

Rocky Flats Environmental Technology Site

Revision 3

KAISER-HILL TEAM QUALITY ASSURANCE 10 CFR 830.120 IMPLEMENTATION PLAN

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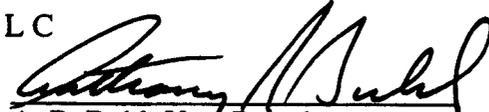
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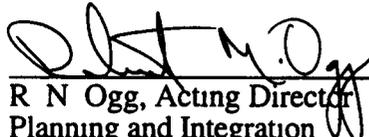
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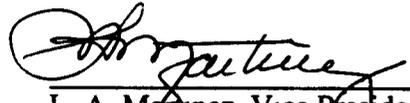

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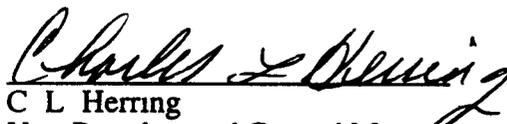

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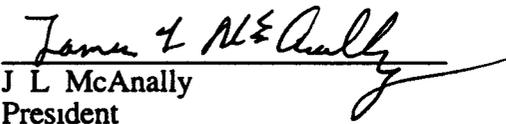

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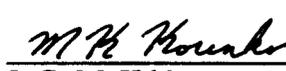

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8/2/96

LIST OF EFFECTIVE PAGES

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8/2/96

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
	TITLE PAGE	1
	CONCURRENCE PAGE	2
	LIST OF EFFECTIVE PAGES	3
	TABLE OF CONTENTS	4
1 0	Introduction	5
1 1	Background	6
1 2	Nuclear Safety Authorization Bases	6
2 0	Implementation Plan Summary	7
3 0	General Information	8
4 0	Applicability of Nuclear Safety Requirements	8
5 0	Safety and Implementation Guides and Technical Standards	9
6 0	Baseline Assessments	10
6 1	Quality Assurance 10 CFR 830 120 Baseline Assessment	10
6 2	Verification of 10 CFR 830 120 Baseline Assessment	11
7 0	Additional Activities	11
8 0	Graded Approach	11
9 0	Resource Assessment	14
10 0	Prioritization	14
11 0	Milestones and Schedules	14
12 0	Exemptions	14
13 0	Compensatory Actions	15
14 0	Tracking	15
	Appendix 1 Criteria For Including Issues in the Quality Assurance 10 CFR 830 120 Implementation Plan	16
	Appendix 2, Graded Approach to the Requirements of 10 CFR 830 120	17
	Appendix 3, Matrix of CCCP/COEM Systems Categories to DOE Orders and Standards Classification Schemes and to Graded Infrastructure, as it Applies to Rocky Flats Technology Site, Draft H	22
	Attachment 1, Implementation Issue Matrix for Quality Assurance 10 CFR 830 120 Implementation Plan	23

1.0 Introduction

This document was developed by Kaiser-Hill Company, L L C (Kaiser-Hill) with input from the four Principal Subcontractors Kaiser-Hill and the four Principal Subcontractors comprise the Kaiser-Hill Team The four Principal Subcontractors are DynCorp of Colorado, Inc (DCI), Rocky Mountain Remediation Services, L L C (RMRS), Safe Sites of Colorado (SSOC), and Wackenhut Services, L L C (WSLLC) This document is the Kaiser-Hill Team Implementation Plan for 10 CFR 830 120, Quality Assurance Requirements, and is referred to as the Implementation Plan throughout the document This Implementation Plan has been prepared in accordance with 10 CFR 830 120 and the Department of Energy (DOE) Standard DOE-STD-1082-94, Preparation, Review, and Approval of Implementation Plans for Nuclear Safety Requirements This Implementation Plan does not address DOE Order 5700 6C implementation

This Revision 3 incorporates changes in response to comments received from the DOE Implementation Plan Review Team and changes to make the document more technically correct

Significant changes from Revision 2 to Revision 3 include the following

- Added six new implementation issues to Attachment 1, Implementation Issue Matrix for Quality Assurance 10 CFR 830 120 Implementation Plan Three were previously believed to be compliance issues and one item was expanded to four deficiencies
- Deleted five implementation issues from Attachment 1 One has been completed and closed in the tracking system One does not meet the criteria for inclusion Three items are covered by other items
- Provided additional details in Attachment 1 to clarify the deficiencies, the implementation activities, and/or the compensatory actions
- Deleted "Site" from the Implementation Plan title and text The document is the Kaiser-Hill Team Implementation Plan for 10 CFR 830 120
- Deleted the statement that 10 CFR 830 120 was not applicable to War Reserve activities
- Added statements that "activities with the potential to cause radiological harm" are covered by 10 CFR 830 120
- Section 5 0 was revised to more clearly identify where the Quality Assurance (QA) requirements are found and to provide (in the QAP) a very brief description of how the QA requirements in the Quality Assurance Program Criteria document were identified
- Section 8 0 has been completely re-written to provide a more complete description of graded approach
- Eleven task completion dates have been extended from two to 19 months
- Other changes were made to improve the document and to make it more technically correct or to be responsive to DOE comments

8/2/96

1.1 Background

On July 1, 1995, Kaiser-Hill became the Integrating Management Contractor (IMC) under a performance-based contract specified by the DOE. In executing the IMC role, Kaiser-Hill has direct responsibility for scoping and assigning work, identifying standards for performance of work, integrating the work of the Principal Subcontractor companies, and providing performance oversight. The Site is an aging DOE facility in the post production, cleanup, and closure phase of its life cycle. There is no intent to resume production operations. The Kaiser-Hill Team has been tasked to stabilize and consolidate special nuclear material, process waste, perform decontamination and deactivation, and environmental remediation activities.

The Site has a wide range of hazards and safety uncertainties representing a substantial challenge for meeting Price-Anderson Amendments Act (PAAA) requirements. This includes the classical set of problems expected at an aging facility, such as facility authorization basis to meet the new Site mission, deteriorating facility and system material condition, past inadequate configuration control, proceduralization problems, etc. In addition to these problems, operations were shut down in 1989. No special layout, deactivation, or storage precautions or actions were taken because it was believed that operations would resume in the near future. This has created a unique set of problems.

Since 1990, substantial effort was expended by the previous Management and Operating contractor and DOE, Rocky Flats Field Office (RFFO) to define and correct these problems. Because of their complex nature and scope, combined with limited resources and changing mission objectives, many of the problems still exist under Kaiser-Hill. Upon assuming responsibility for the Site on July 1, 1995, Kaiser-Hill inherited the existing implementing infrastructure programs and procedures that were developed over the previous five years. The dilemma which faces the Site in a climate of declining funding is to ensure that the existing infrastructure programs and procedures are adequate to support accelerated, cost effective, risk reduction, special nuclear material stabilization, and Site closure, while properly addressing PAAA requirements.

