Implement the design subcontract option.

- Preparation, review, and comment resolution for the 50% Title II Design.
- Preparation of the final Title II Design for submittal to DOE.
- Preparation of a groundwater monitoring plan for the Onsite Waste Management Facility based on the Title II Design.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Title II Subcontract**

Definition: Title II design continues the development of the project based on approved Title I (preliminary) design. Definitive design includes any revisions required of the Title I effort; preparation of the final working drawings, specifications, bidding documents, cost estimates, and coordination with all parties which might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids. Title II Design will be performed by Merrick with input from RMRS Project Management and RMRS Engineering Support personnel.

Objective: The objective of this task is to procure engineering services to perform the Title II Design for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **50% Title II Design**

Definition: Definitive design includes any revisions required of the Title I effort; preparation of the final working drawings, specifications, bidding documents, cost estimates, and coordination with all parties which might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids.

Objective: The objective of this task is to produce a comprehensive Title II Design for the Onsite Waste Management Facility for review by RMRS and Kaiser-Hill.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Final Title II Design**

Definition: Definitive design includes preparation of the final working drawings, specifications, bidding documents, cost estimates, and coordination with all parties which might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids.

Objective: The objective of this task is to produce a comprehensive Title II Design for the Onsite Waste Management Facility for approval by DOE and the regulators.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Decision Document**

Definition: The DD is being prepared to present an expedited and cost effective response to disposing of remediation wastes at the Rocky Flats Environmental Technology Site (RFETS) to the DOE, the EPA and the CDPHE. The main objective of constructing a disposal facility for remediation wastes is to accept waste that previously had been designated for shipment to offsite facilities. The cost of shipment and

disposal is quite high and in order to lessen costs to the taxpayer's, a determination was made that a disposal cell at the RFETS was more cost effective and timely. The primary objective of constructing a disposal cell is to accept Operable Unit 4 wastes in order to comply with the Interagency Agreement (IAG) to provide an expedited response action for the OU4 Solar Evaporation Ponds.

The following are specific objectives for the Decision Document:

- Preparation of a draft Decision Document incorporating all regulatory requirements and explaining how the Onsite Waste Management Facility will be operated.
- Public review and comment period of the draft DD to receive all questions on the Onsite Waste Management Facility.
- Preparation of a final DD incorporating or resolving all comments received from the public comment period for final approval by all applicable regulatory agencies.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Draft DD**

Definition: Preparation of a draft Decision Document incorporating all regulatory requirements and explaining how the Onsite Waste Management Facility will be operated. The DD is being prepared to present an expedited and cost effective response to disposing of remediation wastes at the Rocky Flats Environmental Technology Site (RFETS) to the DOE, the EPA and the CDPHE.

Objective: Prepare a draft DD for public review.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **DD Public Comment**

Definition: Sixty day period for public to review and comment on the Draft DD for the Onsite Waste Management Facility.

Objective: Public review and comment period of the draft DD to receive all questions on the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Final DD**

Definition: Preparation of a final Decision Document incorporating all regulatory and public comments on the Onsite Waste Management Facility will be operated.

Objective: Preparation of a final DD incorporating or resolving all comments received from the public comment period for final approval by all applicable regulatory agencies.

LEVEL 2 ACTIVITY

Activity Number:

Activity Title: **Regulatory Permitting**

Definition: Preparation of regulatory documentation that must be completed prior to beginning any type of construction activities for the Onsite Waste Management Facility.

The following are specific objectives for Regulatory Permitting:

- Preparation of a Certificate of Designation Modification providing technical information on the design of the Onsite Waste Management Facility. The CD will present all regulatory requirements and design standards to the CDPHE and Jefferson County to ensure that the facility is operated in a manner to protect public health and the environment.
- Preparation of National Pollutant Discharge Elimination System (NPDES) documentation to assess the environmental impacts of constructing the Onsite Waste Management Facility. This task generally encompasses performing a Clean Water Act Review.
- Preparation of Air Pollutant Emission Notice documentation to assess the air pollution discharges that will result from performing construction and operation of the Onsite Waste Management Facility. RMRS will assess if it will impact the environment.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Certificate of Designation Modification**

Definition: A regulatory document which presents all regulatory requirements and design standards to the CDPHE and Jefferson County to ensure that the facility is operated in a manner to protect public health and the environment.

Objective: Preparation of a Certificate of Designation Modification providing technical information on the design of the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **APENS**

Definition: APENS documentation assessing the air pollution discharges that will result from performing construction and operation of the Onsite Waste Management Facility. RMRS will assess if it will impact the environment.

Objective: Preparation of Air Pollutant Emission Notice documentation to assess the air pollution discharges that will result from performing construction and operation of the Onsite Waste Management Facility. RMRS will transmit documentation to appropriate regulatory agencies.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **NPDES**

Definition: The national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing pretreatment requirements, under sections 307, 402, 318, and 405 of the Clean Water Act.

Objective: Preparation of National Pollutant Discharge Elimination System (NPDES) documentation to obtain a NPDES Permit for the Onsite Waste Management Facility. An NPDES Permit is a permit issued by the federal or state EPA for the discharge of wastewater to the environment. This permit states the parameters for a discharge which defines compliance for authorized discharge pollutant levels, and/or includes a schedule which will allow the point source discharge to be remediated into compliance with the authorized discharge levels.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)
Activity Title: **Construction Procurement**

Definition: Preparation of Procurement documentation to procure a construction subcontractor for the Onsite Waste Management Facility.

The following are specific objectives of Construction Procurement:

- Prepare costs and a statement of work for a Davis/Bacon determination.
- Award a subcontract for the construction of the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)
Task Title: **Davis/Bacon Determination**

Definition: A decision made by the DOE that a work order is or is not covered under the provisions of the Davis/Bacon Act.

Objective: Preparation of costs to determine if subcontractor services may be utilized for construction of the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)
Task Title: **Contract Award**

Definition: Award of the contract for a construction subcontract.

Objective: Award a construction subcontract.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)
Activity Title: **Preconstruction**

Definition: Preparation of all applicable and required documentation for construction of the Onsite Waste Management Facility as identified by RMRS Project Management.

The following are specific objectives of Preconstruction:

- Develop Waste Acceptance Criteria for the Onsite Waste Management Facility.
- Prepare a Construction Quality Assurance Plan for the construction phase of the project.
- Prepare a Health and Safety Plan for construction activities.
- Schedule site surveys of the construction site prior to beginning construction activities at the site.
- Ensure that construction subcontractor personnel receive plant specific training.
- Prepare the Integrated Work Control Package for construction work.
- Obtain necessary excavation permits and soil disturbance permits for construction activities.
- Perform a graded Operational Readiness Review on the construction phase of the project.
- Mobilize the subcontractor to bring all necessary equipment and materials for the construction of the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Waste Acceptance Criteria**

Definition: Criteria developed for acceptance of wastes from remediation activities onsite to ensure compliance with all applicable state and federal regulations for disposal facilities.

Objective: Develop Waste Acceptance Criteria for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Quality Assurance Plan**

Definition: A document that contains or references the quality assurance elements established for an activity, group of activities, a scientific investigation or a project and describes how conformance with such requirement is to be assured for structures, systems, computer software, components, and their operation commensurate with (a) the scope, complexity, duration, and importance to satisfactory performance; (b) the potential impact on environment, safety and health; and (c) requirements for reliability and continuity of operation.