1.2 Nuclear Safety Authorization Bases

The Site is currently performing work under an existing authorization basis described in documents such as the facility Safety Analyses Reports, Hazard Classification documents, the Technical Safety Requirements, Safety Evaluation Reports, and facility-specific commitments made in order to comply with DOE directives, including infrastructure programs such as conduct of operations, radiological control program, and criticality safety program. Kaiser-Hill believes that, collectively, these documents establish sufficient bases for safe execution of near term baseline and risk reduction activities. In their current state of definition, however, these documents must be upgraded or superseded to form authorization bases for the accelerated Site clean-up and decommissioning mission.

Since assuming control of the Site, Kaiser-Hill has worked in concert with DOE, RFFO, the Defense Nuclear Facilities Safety Board, and other stake-

8/2/96

holders to institutionalize a more effective approach to development and implementation of a Site level authorization agreement and facility specific authorization bases to support execution of nuclear related activities at the Site. While progress has been made towards this end, Kaiser-Hill is still in the prototype phase and substantial work remains to complete the development effort and implement its results. Kaiser-Hill has selected Building 771 as the authorization bases process and product prototype and work is in progress. Upon completion of the Building 771 prototype, Kaiser-Hill will apply the experience and lessons learned to develop a schedule for the remaining facilities of interest and institutionalization of the authorization basis process.

Until the prototype work is completed, the authorization basis process fully institutionalized, and the existing Site authorization bases upgraded or superseded, Kaiser-Hill will evaluate all planned work activities to ensure that sufficient safety basis exists to authorize the work activity for performance.

2.0 Implementation Plan Summary

This 10 CFR 830 120 Implementation Plan provides information regarding implementation of the QA requirements and the Kaiser-Hill Team Quality Assurance Program (hereafter referred to as the QAP) for nuclear facilities and nuclear activities. The QAP is contained in the Quality Assurance Manual. The QAP describes the roles, responsibilities, and commitments for implementing the requirements of 10 CFR 830 120 for nuclear facilities and nuclear activities. Lower-tier subcontractors to Kaiser-Hill and the Principal Subcontractors are included and are accountable to Kaiser-Hill, or the Principal Subcontractor for whom they work, to implement the QA requirements.

Baseline assessments have been conducted against existing Site infrastructure documents. Many of these Site infrastructure documents reflect the previous contractor organization responsibilities and methods of doing business, and need to be revised. Previously identified and reported weaknesses, deficiencies, and noncompliances (see Rev 1) have been reviewed and evaluated in accordance with the criteria contained in Appendix 1. Items that did not meet the criteria contained in Appendix 1 were deleted from Revision 2 of this Implementation Plan. Those items will continue to be tracked and will be addressed under different DOE Orders and Rules by Compliance Schedule Approvals, corrective action plans, implementation plans, or other resolution documentation. The remaining implementation issues together with budget work package numbers, additional funding requirements, corrective action tasks, schedules, and significance levels for items identified by the assessments are provided in Attachment 1.

No implementation issues were identified in the area of criterion (7)
Procurement

No exemption requests are being submitted at this time. Funding for Fiscal Year (FY) 1996 is included in the budget work packages. Additional funding of \$4,308,000 for FY 1997 and \$3,358,000 for FY 1998 will be sought during the budget process.

8/2/96

No significant new programs or activities needed to meet the QA Rule requirements have been identified. No significant impacts to other programs or activities (not included in this Implementation Plan) have been identified. No special constraints to implementing this plan have been identified.

3.0 General Information

This Implementation Plan for 10 CFR 830 120 includes input from the individual Principal Subcontractors and from the evaluation of previously reported weaknesses, deficiencies, and noncompliances.

The DOE Standard DOE-STD-1082-94, Preparation, Review and Approval of Implementation Plans for Nuclear Safety Requirements, was used for the development of the format and content of this document.

This Implementation Plan (Rev 3) is a revision to the Implementation Plan (Rev 2) submitted by Kaiser-Hill on May 6, 1996.

This Implementation Plan applies to Site nuclear facilities and to activities with the potential to cause radiological harm.

This Implementation Plan is based on QA baseline assessments conducted by the Kaiser-Hill Team against existing Site infrastructure programs and procedures. Valuable input was provided by Site workers. Attachment 1 lists the QA Criteria of 10 CFR 830 120, the infrastructure programs that support each criterion, the implementation issues, along with additional supporting information such as corrective action tasks, schedules, and funding. Compensatory measures are recorded. The Plant Action Tracking System numbers and significance levels are also included.

The remainder of the Implementation Plan addresses each of the sections outlined in DOE-STD-1082-94.

4.0 Applicability of Nuclear Safety Requirements

NOTE The list of hazard category 2 and 3 facilities as defined in DOE Order 5480 23, Nuclear Safety Analysis Reports, and the description of the Master Activities List describe the primary areas to which 10 CFR 830 120 will apply. Applicability of 10 CFR 830 120 is not limited to hazard category 2 or 3 facilities. The Rule is applicable to activities that have the potential to cause radiological harm regardless of where they occur.

Title 10 CFR 830 120 applies to nuclear facilities and to activities with the potential to cause radiological harm. Designated nuclear facilities are identified in the Rocky Flats Site Safety Analysis Report (SAR) Project Phase 1 Summary Report, Facilities Hazards Assessment and Classification, NSTR-016-94, Revision 2, September 29, 1995. The list of nuclear facilities is subject to change as risk assessments are accomplished. A list of category 2 and 3 nuclear facilities is included in the QAP.

8/2/96

On February 27, 1996, Kaiser-Hill and DOE, RFFO signed an Authorization Agreement (Agreement) to establish and maintain the Authorization Bases for activities at the Site as listed in the Master Activity List (MAL). The Agreement will be incorporated into the DOE contract with Kaiser-Hill for the operation of the Site.

The MAL contains a list of currently identified work activities which are either (1) a baseline activity necessary for performance due to the presence of hazards, (2) a mission program activity authorized for performance, (3) a mission program activity authorized for planning only, or (4) a currently unauthorized mission program activity. The MAL contains currently approved nuclear activities, however, not every listed activity is a nuclear activity. The MAL is a planning document and will be updated as needed. The MAL is not the document that authorizes work.

Site functions, such as Human Resource Development, Financial Management, Benefits Administration, Food Service, Employee Assistance Program, and other functions required as a part of the conduct of business do not meet the definition of an activity. Therefore, these functions are not included in the MAL.

Standards that are required by law or contract are mandatory unless a temporary or permanent exemption from that requirement has been granted by one having proper regulatory authority. The criteria for granting an exemption to a DOE nuclear safety requirement are specified in 10 CFR 830.62, Criteria.

5.0 Safety and Implementation Guides and Technical Standards

The Kaiser-Hill contract with DOE contains the list of DOE Directives imposed on the Kaiser-Hill Team by DOE. The Kaiser-Hill Team QA requirements are identified in the Quality Assurance Program Criteria document.

Using the DOE closure process for necessary and sufficient sets of standards, Kaiser-Hill intends to develop a set of requirements (which are to ultimately replace the set contained in the DOE/Kaiser-Hill contract) in the form of Standards/Requirements Identification Documents (S/RIDs) that contain a necessary and sufficient set of standards. When the S/RIDs are approved by DOE in Authorization Agreements, they will replace the list of DOE Directives in the contract. When the QA S/RID is approved, it will replace the Quality Assurance Program Criteria document. (Note: If the approved QA S/RID results in the need to change the QAP, such changes will be made.)

The Quality Assurance Program Criteria document contains QA requirements selected by a group of subject matter experts through an iterative process (described in the QAP), to be a necessary and sufficient set of QA standards. The requirements were selected from the following technical standards:

- ASME-NQA-1-1994, Quality Assurance Requirements for Nuclear Facility Applications, 1994

8/2/96

- ANSI/ASQC-E4-1994, Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs
- EPA-5360 1, Program and Policy Requirements to Implement the Mandatory Quality Assurance Program
- ASTM-C-1009-89, Standard Guide for Establishing a Quality Assurance Program for Analytical Chemistry Laboratories Within the Nuclear Industry
- DOE/AL-QC-1,1995, Quality Criteria
- ANSI/NCSL Z540-1-1994, Calibration Laboratories and Measuring and Test Equipment - General Requirements

Other safety and implementation guides and technical standards were considered in the development of the QA requirements but were not selected. They are listed in the Quality Assurance Program Criteria document.

6.0 Baseline Assessments

The Kaiser-Hill Team has performed QA baseline assessments for their respective areas of responsibilities to determine whether the implementing infrastructure programs and procedures incorporate the QA requirements of 10 CFR 830.120, as applicable.

6.1 Quality Assurance 10 CFR 830.120 Baseline Assessment

Quality Assurance 10 CFR 830.120 baseline assessments were performed from July 21, 1995, through January 30, 1996, by the Kaiser-Hill Team. The IMC also provided oversight and technical assistance to the Principal Subcontractors. The process was as follows:

- Sub-teams from the Kaiser-Hill Team identified specific nuclear activities and facilities that fell into each company's respective areas of responsibility.
- The sub-teams determined the programs and procedures used to control those activities.
- With guidance from the sub-team, responsible managers along with their technical personnel performed baseline assessments to determine whether the requirements of 10 CFR 830.120 were incorporated into the Site infrastructure programs and procedures. Identified issues were documented on Compliance Summary Reports.
- Representatives of organizations responsible for the Site infrastructure programs and procedures performed an additional baseline assessment. The objective of the additional assessment was to determine implementation issues associated with the infrastructure programs and procedures such that Kaiser-Hill has confidence in the functionality of the programs and procedures to support the Site mission.
- The findings have been reviewed and evaluated in accordance with the criteria contained in Appendix 1. Items that did not meet the

8/2/96

criteria were deleted from Revision 2 of the Implementation Plan as explained in Section 2.0

- Remaining open issues are included in Attachment 1. These items have been entered into and are being tracked through the Commitments Management and Corrective Actions Process.

6.2 Verification of 10 CFR 830.120 Baseline Assessment

The IMC has conducted an assessment to verify that information gathered in the baseline assessment accurately reflects the status of the Site. The verification included a sample of the implementation issues identified in the Compliance Summary Reports. The verification found that the "shall" statements contained in 10 CFR 830.120 are reflected as requirements in the upper-tier governing Site documents and that those requirements flow down into the implementing procedures sampled in the verification.

7.0 Additional Activities

The additional activities that are necessary to meet the requirements of 10 CFR 830.120 are described in Attachment 1.

8.0 Graded Approach

A graded approach is the process by which the levels of analysis, documentation, and other actions necessary to implement the QA requirements are based on facility/activity specific factors.

The QA Rule (10 CFR 830.120) and DOE Order 5700.6C are applied to the Site through the use of a graded approach. In order to ensure the most efficient use of resources, a graded approach is used to determine the rigor with which the QA requirements are applied to a specific facility or activity. This approach provides the flexibility to implement the programs in a way that best suits the facility or activity while maintaining full compliance with the QA Rule and DOE Order 5700.6C.

The facilities at Rocky Flats are identified as hazard category 2 or 3 facilities, radiological facilities, or other facilities. There are no hazard category 1 facilities at the Site. Structures, systems, and components important to safety are identified in the facility Safety Analysis Report (SAR) and in other authorization basis documents. Because the SARs were written when the facilities were operational, they may reflect the need for more stringent safety requirements and operational needs. They may represent an over commitment for what is needed for an end-of-life facility that will be decontaminated and decommissioned. As new authorization basis documents are prepared using the DOE closure process for necessary and sufficient sets of standards, they will adequately reflect the requirements appropriate for the current Site mission. The DOE closure process for necessary and sufficient sets of standards is one method of applying graded approach.

8/2/96

Consistent with DOE STD-1082-94, Preparation, Review, and Approval of Implementation Plans for Nuclear Safety Requirements, the Kaiser-Hill Team organization responsible for a nuclear safety requirement has been empowered to use its best judgment in the determination of the appropriate graded approach to be used to achieve full implementation of the requirement. This judgement is based on detailed knowledge of the specific requirements, features, resources, needs, goals, and interface with other organizations and facilities. The graded approach utilized to comply with a QA requirement was developed by application of the best judgments of a group of experts who have collectively broad knowledge of the applicable facilities and activities, of the safety management program for applicable facilities and activities, and of the collective wisdom behind the established regulatory requirements as defined in regulations and amplified by related technical standards and guides. Each level 1 procedure implementing a Site infrastructure program, (QA requirements) or a part thereof, has provided in the instructions section, as appropriate, the level of analysis, documentation, and actions necessary to comply with the QA requirements based on a graded approach.

Additionally, procedures and other documents which implement Site infrastructure programs with direct impact on work and work processes receive independent review under the existing Site infrastructure. This independent review utilizes an interdisciplinary technical evaluation process to evaluate safety issues and (implicitly) quality aspects. Further, work-level instructions, procedures, and other instruments of work control developed under the Site infrastructure programs receive independent review (primarily Operations Review Committees) as a verification of the implementation of safety and program (including quality) requirements, where the work to be performed meets threshold risk requirements. This process as a whole validates the grading and application of quality assurance requirements.