Objective: The objective of this task is to prepare a quality assurance plan for the construction phase of this project to ensure that all quality affecting activities are performed in accordance with all applicable requirements.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Site Plans**

Definitions:

Health and Safety Plan - A written document that defines the health and safety hazards, controls, and requirements for worksite activities. Hazardous Waste Areas (HWAs) normally do not require such plans, however, they may be required to have a plan as determined by Industrial Hygiene.

Security Plan - A written document that defines the security requirements, and controls for entering the worksite. The Security Plan must be approved by Wackenhut Security.

Objectives: Modify the existing Health and Safety Plan for the New Sanitary Landfill to produce a construction HASP for the Onsite Waste Management Facility. Modify the existing Security Plan for the New Sanitary Landfill to produce a Security Plan for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Site Surveys**

Definitions:

Land Survey - To determine and delineate the form, extent, and position of a tract of land by taking linear and angular measurements and by applying the principles of geometry and trigonometry.

Radiological Survey - A survey of the area to determine radiological hazards.

Objectives: Obtain a land survey of the site prior to construction. Obtain a radiological survey of the site to determine if any radiological hazards exist at the site.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Subcontractor Training**

Definition: Rocky Flats Environmental Technology Site specific training required for employees or subcontractors performing work on the site.

Objective: Train construction subcontractors to site specific requirements.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Integrated Work Control Package**

Definition:

Objective: Prepare an IWCP for construction activities at the Onsite Waste Management Facility site.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Permits**

Definition:

**Excavation Permit -
Soil Disturbance Permit -**

Objective: Obtain an Excavation Permit and a Soil Disturbance Permit for construction activities at the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Mobilization**

Definition: Assemble subcontractor resources to begin construction activities.

Objective: Completion of mobilization of the construction subcontractor and associated subcontractors. The scope will include the installation of the subcontractor's office trailers, the installation of supporting utilities and mobilization and inspection of construction equipment.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Readiness Review**

Definition: A structured method for determining that a project, process, or facility is ready to operate and occupy, includes (at a minimum) review of the readiness of the plant and hardware, personnel, and documentation. The review includes a determination of compliance with environment, safety, and health protection requirements.

Objective: Develop a readiness review "tree" to ensure that all administrative and physical controls have been identified and are in place prior to start of construction. Ensure that sign off from all responsible organizations is secured and that all required documentation is forwarded to Records Management.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Test Fill**

Definition: To Be Completed

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: Construction

Definition: Physical activities to build or otherwise bring into being a project design. The term "construction" can mean construction activities as normally conceived, that is to erect a facility or to assemble a system; however, it can also mean the fulfillment of remediation field activities or the execution of demolition tasks.

The following are specific objectives of the Construction activity:

- Install a trailer with facilities for workers for clothing changes and showers.
- Construct a vehicle decontamination facility.
- Construct a storage shed or other facility for storage of miscellaneous equipment, spare parts, pumps, etc.
- Construct the disposal cell of the Onsite Waste Management Facility.
- Install a disposal cell liner and a leachate collection system.
- Erect a prefabricated building at the top of the sump risers to house and provide containment for piping and valving from the leachate collection and leak detection sump risers to the leachate storage tanks.
- Construct a concrete staging area for waste unloading and temporary storage of waste.
- Construct a new road from the Onsite Waste Management Facility to the New Sanitary Landfill.
- Erect a security fence around the Onsite Waste Management Facility.
- Install monitoring wells around the disposal cell for groundwater monitoring purposes.
- Install all necessary utilities for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Excavation**

Definition: any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal, and includes, but is not limited to, the installation of fence posts, poles, and drilling of boreholes.

Objective: Perform all excavation activities necessary to construct the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Fabrication/Installation**

Definition: To build and install all necessary facilities required for the Onsite Waste Management Facility.

Objective: To fabricate and install as necessary buildings, structures, fences, monitoring wells, disposal cell and leachate collection system, etc. for the purpose of completing the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Title III Field Work**

Definition: Those activities required to assure that the project is constructed in accordance with the plans and specifications (e.g., construction inspection), and that the quality of materials and workmanship is consistent with the requirements of a project (e.g., materials testing).

Objective: Monitor the construction subcontractor's activities during the time of construction to verify that the environment and safety of the workers is being provided for. Ensure that any design modifications that may need to be made are addressed and expedited. Verify that the construction is being performed in accordance with all site requirements.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Operations Testing, Training and Procedures**

Definition: Documentation, training, and performance of system testing in order to ensure that the Onsite Waste Management Facility is ready for "operation".

The following are specific objectives for this activity:

- Prepare all necessary plans for the facility that are required by DOE and other regulatory agencies.
- Preparation and approval of all operating procedures for operation of the facility.

Perform a System Operational Test.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Emergency Operations Plan**

Definition: A written document specifying the actions to be taken to protect the employees, nuclear materials or other government property from injury, loss, or other harm resulting from an unplanned event. All activities aimed at limiting the adverse effects of an event on the surrounding community should be documented in the Emergency Operations Plan. The Emergency Plan also contains coordinating efforts of plant personnel with other federal, state, or local emergency organizations.

Objective: Prepare a Site Specific Emergency Plan for the Onsite Waste Management Facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Operations Procedures**

Definition: A document that describes the actions and responsibilities for performing activities that include, but are not limited to, production, operation, surveillance of equipment and facilities, and maintenance.

Objective: Prepare operation procedures for the operation of the Onsite Waste Management Facility that meet all regulatory requirements.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Systems Operations Test**

Definition: A comprehensive, integrated test performed on facilities, production, and waste process equipment, systems, or processes after Construction Component testing to demonstrate conformance to specification and operability. Systems are checked individually and as a complete unit. A test that quantifies overall system(s) performance or at least the performance of more than one component.

Objective: Perform a System Operational Test of the Onsite Waste Management Facility to ensure that all personnel have been properly trained to the operating procedures and to verify that all equipment and systems are functional.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Project Close-out**

Definition: When a construction project is completed, it must be inspected and accepted by the plant operating contractor. Project inspection and acceptance is documented by the Construction Management Department. Upon project acceptance and transfer, operation of the facility is transferred to the plant operating contractor.

The following are objectives of this activity:

- Complete Beneficial Occupancy of the facility.
- Complete As-Built Engineered Drawings of the facility.
- Turn over the Operation and Maintenance Manual to operations.

Receive approval from to DOE and the appropriate regulatory agencies to begin operation of the facility.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Beneficial Occupancy**

Definition: The process by which the plant operating contractor takes possession of a project or a portion of a project before completion.

Objective: To take Beneficial Occupancy after construction is completed.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **As-Builts**

Definition: Drawings certified for construction or approved shop drawings that reflect the arrangement and configuration of equipment, systems, and other materials in respect to the actual installation. These drawings include all redline changes to original design drawings.

Objective: Receive a complete set of As-Built Drawings at the completion of construction.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **O&M Manual Turnover**

Definition: Turn over of the operation and maintenance Manual for the Onsite Waste Management Facility.

Objective: Give the O&M Manual for the facility to operations.

LEVEL 3 Task

Task Number: (See Primavera Schedule)

Task Title: **Operational Startup**

Definition: The point at which a project is ready to be turned over to the operations personnel for startup.

Objective: Turnover of the facility to operations for startup.