The following general criteria are guiding principles in the application of graded approach by the Kaiser-Hill Team:

- Graded approach may not be used to exempt a process, item, activity, or program from meeting requirements nor to avoid compliance with federal, state, and local regulations.
- The higher the risk, the more rigor is required to ensure that requirements are met.
- Site facilities and activities are graded as either nuclear or non-nuclear facilities or activities.
- The program owner organization, because it has detailed knowledge of processes, items, activities, and programs, uses best judgment in determining the rigor of requirement implementation, administrative controls, and business practices to be applied to ensure requirements are met.
- Implementing procedures and work plans reflect the use of the graded approach by setting forth direction for the amount of analysis, documentation, and actions required to ensure requirements are met.

8/2/96

Graded approach has been implemented to meet the QA requirements considering and using individually, or in combination, the following criteria

- The relative importance to safety, safeguards, and security - The relative importance of an activity or item to safety, security, safeguards, environment, or mission provides the basis for establishing the order of completion or the depth, rigor, and thoroughness in applying the requirement (For example the corrective action process provides for grading deficiencies and other action items by significance level [0 to 11] The higher the number, the greater the significance Corrective actions are scheduled and accomplished based, in part, on significance)
- The magnitude of any hazard involved - Consideration of the risks and hazards of the facility allows the implementing organization to focus resources on the activities most likely to reduce the associated risks and hazards by tailoring the implementing actions to the specific risks and hazards at the individual facilities and activities (For example activities to stabilize Plutonium were given high priority in the Accelerated Site Action Project, the Site strategic plan, in order to reduce the hazardous condition)
- The life cycle stage of a facility - The consideration of the life cycle stage of a facility permits the implementing organization to assess the appropriate application for the current life cycle stage of the facility (For example A facility that has the source material removed, and that is scheduled for decontamination and decommissioning, should have fewer requirements than a plutonium storage facility)
- The programmatic mission of a facility - The programmatic mission of a facility, including passive missions such as contamination confinement and material storage, may dictate the degree of gradation for the implementation of a requirement (For example an operating facility that processes plutonium should have more rigorous and a larger number of requirements than a material storage facility)
- The particular characteristics of a facility - The particular characteristics of a facility influence how nuclear safety requirements are applied (For example A waste storage facility should have fewer requirements than a plutonium facility performing stabilization activities)
- Any other relevant factor - One such factor might be phased implementation of a requirement (by time or by facility) Phased implementation of a requirement minimizes the impact on resources and allows for a learning curve (For example the procedure preparation process is being phased in over time to minimize the impact on resources)

Graded approach has been utilized during the development of the Site infrastructure programs and implementing procedures to comply with the requirements of 10 CFR 830 120 This is described in Appendix 2, Graded Approach To The Requirements of 10 CFR 830 120

8/2/96

Appendix 3, Matrix of CCCP/COEM Systems Categories to DOE Orders and Standards Classification Schemes and to Graded Infrastructure, shows the relationship between DOE Order 5480 23, DOE Order 5481 1B, DOE Order 6430 1A, DOE-STD-1021-93, DOE-STD-1027-92, DOE-STD-3009-94, current and proposed system categories, procurement levels, and significance levels from other infrastructure programs and procedures

9.0 Resource Assessment

Fiscal Year 1996 budget work package numbers, additional funding requirements, corrective action tasks, and schedules for items identified by the baseline assessments are provided in Attachment 1. Additional funding of \$4,308,000 for FY 1997 and \$3,358,000 for FY 1998 is identified in Attachment 1. Based on identified issues, current budget, and projected availability of funds, the existing work packages and identified additional funding should be sufficient to meet the requirements of 10 CFR 830 120 Quality Assurance Program implementation resources are assessed annually during the budget cycle.

10.0 Prioritization

Implementation issues identified in the QA baseline assessment have been prioritized in accordance with the Site Commitments Management and Corrective Actions Process. The level of importance to be placed on the correction of a deficiency or action request is evaluated for impact by considering the types of risks that may be encountered, consequences of these risks, and the frequency or probability of occurrence of like deficiencies or action requests. Significance levels are assigned based on the evaluation in relation to the impact on health, safety, the environment, regulatory compliance, safeguards and security, or the operation or mission at the Site. Significance levels are classified as

- High - Significant Impact (Significance No. of 7 to 11)
- Medium - Minor Impact (Significance No. of 4 to 6)
- Low - Minor Impact (Significance No. of 0 to 3)

The significance levels for the implementation issues are included in Attachment 1.

11.0 Milestones and Schedules

Milestones and schedules have been developed and will be tracked. Scheduled completion dates for identified implementation issues are shown in Attachment 1. Intermediate tasks are entered into the Plant Action Tracking System and will be tracked through the Commitments Management and Corrective Actions Process. Detailed corrective action plans are available through the Kaiser-Hill Commitments Management organization.

12.0 Exemptions

No exemptions from the criteria of 10 CFR 830 120 are being requested.

8/2/96

13.0 Compensatory Actions

Compensatory actions for identified implementation issues are documented in Attachment 1

14.0 Tracking

Implementation issues identified in Attachment 1 are being tracked by the Commitments Management and Corrective Actions Process

8/2/96

APPENDIX 1
Page 1 of 1

**Criteria for Including Issues in the
Quality Assurance 10 CFR 830.120 Implementation Plan**

The DOE expectation is that the Implementation Plan for 10 CFR 830 120 will identify the status of implementing the QA requirements down to the floor level

Revision 1 of the Implementation Plan, submitted to DOE on February 2, 1996, contained implementation and compliance issues that had a price tag of well of 400 million dollars to correct DOE provided comments and guidance both in meetings and in writing that clarified DOE expectations¹ Based on these comments and guidance, the Kaiser-Hill Team evaluated the previously reported issues using the following criteria

Site programs and functions such as fire protection, conduct of operations, maintenance, safeguards and security, and others are recognized to be enforceable under 10 CFR 830 120, however, detailed plans for these programs and functions will be addressed by other DOE Rules and DOE Orders The Kaiser-Hill Team is currently in the process of developing Standards/Requirements Identification Documents (S/RIDs) to identify the necessary and sufficient subset of requirements to support Site activities Certain deficiencies identified in Appendix 1 of Revision 1 for Site programs and functions may no longer be relevant under these new S/RIDs

The following Implementation Issues are included in the 10 CFR 830 120 Implementation Plan