LEVEL 2 ACTIVITY

Activity Number: (See Primavera Schedule)

Activity Title: **Project Support**

Definition: Personnel required to support maintaining control of the work package as required to manage the work being performed, evaluate the associated costs to stay within budget, provide periodic reports, and initiate Baseline Change Proposals as required. This activity also includes customer and regulator interface, contract preparation and negotiations, field supervision, as required and technical assistance/administrative support and review of all project related documents for the Onsite Waste Management Facility.

The objective of this task is to provide necessary project support in order to construct the Onsite Waste Management Facility on schedule and within budget and in accordance with all regulatory requirements.

Under this project the following activities and tasks would be used:

Activity - Conceptual Design Objective: Develop a project scope, which will satisfy program needs. Assure project feasibility and attainable performance levels. Develop reliable cost estimates and realistic schedules in order to provide a complete description of the project. Develop project criteria and design parameters for all engineering disciplines, identification of applicable codes and standards, quality assurance requirements, materials of construction, health and safety and security requirements and any other features or requirements necessary to describe the project.

Sub-activities:

- Prepare Operational Readiness Document
- Conceptual design Report Preparation
- Conceptual Design Cost Estimate
- Conceptual Design Final Report
- Submit Conceptual Design to Kaiser-Hill DOE

Activity - Title II design Objective: Produce final Title II design, including drawings, specifications, calculations and reports, required for construction and regulatory approval.

Sub-activities:

- Prepare Statement of Work
- Develop Basis Memorandum
- Implement Design Subcontract Option
- Prepare 50 % Title II Design
- Review Meeting on 50 % Title II Design
- Incorporation of Comments for 50 % Title II Design
- Prepare 100 % Title II Design
- Title II Independent Government Cost Estimate
- Finalize Title II Schedule
- Title II Review
- Title II Comment Incorporation
- Title II Review Meeting
- Prepare Groundwater Monitoring Plan
- Review and Approve Groundwater Monitoring Plan
- Issue Title II Design

Activity - Decision Document Objective: Produce brief and concise as possible Decision Document, while still meeting the primary goals, which are to identify the objectives of the action and analyze the effectiveness, implementability, and cost of the few alternatives considered. Decision Document establishes the requirements for the work and documents decision and its justifications. This is a primary tool for informing the public and soliciting comments.

Sub-activities:

- Prepare Decision Document
- Reproduction of Draft Decision Document
- Internal Review of Draft decision Document
- Incorporate Draft Decision Document Comments
- Reproduction of Draft Decision Document for Public Review
- Public Comment Period
- Public Meeting

- Comment Resolution Period
- Approval of Decision Document
- Preparation of Final Decision Document

Activity - Regulatory Permitting Objective: Prepare and issue all required permits for the approval to the EPA and CDPHE. Assure that all the necessary documentation is submitted on time and will not pose a delay to any of the activity within the project.

Sub-activities:

- Develop Certificate of Designation Mod
- Public Meeting
- C.D. Review and Comment Jeffco/CDPHE
- Incorporate C.D. Comments
- C.D. Approval
- Jeffco Planning and Zoning
- Jeffco Commissions
- Prepare APENS Permit
- Reproduce/submit to APENS to CDPHE
- CDPHE Review and Approve APENS Permit
- APENS approval
- Prepare NPDES Permit
- Submit NPDES to EPA
- EPA approve NPDES Permit
- NPDES Approval

Activity - Construction Procurement Objective: Assure that all documentation is completed accordingly to issue subcontract for the construction activities on time without unnecessary delay. Assure that negotiations are completed and no outstanding issues exist to prevent construction work from implementation. Provide independent cost estimate on the proposed work for the future subcontract to assure that negotiated cost is accurate and includes all the items and labor necessary for the completion of work in time and under budget.

Sub-activities:

- Davis Bacon Determination
- Prepare Statement of work
- Prepare Procurement Package
- Submit Procurement Package to Kaiser-Hill/DOE
- Commerce Business Daily Announcement
- DOE Approval of RFP
- Pre-qualifications
- Issue request for proposal
- Receive Bids
- Technical/Cost Evaluation
- Contract Negotiations
- Contract Award

Activity - Preconstruction Objective: Assure that all necessary documentation for the construction activities are completed and accurate by performance of Operational Readiness Review. Prepare Health and Safety Plan, Integrated Work Control Package, QA Plan, perform all survey required prior to the construction activities. Assure that Construction activities can be initiated.

Sub-activities:

- Amend Existing Site Specific H& S Plan
- Modify Existing security Plan
- Site Survey
- Subcontractor Training
- Hazard Assessment
- Integrated Work Control Package
- Ecological Survey
- Prepare Quality Assurance Plan and Approval
- Award Construction QA Sub
- Construction Quality Assurance
- Soil Disturbance Permit
- Excavation Permit
- Waste Acceptance Criteria Development
- Prepare Readiness Review
- Submit Operational Readiness Review to DOE and Kaiser-Hill, approval of ORR
- Readiness Review

Activity - Test Fill

Objective: During construction subcontractor will construct clay liner to demonstrate ability to meet regulatory requirements.

Sub-activities:

- RMRS Review and Approve Borrow Source
- Mobilize
- Construct Test Fill
- Run SDRI Test
- Data Compilation
- Final Report Preparation
- Submit Test Fill Report to CDPHE
- CDPHE Review Fill Report
- CDPHE Test Approval

Activity- Construction

Objective: Perform construction of WMF on time and under budget. During the construction perform disposal cell excavation and liner placement, install wash facilities and leachate collection system, install test alarms.

Sub-activities:

- Disposal Cell Excavation
- Disposal Cell Liner Placement
- Fab/Install Vehicle Wash Facility
- Fab/Install Personnel Wash Facility
- Install Leachate Collection System
- Install Test Alarms
- Final Test Punch List
- Title III Field Work

Activity - Operations Testing, Training & Procedures

Objective: Prepare all procedures necessary for the implementation of construction prepare emergency operations plan. Perform all training necessary for the subcontractor personnel to perform construction activities to assure compliance with RFETS and Health and Safety requirements.

Sub-activities:

- Prepare System Operating Testing Document
- Prepare Emergency Operations Plan
- Review and Approve Emergency Operations Plan
- Prepare Draft Operations Procedures
- Submit Operations Procedures to CDPHE/Jeffco
- Comment Resolution of Draft Procedures
- Prepare Final Operation Procedures
- Training of Operations
- Systems Operations Testing

Activity - Project Closeout Objective:

Sub-activities:

- Beneficial Occupancy
- As Builds
- O&M Manual Turnover
- Begin Operations

Assure that all construction activities are completed. Perform audit to accept all construction work based on the requirements of inspection criteria outlined within IWCP. Assure that all documentation on the project is submitted to the Record Center based on the requirements. Prepare and submit approved Operation and Management Manual to the operation team.

On-site Disposal Cell

Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	Tot Float	1995	1996	1997																											
							J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
55		55	03JUL95	19SEP95	126																															
351		351	03JUL95	15NOV96	238																															
390		390	03JUL95	26JUL96	112																															
547		547	03JUL95	26AUG97	52																															
301		301	20SEP95	22NOV96	0																															
599		599	03JUL95	07NOV97	0																															
238		238	25NOV96	31OCT97	0																															
134		134	20FEB97	28AUG97	35																															
577		577	01AUG95	05NOV97	2																															
50		50	29AUG97	07NOV97	0																															
317		317	03JUL95	30SEP96	4																															

Project Start 01AUG98
 Project Finish 07NOV97
 Data Date 01JUL95
 Ptd Date 28SEP95

Legend:
 Early Bar
 Progress Bar
 Critical Activity

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LLP2

RMBR/RFETS
 LLMW CELL FY 96 REVISED 9-27
 BASELINE CHANGE TO BE DETERMINED

Sheet 1 of 1

Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float
RK96200001	O.R.D.	3	3	03JUL95	06JUL95	4
RK96200010	CONCEPTUAL DESIGN	55*	55*	03JUL95	19SEP95	126
RK96200020	CONCEPTUAL DESIGN REPORT PREPARATION	36	36	07JUL95	25AUG95	126
RK96200030	CONCEPTUAL DESIGN COST ESTIMATE	5	5	28AUG95	01SEP95	137
RK96200040	CONCEPTUAL DESIGN FINAL REPORT	5	5	28AUG95	01SEP95	126
RK96200050	INCORPORATE COMMENTS FOR CDR	5	5	05SEP95	11SEP95	126
RK96200060	TRANSMIT CDR TO K-H (RMRS)	3	3	12SEP95	14SEP95	126
RK96200070	TRANSMIT CDR TO DOE (K-H)	3	3	15SEP95	19SEP95	126
RK96200080	SUBMIT CONCEPTUAL DESIGN TO DOE	0	0		19SEP95	126
RK96210001	TITLE II DESIGN	313*	313*	14JUL95	04OCT96	0
RK96210010	DEVELOP DESIGN BASIS MEMORANDUM	8	8	03JUL95	13JUL95	135
RK96210020	S.O.W.	8	8	03JUL95	13JUL95	135
RK96210030	IMPLEMENT DESIGN SUBCONTRACT OPTION	5	5	14JUL95	20JUL95	135
RK96210040	PREPARE 50% TITLE II DESIGN	30	30	21JUL95	31AUG95	135
RK96210050	REVIEW 50% TITLE II PACKAGE	4	4	01SEP95	07SEP95	135
RK96210060	REVIEW 50% TITLE II DESIGN MEETING	1	1	08SEP95	08SEP95	135
RK96210070	INCORPORATE 50% TITLE II COMMENTS	10	10	11SEP95	22SEP95	135
RK96210080	PREPARE 90% TITLE II DESIGN	41	41	25SEP95	20NOV95	135

On-site Disposal Cell

Project Start: 01AUG88
 Project Finish: 07NOV97
 Data Date: 01JUL95
 Plot Date: 08SEP95

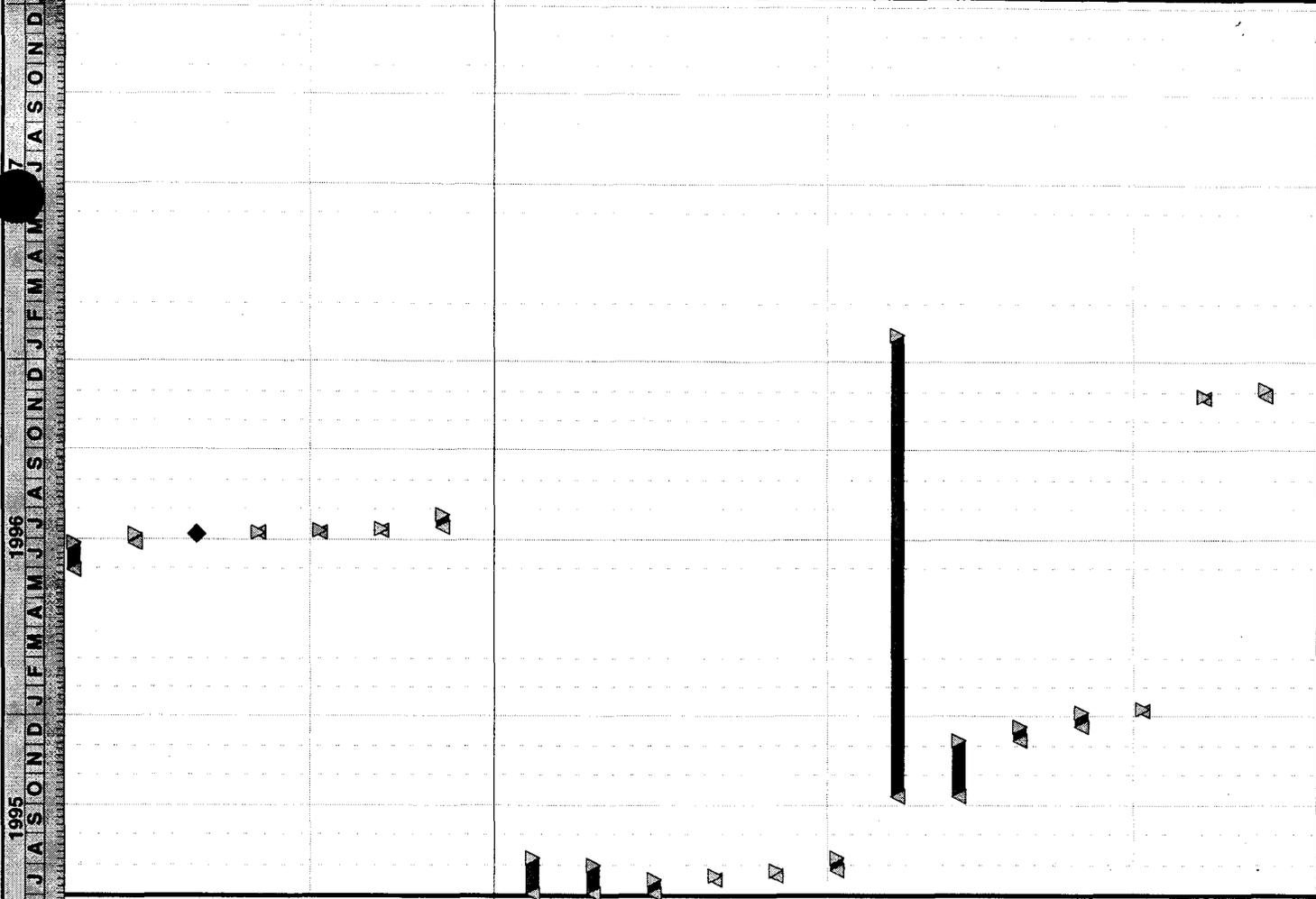
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 [Bar with vertical lines] Progress Bar
 [Bar with horizontal lines] Critical Activity