- 1 QA issues that are not governed by another DOE Rule (e g 10 CFR 835) or DOE Directive
- 2 Programmatic QA issues not addressed by Implementation Plans or Requests for Approval as discussed above
- 3 Implementation deficiencies Implementation means that where a requirement applies, a process is established (i e formal training, assessments, and / or inspection / acceptance testing) or a tool is available for use (i e procedure, design specifications, and / or procurement records) which fulfills the intent of the requirement and allows work to be performed in a safe and effective manner Lack of such a process or tool is an implementation deficiency

Lack of budget / resource issues that remain following graded approach consideration, and that are of such extent so as to jeopardize development and/or implementation of the program/process, are considered to fall under the category of Implementation Issues

Compliance issues are not included in the Implementation Plan "Compliance is the day-to-day utilization of these processes / tools and conformance to the intent, during the actual performance of work It is understood that on any given day someone may not comply with a requirement, knowingly, or unknowingly, and that the actual noncompliance with a requirement may be an apparent violation and could also be deemed enforceable in accordance with 10 CFR 820 "

¹ Memorandum SIG NAM 07019 from David A Brockman to Tony R Buhl, Rocky Flats Field Office Expectations for Quality Assurance Plan and Implementation Plan, dated April 11, 1996

8/2/86

APPENDIX 2
Page 1 of 5

Graded Approach To The Requirements
of 10 CFR 830 120

The criteria of 10 CFR 830 120 are applied in a graded approach as described below

- (1) **Program** - There is one Kaiser-Hill Team Quality Assurance Program. It describes the roles and responsibilities of the Kaiser-Hill Team and the principal documents that implement the QA requirements. Implementing documents (procedures) have been developed, as appropriate, to utilize a graded approach for implementing the QA requirements and procedural instructions. Strategic planning for the Kaiser-Hill Team has focused on reducing the risks and hazards in the various Site facilities in order to accomplish the most mission work possible within a reasonable time period and within an allocated budget.
- (2) **Personnel Training and Qualification** - Requirements for the indoctrination, training, and continuing (refresher) training are commensurate with the scope, complexity, and nature of the assigned duties, or the activity, to be performed. The Site Training Implementation Matrix (TIM) identifies the qualification and certification requirements by job designation for 14-nuclear facilities. The matrix will be expanded to address the other nine Category 2 and 3 nuclear facilities.
- (3) **Quality Improvement** - It is important that all deficient conditions and nonconforming items be identified, therefore, it is not appropriate to apply graded approach to their identification. Items that do not conform to requirements are controlled to prevent inadvertent installation or use. Graded approach is built into the corrective action process. Each item that requires corrective action is evaluated and ranked according to its significance (from 0 to 11). The higher the significance or risk level, the more rigorous are the required corrective action elements. For example, items with a significance level of seven or greater are required to have the corrective actions independently verified. In addition, the cause analysis procedure requires the more significant events to receive a more rigorous cause analysis.
- (4) **Documents and Records** - Graded approach is applied to the preparation, review, approval, issue, distribution, use, and revision of documents based on their relative importance, the intended recipients, the applicability of the document, and the need to know. The more important documents receive a unique identification number and controlled distribution. Graded approach has limited application in the specification, preparation, review, approval, and maintenance of Site records. If a document is, or will become, a record, it is governed by the Records Management Program. Government records must meet the requirements of the National Archives and Records Administration (NARA). NARA dictates how records are to be maintained and provides approved and graded retention schedules.

8/2/96

APPENDIX 2
Page 2 of 5

- (5) Work Processes - Graded approach is built into Site work processes through the infrastructure programs and procedures. These include but are not limited to, Policies and Procedures, Issues Management, Operational Readiness Reviews, Lessons Learned, Configuration Management, Training and Qualification, Emergency Management, Security and Safeguards, Engineering, Maintenance, Conduct of Operations, Radiation Protection, Occurrence Reporting, Procurement, Waste Management, and Nuclear Safety. The Commitments Management and Corrective Actions Process provides a mechanism for prioritizing and evaluating unclassified deficiencies, concerns, and improvements. A brief description of example work processes follows:

- Occurrence Reporting

Based on the reporting requirements established by DOE, Kaiser-Hill provides a graded approach to the implementation of DOE reporting requirements. Each event or occurrence is categorized by significance. The categories in descending order of significance are Emergency, Unusual Occurrence, Off-normal Occurrence, and Internally Reportable Occurrence. The first three categories are reported formally to DOE. The fourth category warrants notification of company management but not DOE. Occurrences that fall outside of these four categories do not require formal reporting. Grading is also built into the need to hold a management fact-finding meeting and in the rigor of the cause analysis. If the facts are known and documented, a meeting is not required. When the facts are not known, then a meeting is required to determine the facts. The rigor of the cause analysis and the resources to be applied to the cause analysis of an occurrence are dependent on the significance of the event and the potential risk the event or condition poses to the workers, the public, the environment, or the facility.

- Operational Readiness Reviews

The Site operational readiness review (ORR) procedure that implements the DOE requirements for startup and restart of nuclear facilities, provides a methodology for determining the breadth and depth of the readiness determination consistent with the hazards and complexity of the proposed facility transition. In addition to grading the readiness assessment by breadth and depth, the procedure is also graded by applicability. The ORR requirements do not apply to facilities that are less than Hazard Category 3. Appendix 2 of the procedure, Application of the Graded Approach in ORR Planning, provides factors to consider in developing the depth of the ORR.

8/2/96

APPENDIX 2

Page 3 of 5

- Maintenance

The Integrated Work Control Program (IWCP) provides a maintenance process for Operations Managers to identify, report, evaluate, assign resolution responsibilities, and close out deficiencies, modifications, and work requests. The process provides a graded approach based primarily upon importance to safety and the magnitude of the hazards. The maintenance process distinguishes between emergency work and non-emergency work. It provides a graded approach using a single work package development process. Work packages will be established based upon the six criteria of DOE definition of graded approach. The process permits minor maintenance work (such as repair of water fountains and touch-up painting) to be performed without a work package. It also provides for the use of preapproved Standard Work Packages for certain repetitive maintenance work.

- Lessons Learned

The lessons learned process utilizes a graded approach in determining the relative significance of a potential lesson learned and in the manner that lessons learned are distributed to Site organizations and personnel. Both onsite and offsite events and experience documents are screened to determine the applicability of the event or experience to the Site, to determine the significance, to determine the recurrence frequency, and to determine the recurrence probability. Based on the results of the screening process, four types of lessons learned documents are or may be prepared. Red/Urgent Lessons Learned are sent on red paper and alert onsite facilities and personnel of potential eminent hazards for which corrective actions may be needed. Yellow/Caution Lessons Learned are sent on yellow paper and warn of potential event conditions. Blue/Information Lessons Learned are sent on blue paper and provide information that may be of benefit to others. Green/Good Work Practice Lessons Learned are sent on green paper and share a positive lesson or action that has the potential to be the basis of significant improvement or cost savings.

- Procedures and Policies

Graded approach has not been incorporated to address the rigor required or the flexibility granted with respect to procedure format. However, the sitewide procedure development process incorporates graded approach in several other ways. The use of procedures is graded by four Use Categories. The Use Category determines whether the procedure must be in hand, memorized, or referenced. Administrative procedures are included in Use Category 4. The process governing revisions, modifications, and changes to procedures is graded by two levels of effort, non-intent changes and intent changes. Graded approach is also incorporated through phased implementation. Site organizations have until December 31, 1997 to complete sitewide transition to the requirements of the procedure development process.

8/2/96

APPENDIX 2
Page 4 of 5

Prior to Kaiser-Hill being selected to be the Integrating Management Contractor, the Site had over 250 policies in the Policy Manual. Many of the policies contained instructions. The Kaiser-Hill Team reviewed the existing policies and identified a minimum set of approximately 25 policies that express broad fundamental core values, principles, and expectations of senior management regarding the direction of the Site and Site personnel.

- (6) Design - The design process utilizes graded system category classifications (three system categories based on the safety significance of the structures, systems, and components) for ensuring that all phases of design, construction, repair work, and decommissioning activities are subject to levels of review and control commensurate with the safety function of the system, component, or part. The design process utilizes the graded procurement process (three quality levels based on importance to safety, safeguards, security, and intended use) when ordering new or replacement parts. Design verification requirements are established using a graded approach based on importance to safety, the complexity of the design, and the use of the output. (For example, computer software program features used as tools to develop a preliminary model or used merely as an aid in reviewing results need not be verified. However, program outputs used as inputs for final analysis are independently verified correct for each calculation, analysis, evaluation, or model.) Many old as-built drawings are not current, therefore, before an as-built drawing is used as input for a vital safety system (VSS) design modification, the affected location must be walked-down and a field-verified drawing generated. Non-VSS modifications require accurate information as to field conditions, but a walkdown is not a requirement.
- (7) Procurement - The procurement process has graded procurement controls which specify the method for acceptance to verify that the purchased item/service performs its intended function and meets requirements. Procurement level is the term given to the graded procurement controls. The process uses three procurement levels (1, 2, and 3). Suppliers are evaluated using a graded approach based on relative importance to safety, safeguards, and security. Grading is applied to "router" codes to identify inspection requirements and/or quality assurance program approval requirements. Grading is also used by Engineering to specify the proper storage classification level (A, B, C, or D) in accordance with the plant standard.

8/2/96

APPENDIX 2

Page 5 of 5

- (8) **Inspection and Acceptance Testing** - Inspection and testing of specified items, services, and processes are conducted utilizing established, acceptance and performance criteria. Engineering personnel determine inspection criteria and post-maintenance testing requirements for maintenance and modifications. Inspection criteria and post-maintenance testing requirements are identified in maintenance work packages. Purchase requisitions identify the procurement level and the inspection requirements for procured items and services. Other than deciding whether inspection or post-maintenance testing is necessary, there is little grading that can be applied since inspections and post-maintenance testing requirements are based on national codes and technical standards.
- (9) **Management Assessments** - The management assessment process is graded in that it empowers individual senior managers of the Kaiser-Hill Team to direct the development and implementation of management assessment programs for their respective organizations. The programmatic mission of an organization, as it relates to the application of QA requirements, will determine the management assessments. The Site level 1 procedure provides the programmatic framework for ensuring that an organization's management assessment program implements the management assessment requirement without being overly prescriptive or restrictive.
- (10) **Independent Assessment** - Independent assessments are planned and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. Flexibility (grading) in meeting these objectives is prescribed by prioritizing the program, scheduling assessments, and allocating resources in accordance with importance to safety, status, risk, and complexity of the item or process being assessed. Emphasis is placed on elements of activities most important to safety and on the need to evaluate facility performance when allocating assessment resources. Reactive independent assessments are performed in response to management requests, building or equipment problems, occurrence reports, negative performance trends, or unsatisfactory performance indicators. It is not appropriate to apply graded approach to the requirement that the group performing independent assessments have sufficient authority and freedom from the line to carry out its responsibilities.

8/2/96

MATRIX OF CCCP/ORM SYSTEMS CATEGORIES TO DOE ORDERS AND STANDARDS CLASSIFICATION SCHEMES AND TO GRADED INFRASTRUCTURE, AS IT APPLIES TO ROCKY FLATS TECHNOLOGY SITE, DRAFT H

1	2	3	4	5	6	7	8	9	10	11	12	13	14
CCCP System Category (Proposed)	CCCP System Category (Current)*	DOE-STD-3009-94 Nuclear SAR Preparation	DOE Order 5481.1B Non-Nuclear Technological SAR Hazard Class	DOE-STD-1027 91 & DOE Order 5480.23 Nuclear SAR Hazard Category (HC)	DOE-STD Standard 1021.93 Natural Phenomena Performance Category (PC)	Nuclear Safety Effect or Focus	Performance Standards for Engineering, Maintenance & Surveillance	Procurement Level	Safety Evaluation Screen (SES) USQD Required	Independent Safety Review/QRC Review Required	Pre Ops Instrument Calibration Required	CCCP Systems Category Definitions	DOE Order 6430.1A Screen
Reactors N/A	Reactors N/A	Safety Class	Not Applicable	(Reactors Only) HC 1 Bldg	(Reactors Only) PC-4	Public Safety	Nuclear Standards	Nuclear	N/A	N/A	N/A	N/A	N/A
Safety SSC, Site & Building dependent ventilation	Visual Safety Systems 1 or 2	Safety Class	High Hazard Bldg (No High Hazard Bldg at RF)	HC 2 Bldg, including custom Facility Support SSCs)		Public Safety	FSAR, TSM, BFO and other DOE Nuclear Standards or default to Industry "Good Practice"	PL1 (Approve vendors plus CMTR** when appropriate) PL2 when no approved vendors available)	YES (For Monitoring LCO compliance Regulatory requirements VSS alarms VSS automatic features) As requested by CMTR** Engineering to support good business practice.)	YES	YES	A) Does the SSC provide... 1) For new... 2) When... 3) When project... 4) On SSCs... 5) On SSCs...	Application Mandatory 1) For new... 2) When... 3) When project... 4) On SSCs... 5) On SSCs...
Facility Support SSC's e.g., JAWAs, etc. with... designated... etc.)	3 Technological Radiological	Safety Significant (Typically W/LODs)	Medium Hazard Bldg Low Hazard (and Radiological Bldg)	HC-3 Not Applicable	PC-2	Worker Safety & Environmental Protection and Defense in Depth	Industry "Good Practice"	PL2 (Onsite testing, inspections, and design margin analysis)	Pre-Screen only to verify that system is ready category 2	NO	Four Monitoring Safe operations As requested by CMTR** Engineering to support good business practice.)	(B) Does the SSC provide... 1) For new... 2) When... 3) When project... 4) On SSCs... 5) On SSCs...	Recommended in Guidance for all other Projects
All Other (Trailers offices etc.)	Industrial Sids	Auxiliary & Utility Distribution Systems and Other	Not Applicable	Not Applicable	PC-1 Min natural phenomena concerns PC-0 No natural phenomena concerns	No Safety Significance or Shared Industrial Hazard	Local Option	PL3 OS&D* * Inspection only	NO	NO		(C) Not covered by A or B (for example trailers office buildings)	