LLR2

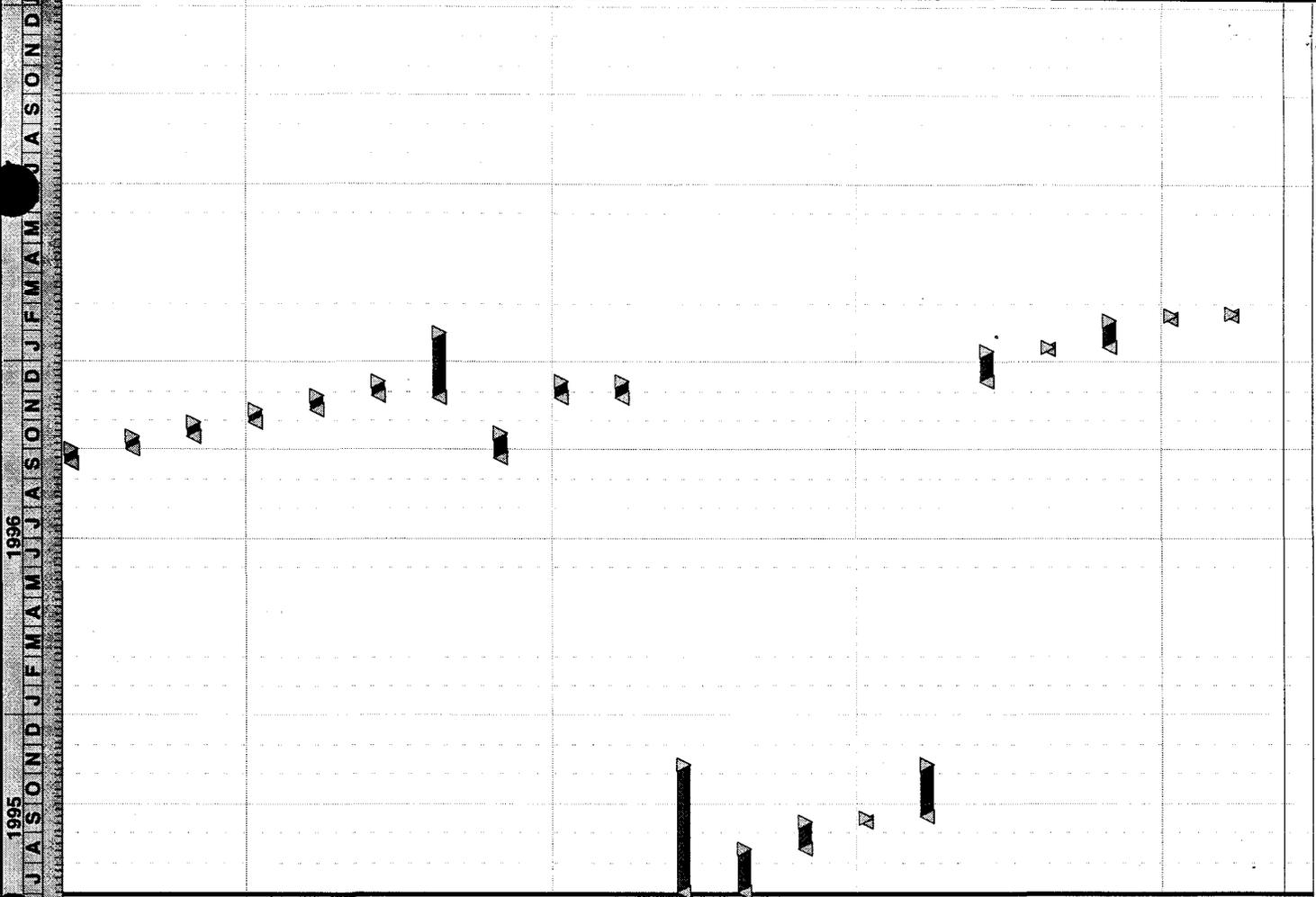
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Sheet 1 of 15