07/16/96

* For Reference Only classification interrelationships are keyed to "Proposed" categorization scheme
** CMTR = Certified Material Test Report
*** OS&D = Over Short and Damaged Inspection

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830.120 Implementation Plan

ID No	10 CFR 830.120 QA Criteria	Yes	Implementing Infrastructure Programs	Scheduled Completion Funding Source PATS Number Significance Level
1	(c) Quality Assurance Criteria (1) Management Program (i) Program	Yes	Quality Assurance Program & Implementation Plan (QAP&IP) - Site Quality Assurance Manual	<ul style="list-style-type: none"> •3/31/97 •WP-83408 •95-004370 •Medium
2	(c) Management Personnel Training and Qualification	Yes	Training	<ul style="list-style-type: none"> •9/30/96 •WP-82011 •96-000784 •6

Deficiency: Guidance needs to be provided on how to build graded approach into Site infrastructure programs and procedures. Instructions need to be provided for documenting the bases for selection using graded approach.

Implementation Activity: Graded Approach will be addressed as a requirement in the Site Documentation Requirements Manual which is being developed by the Site Streamlining Initiative Team. For Authorization Basis activities, graded approach will be further formalized through the Activity Definition procedure, application of the DOE Work Smart Standards closure process, and implementation of DOE's 95-2 Plan. The independent review process described in Section 8 of the IP, is implemented to validate the outcome of any of the above initiatives (KH-H&S).

Compensatory Action: The QAP&IP have been revised to describe the Kaiser-Hill Team graded approach, the general and specific criteria and guidelines upon which the graded approach is based, and how graded approach is built into the programs and procedures that implement the ten criteria of 10 CFR 830.120. The Kaiser-Hill Team will continue to implement the infrastructure programs and procedures.

Deficiency: Qualification and Continuing Training program for Engineering personnel is not formalized.

Implementation Activity: Update the Engineering and Project Manual QA Plan to identify 1-S50-T&Q-QC-002 as the method for compliance to qualification requirements (KH-SETS).

Compensatory Action: The methods used by SETS for complying with the qualification and continued training requirements are addressed in 1-S50-T&Q-QC-002 and the Site Training User's Manual.

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No.	10 CFR 830 120 QA Criteria	Implementing Infrastructure Programs	<p>Deficiency: Qualification Standard Packages need development and/or revision. The training and qualification program has not been completely implemented for SSOC activities.</p> <p>Implementation Activity: Review and revise Qualification Standard Packages (RMRS)</p> <p>Develop SSOC Training Improvement Plan, and implement the necessary training for facility and support personnel.</p> <p>Compensatory Action: RMRS has conducted a company-wide assessment to determine the status of existing training and qualifications. Certain QSPs have been prioritized for review and revision, if necessary. For example, the QSP for Non-Destructive Assay Operations has been revised. Other qualifications are being prioritized for revision (RMRS)</p> <p>SSOC will continue to provide training on an as-identified basis pending implementation of the SSOC Training Plan. Additional management and supervisory attention of work activities is being increased. Management observation of work activities is being performed. Specialized training has been developed for facility and support personnel to respond to identified needs and areas of weakness. The general experience level and skill level of facility and support personnel is adequate (SSOC)</p>	Scheduled Completion Funding Source PATS Number Significance Level
3	(c) (1) Management (ii) Personnel Training and Qualification CONTINUED	Yes		<ul style="list-style-type: none"> •4/30/97 (RMRS) •\$500,000 to be pursued in FY97 budget (RMRS) •96-000781 (RMRS) •10 (RMRS) •9/30/97 (SSOC) •WP-31111 (and various) (SSOC) •96-000789 (SSOC) •3 (SSOC)

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No.	10 CFR 830 120 QA Criteria	Implementing Infrastructure Programs	Schedul Completion Funding Source PATS Number Significance Level
4	(c) Management (i) Personnel Training and Qualification CONTINUED	Yes	<p>Deficiency: Applicable Quality Assurance Program requirements are not covered in current training documentation (NQA-1, 1994, Part 1, Supplement 2S-4, Sections 2 and 3) Implementation Activity: Incorporate requirements into the total rewrite of Level 1 Training and Qualification Program Plan (KH-T&Q, H&S) Compensatory Action: Document Modification Request 96-DMR-000609 has been issued for 95-PP/T&Q-0026, Training and Qualification Program Plan, to show the responsibilities of Line Managers and Subject Matter Experts include incorporating applicable codes, standards and procedures, applicable QAP elements, and job responsibility and authority into developed training or provided as additional training</p>
5	(c) Management (i) Personnel Training and Qualification CONTINUED	Yes	<p>Deficiency: The Training Implementation Matrix (TIM) identifies the qualification and certification requirements for only 14-nuclear facilities, rather than the larger number (23 nuclear facilities) identified in the Site SAR Project Phase I Summary Report No NSTR-016-94, Rev 2 Implementation Activity: Training and Qualification Council to develop strategy and revise documentation using a graded approach (KH-T&Q) Compensatory Action: Managers will ensure that their employees are sufficiently trained, skilled, and knowledgeable to accomplish a task safely and in accordance with requirements before assigning them to do the task. The affected Subcontractors have designated individuals to coordinate preparation of TIM sections for all nuclear facilities under their responsible control. These individuals are currently using existing TIM sections or QSPs from other facilities with similar operations and personnel as a baseline for assisting facility managers in determining qualification requirements. Managers have detailed knowledge of the processes and activities involved</p>