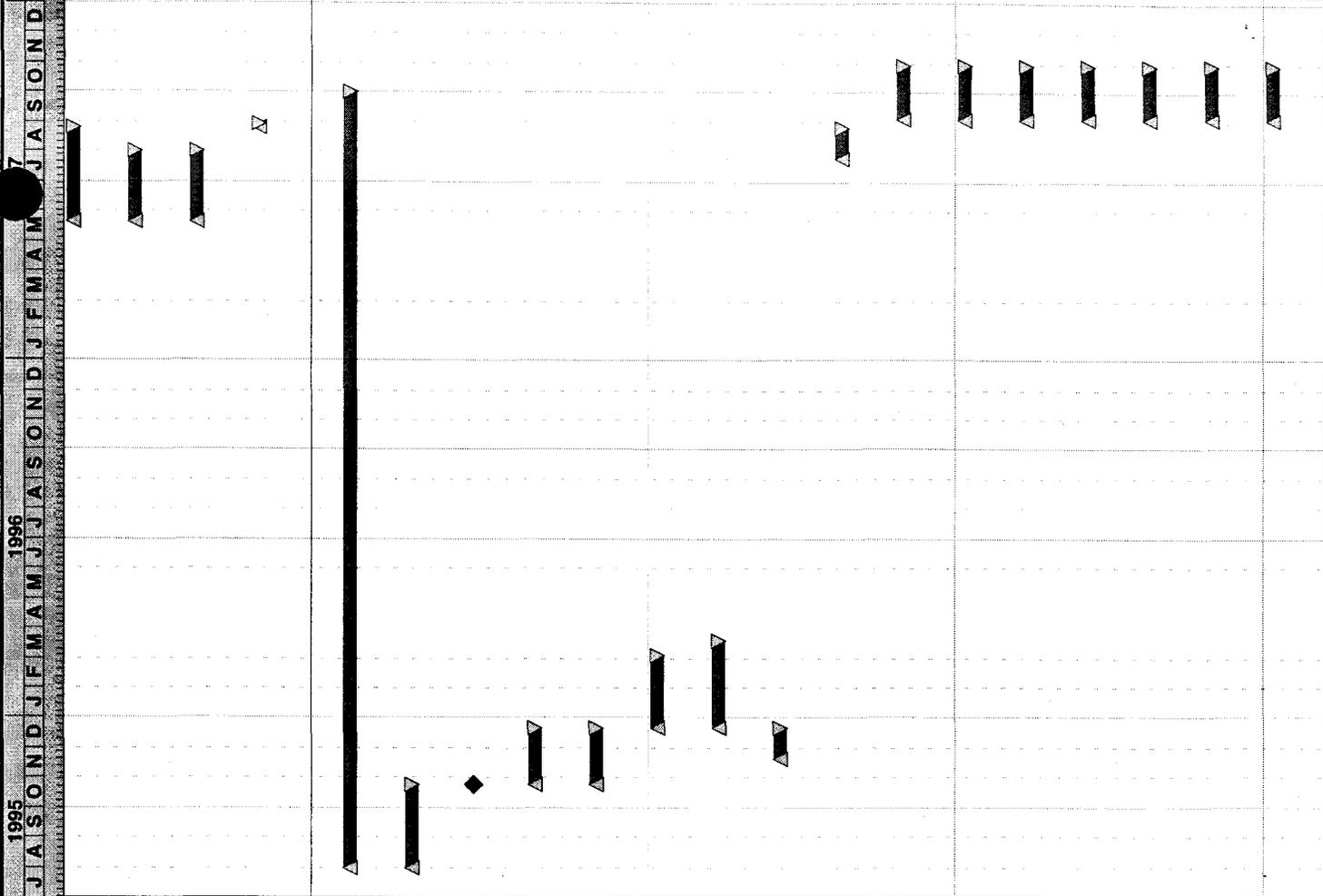
RMRS/RFETS
 LLMW CELL FY 96 REVISED 9-27
 BASELINE CHANGE TO BE DETERMINED



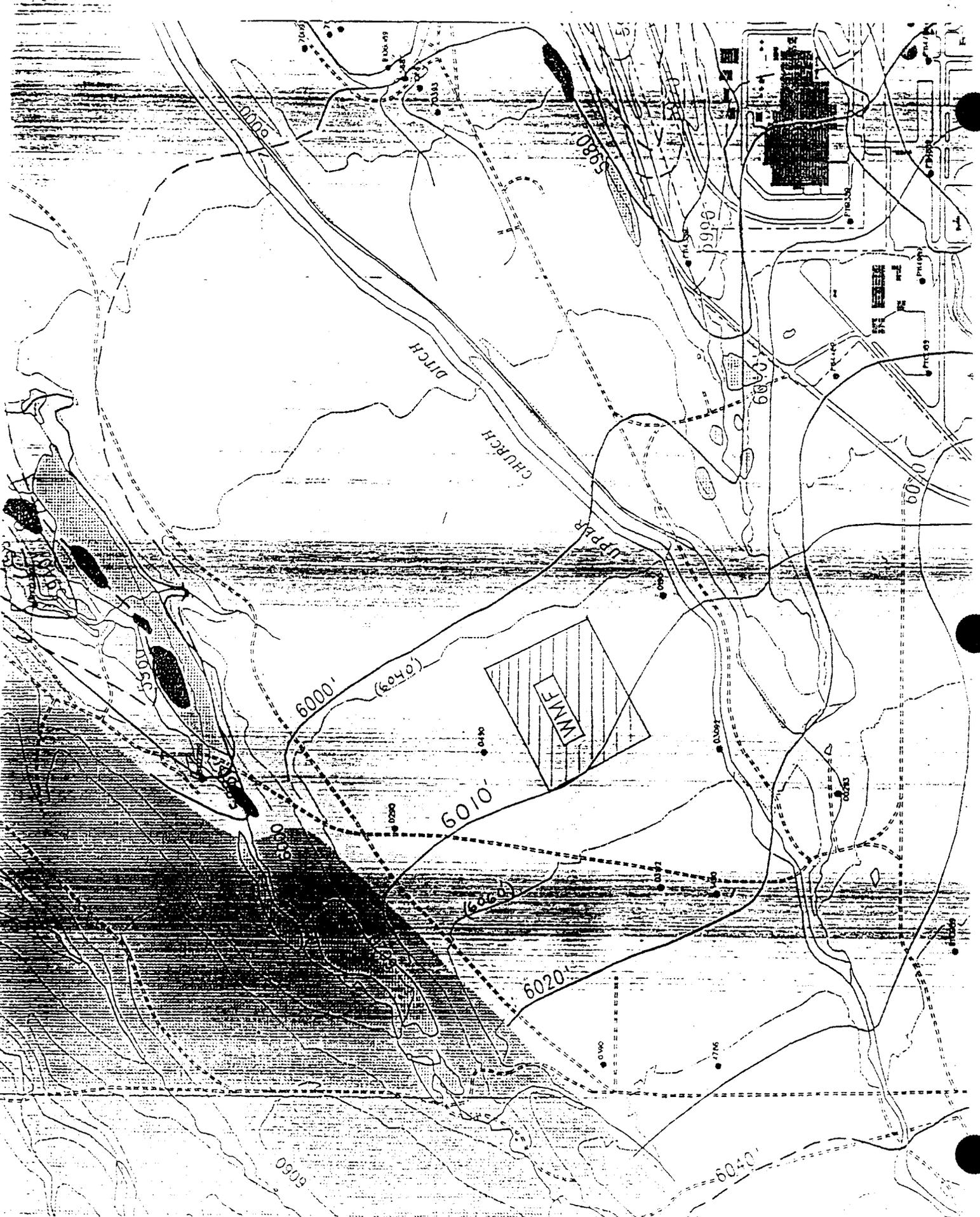
Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float
RK96220420	APPROVE FINAL D.D./R.S. (REGULATORS)	20	20	31MAY96	27JUN96	0
RK96220430	RECEIVE SIGNATURES FINAL D.D./R.S.	5	5	28JUN96	05JUL96	0
RK96220440	DECISION DOCUMENT APPROVAL	0	0		05JUL96	94
RK96220450	INSERT SIGNATURES INTO FINAL D.D./R.S.	1	1	08JUL96	08JUL96	79
RK96220460	DELIVER DIGNED D.D./R.S. TO K-H	2	2	09JUL96	10JUL96	79
RK96220470	DELIVER DIGNED D.D./R.S. TO PUBLIC READING	2	2	11JUL96	12JUL96	79
RK96220480	PUBLIC READING	10	10	15JUL96	26JUL96	79
RK96230080	APENS	26*	26*	03JUL95	08AUG95	389
RK96230090	PREPARE FUGITIVE DUST CONTROL DOCUMENT	20	20	03JUL95	31JUL95	319
RK96230100	PREPARE APENS	10	10	03JUL95	17JUL95	389
RK96230110	TRANSMIT APENS TO K-H	3	3	18JUL95	20JUL95	389
RK96230120	TRANSMIT APENS TO DOE (K-H)	3	3	21JUL95	25JUL95	389
RK96230125	TRANSMIT APENS TO CDPHE (DOE)	10	10	26JUL95	08AUG95	389
RK96230130	STORMWATER PROTECTION PLAN	329*	329*	10OCT95	27JAN97	17
RK96230140	PREPARE STORMWATER PROTECTION PLAN	40	40	10OCT95	06DEC95	250
RK96230150	REVIEW STORMWATER PROTECTION PLAN K-H	10	10	07DEC95	20DEC95	250
RK96230160	INCORPORATE K-H STORMWATER PLAN COMMENTS	10	10	21DEC95	05JAN96	250
RK96230170	OBTAIN RMRS SIGNATURES	2	2	08JAN96	09JAN96	250
RK96230180	OBTAIN SUBCONTRACTOR SIGNATURES	2	2	25NOV96	26NOV96	25
RK96230190	TRANSMIT SIGNED STORMWATER PROTECTION PLN TO K-H	3	3	27NOV96	03DEC96	29



Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	To Float
RK96250100	PERFORM 1ST GROUNDWATER BASELINE SAMPLING	10	10	17SEP96	30SEP96	3
RK96250110	RECEIVE 1ST GROUNDWATER BASELINE RESULTS	10	10	01OCT96	14OCT96	3
RK96250120	PERFORM 2ND GROUNDWATER BASELINE SAMPLING	10	10	15OCT96	28OCT96	3
RK96250130	RECEIVE 2ND GROUNDWATER BASELINE RESULTS	10	10	29OCT96	11NOV96	3
RK96250150	PERFORM 3RD GROUNDWATER BASELINE SAMPLING	10	10	12NOV96	25NOV96	3
RK96250160	RECEIVE 3RD GROUNDWATER BASELINE RESULTS	10	10	26NOV96	11DEC96	3
RK96250190	PREPARE QUALITY ASSURANCE PLAN & APPROVAL	45	45	25NOV96	30JAN97	10
RK96250200	CONSTRUCTION QUALITY ASSURANCE	20	20	23SEP96	18OCT96	39
RK96250210	SOIL DISTURBANCE PERMIT	10	10	25NOV96	10DEC96	45
RK96250220	EXCAVATION PERMIT	10	10	25NOV96	10DEC96	45
RK96250225	WASTE ACCEPTANCE CRITERIA	93*	93*	03JUL95	10NOV95	318
RK96250240	PROVIDE PHYSICAL WAC FOR CELL DESIGN	30	30	03JUL95	14AUG95	163
RK96250245	FINALIZE W.A.C.	20	20	15AUG95	12SEP95	318
RK96250247	ISSUE W.A.C TO CONSIGNORS	3	3	13SEP95	15SEP95	318
RK96250250	PROVIDE ADMINISTRATIVE WAC/CONTROLS FOR OPS	40	40	18SEP95	10NOV95	318
RK96250260	PREPARE CONSTRUCTION READINESS REVIEW	20	20	12DEC96	10JAN97	3
RK96250270	TRANSMIT K-D3 REQUEST TO K-H AND DOE	3	3	13JAN97	15JAN97	3
RK96250280	RECEIVE K-D3 APPROVAL	20	20	16JAN97	12FEB97	3
RK96250300	TRANSMIT COPY OF READINESS REVIEW TO K-H AND DOE	2	2	14FEB97	17FEB97	0
RK96250310	INITIATE CONSTRUCTION	2	2	18FEB97	19FEB97	0



Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	To Float
RK96270050	DISPOSAL CELL LINER PLACEMENT	66	66	22MAY97	25AUG97	0
RK96270060	INSTALL LEACHATE COLLECTION SYSTEM	50	50	22MAY97	01AUG97	16
RK96270070	INSTALL TEST ALARMS	50	50	22MAY97	01AUG97	16
RK96270080	FINAL TEST PUNCHLIST	3	3	26AUG97	28AUG97	0
RK96280001	OPERATIONS TESTING, TRAINING & PROCEDURES	551*	551*	01AUG95	30SEP97	28
RK96280010	PREPARE EMERGENCY OPS PLAN	60	60	01AUG95	24OCT95	384
RK96280030	SUBMIT DRAFT OPS PROCED TO CDPHE/JEFFCO	0	0		24OCT95	419
RK96280040	REVIEW AND APPROVE EMERGENCY OPS PLAN	40	40	25OCT95	21DEC95	384
RK96280050	COMMENT RESOLUTION OF DRAFT PROCEDURES	30	40	25OCT95	21DEC95	419
RK96280060	PREPARE SYSTEM OPERATING TESTING DOCUMENT	50	50	22DEC95	04MAR96	384
RK96280070	PREPARE FINAL OPERATION PROCEDURES	60	60	22DEC95	18MAR96	419
RK96280075	PLAN OPERATIONAL TEST PHASE	20	20	21NOV95	20DEC95	453
RK96280080	OPERATIONAL READINESS REVIEW	22	22	25JUL97	25AUG97	48
RK96280090	ESTABLISH ENVIRONMENTAL BASELINES	40	40	03SEP97	28OCT97	3
RK96280100	ESTABLISH RCT AND AIR MONITORING STAFFS	40	40	03SEP97	28OCT97	3
RK96280110	DEMONSTRATE PUMP OPERABILITY	40	40	03SEP97	28OCT97	3
RK96280120	DEMONSTRATE LEACHATE SUMP OPERABILITY	40	40	03SEP97	28OCT97	3
RK96280130	PERFORM PIPING PRESSURE TEST	40	40	03SEP97	28OCT97	3
RK96280140	PERFORM SYSTEMS TEST	40	40	03SEP97	28OCT97	3
RK96280150	PERFORM DECON PAD TEST RUN	40	40	03SEP97	28OCT97	3



WASTE MANAGEMENT FACILITY
SITE PLAN
FIGURE 1

RESPONSIBLE ASSIGNMENT MATRIX

<i>RESPONSIBLE POSITION</i>	Bannister, R.	Campbell, B.	Franchuk, M.	Hopkins, J.	Mittlestadt, D.	O'Rourke, T.	Schmuck, J.	Steffen, D.
ACTIVITY								
Conceptual Design Report		•						
Title II		•						
Decision Document						•		
Regulatory Permitting							•	
Construction/Procurment					•			
Preconstruction	•							
Waste Acceptance Criteria	•							
Quality Assurance			•					
Site Plans				•				
Site Surveys				•				
Subcontractor Training					•			
IWCP					•			
Permits					•			
Mobilization					•			
Readiness Review			•					
Test Fill		•						
Construction								
Operations	•							
Operations Testing	•							
Operations Training	•							
Operating Proceudres	•							
Operations Readiness Review	•							
Project Closeout		•						
Project Management								•

Figure 2

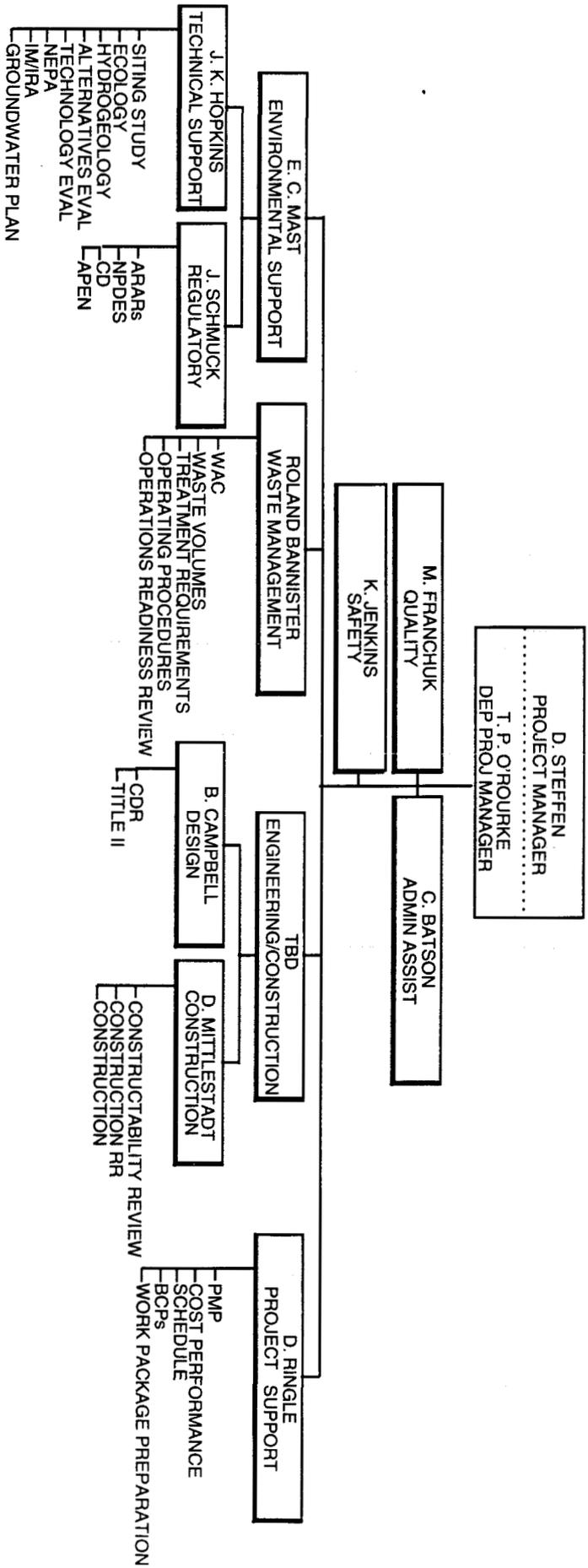


Figure 3 Project Organizational Breakdown Structure

WORK BREAKDOWN STRUCTURE

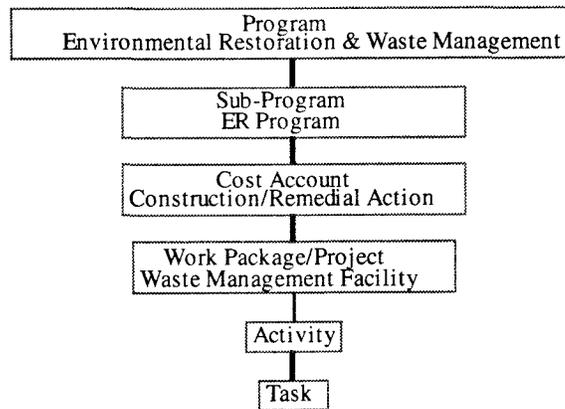


Figure 4

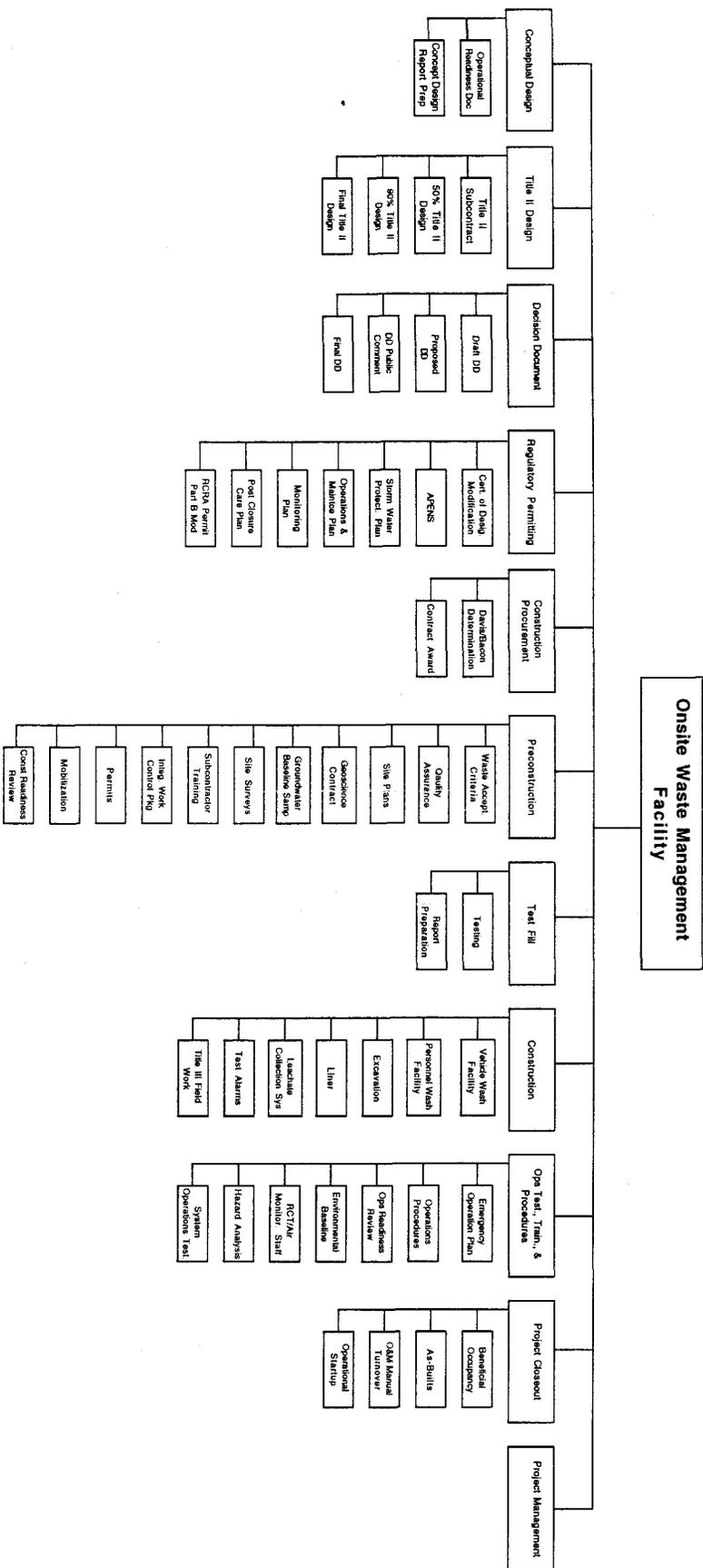


Figure 5

**Table 1
Summary Project Basis of Estimate**

KEY DOCUMENT	PURPOSE	DESCRIPTION	PERFORMANCE MEASURE
--------------	---------	-------------	---------------------

ORGANIZATIONAL DOCUMENT			
Project Management Plan	RMRS documents K-H concurrence; project-level bases, assumptions, and structure; cites project information sources; and fulfills DOE 4700.1	Mission and objectives; statement of work; and project organization, plans, and systems	

BUDGET DOCUMENT			
PAD	K-H authorizes RMRS scope and budget authority for an FY	Brief description of scope and funding authorized for the project	
Work Package	K-H authorizes details of RMRS scope and budget authority for an FY	Detailed Statement of Work, assumptions, schedule, cost plan, and outyear information	Convert OU 4 funding (Stretch FY95)
BOE	RMRS documents bases of estimates used in the Work Package	Information on specific assumptions, resources, and durations of activities or tasks	
ADS and Five Year Plan	RFFO obtains HQ acceptance of scope, enforceable milestones, and cost plan for project	Project information in specified format	
Routine Reports	Document progress of project	Various users, content, and formats	

DESIGN DOCUMENTS			
CDR	RMRS provides engineering basis of project	Descriptions of site, design, and function	Deliver conceptual design (standard FY95)
Title II Package (90%)	RMRS obtains approval of design from K-H and DOE	Drawings, specifications, and other design information	Complete siting and engineering design (standard 3QFY96)
Title II Package (100%)	RMRS/K-H/DOE obtains approval of design from regulators; proceeds with construction subcontracting	Drawings, specification, and other design information	

Table 1 (continued)

APPROVAL DOCUMENTS			
IM/IRA DD	RMRS/K-H/DOE obtains public input and approval for remedy/corrective action from regulators	Alternatives, NEPA values, site description, public and regulators comments and resolution, description of selected remedy	
Part B Modification Request (design stage)	RMRS/K-H/DOE requests RCRA permit modification for project	Standard revisions to site permit, conceptual design, conceptual systems and operations information	
Part B Modification Supporting Documents (construction stage)	RMRS/K-H/DOE submit detailed documents to support State permit preparation	Details of systems and operations of cell	
Part B Modification	CDPHE approves permit	Permit conditions	Complete permitting of cell (stretch 3QFY96, standard FY96)

PROCUREMENT & CONSTRUCTION DOCUMENTS			
RFP	RMRS obtains K-H and DOE concurrence and requests bids for project	Title II Design (draft) and contracting requirements	
Subcontract	RMRS obtains construction contractor	Contractual requirements, scope, cost, and schedule requirements	
Beneficial Occupancy	RMRS demonstrates construction complete	Turnover of ownership from the subcontractor to the site	Complete construction of cell (stretch 3QFY96, standard FY96)
Readiness Review	RMRS obtains K-H concurrence that cell is ready to accept waste	Documentation of system tests, completeness of permits and authorizations, completeness of operations preparations	Begin operation of cell. (stretch FY96)