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

10 CFR 830 120 QA Criteria	Yes	Implementing Infrastructure Programs	Schedulable Completion Funding Source PATS Number Significance Level
6 (c) (1) Management (iii) Quality Improvement	Yes	<p>Sitewide Commitments Management and Corrective Actions Process (CM&CAP) - Management Assessment Process [See QA Criteria (3) Assessment (I) Management Assessment] - Cause Analysis Process - Lessons Learned Process</p>	<p>Deficiency: The quality improvement process has not been adequately implemented for SSOC activities. Elements including root cause analysis, trend identification and analysis, and lessons learned are not being performed in an acceptable manner, and the entire quality improvement process needs to be improved, from problem identification to commitment tracking. Portions of the above process are being implemented, but they do not always result in the development of effective corrective actions to prevent recurrence, the timely completion of needed actions, or in notification to other organizations of problems that potentially affect them.</p> <p>Implementation Activity: Fully implement the quality improvement process for SSOC activities.</p> <p>Compensatory Action: Evaluations of events are resulting in the identification of improvements which can be made to existing processes. SSOC is working with other Site contractors and using this information to make incremental improvements in the quality improvement process until full implementation is accomplished for SSOC activities. In the interim, SSOC will continue to rely on other Site contractors (e.g., DynCorp and Kaiser-Hill) for input in the areas for which they have responsibility.</p>

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Yes/No	Implementing Infrastructure Programs	Implementation Activity (Responsible Organization) Compensatory Action	Scheduled Completion Funding Source PATS Number Significance Level
8	(c) (1) Management (iv) Documents and Records CONTINUED	Yes		<p>Deficiency: The Document Control Program is not adhered to by the following organizations Engineering, Analytical Labs, Radiological Engineering, Industrial Hygiene, Environmental Restoration Management, WSI In addition, an unknown number of Site companies have instituted their own document control systems in a variety of other areas</p> <p>Implementation Activity: Incorporate non-centralized document control systems into the Site Document Control infrastructure A DMR will be issued by September 30, 1996, to change the Document Control Program (1-77000-DC-001) to include a statement that requires subcontractors to comply with the Site Document Control requirements An orderly turnover of documents will be coordinated with Source One Management (KH-F&A)</p> <p>Compensatory Action: The Kaiser-Hill Vice President for Finance and Administration will issue a memorandum by August 15, 1996, to all Site Management to direct all subcontractors to immediately comply with the Site Document Control System, under the purview of Source One Management, Inc</p>	<ul style="list-style-type: none"> •10/01/96 •WP-82501 •96-000385 •10
9	(c) (1) Management (iv) Documents and Records CONTINUED	Yes		<p>Deficiency: Records of special nuclear material inventory are incomplete or have not been verified</p> <p>Implementation Activity: In conjunction with a baseline physical inventory, prepare a baseline Record Review Plan Define Source Records to be maintained for existing risk reduction activities SSOC</p> <p>Compensatory Action: The initial sampling review of records and verification activities provides sufficient confidence that the preponderance of records are available to continue activities</p>	<ul style="list-style-type: none"> •12/31/96 •WP-22110 •96-001739 •3

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Imp. Issue	Implementing Infrastructure Programs	Implementation Comments (to be completed by contractor)	Scheduled Completion Funding Source PATS Number Significance Level
10	(c) (2) Performance (1) Work Processes	Yes	Price-Anderson Process - IWCP - Radiological Control Program - Nuclear Material Control & Accountability (NMC&A) - COOP - Site Procedures Process - Procurement Process - Nuclear Safety - CCCP/COEM - Emergency Preparedness - Waste Management	<p>Deficiency: Lack of acceptance criteria and process controls for RMRS receipt of products and services from other contractors</p> <p>Implementation Activity: Develop criteria for the acceptance of products and services RMRS will develop case-specific letters of agreement with other Principal Subcontractors for acceptance of products and services until specific acceptance criteria can be developed (RMRS)</p> <p>Compensatory Action: RMRS has trained its Quality Engineers (QEs) on the requirements of existing procurement systems QEs are required to review all purchase requisitions for proper quality controls and adherence to existing procurement requirements RMRS will continue to use existing procedures and documentation including the PQE processes for product and services acceptance as they relate to outside contractors However, the PQE process is not applicable to products and services between Principal Subcontractors Accordingly, the \$60K is to establish case specific letters of agreement between same-tier subcontractors providing products and services to each other The compensatory action currently being utilized for acceptance between same-tier subcontractors, is to notify K-H of deficiencies in the receipt of products and services</p>	•4/30/97 •\$60,000 to be pursued in FY97 budget •96-000782 •10

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Findings	Implementing Infrastructure Programs	Implementation Activity (Responsible Organization/Compensatory Action)	Scheduled Completion* Funding Source PATS Number Significance Level
11	(c) Performance (1) Work Processes CONTINUED	Yes		<p>Deficiency: RMRS waste and environmental operations have several nuclear activities not adequately controlled by approved procedures 10 CFR 830 120 specifically states the need for nuclear activities to be controlled by "approved work instructions, procedures, or other appropriate means"</p> <p>Implementation Activity: RMRS will review the set of existing instructions and the activities to determine the adequacy and effectiveness of the instructions. Examples include operations orders that have not been turned into procedures, procedures from '80 under Rockwell title that refer to non-existent organizations, new activities with inadequate or no procedure, and significant activities controlled by other non-approved controls such as worker aids. After reviewing the existing controls and activities, RMRS will prioritize the needed control, using a graded approach, and begin to develop appropriate controls using an approved instruction development process. Review existing controls and activities, and determine the number and extent of revisions, rewrites, or new instructions required. Develop adequate work controls and instruction under an approved instruction development process.</p> <p>Compensatory Action: RMRS will continue to use existing work controls and instructions, where available. These work controls and instructions are determined to be appropriate by management during the course of pre-evolution activities and other work control processes. Where adequate work controls do not exist for an activity, the controls will be developed prior to initiating the process.</p>	<ul style="list-style-type: none"> •3/31/98 •\$1,758,000 to be pursued in each FY97 & 98 budgets •96-000779 •10 •During June 1996 RMRS met with a DOE, RFFO representative to explain and provide justification for the cost associated with this implementation activity. During these meetings objective evidence was presented that depicted the need for procedural revisions, rewrites, and original document development. It was indicated in these meetings that the current cost is only an estimate based on the number of procedures requiring revision or origination. Further, it was explained that, if funding was provided, RMRS would first assess the actual number of revisions or procedures requiring development. At the close of these meetings it was understood that no further information would be required and that the justification would be forwarded to the appropriate organizations within DOE, RFFO
12	(c) Performance (1) Work Processes CONTINUED	Yes		<p>Deficiency: Price-Anderson Implementation Process and Reporting are not adequately covered in existing procedures</p> <p>Implementation Activity: Revise procedures to include the entire Price-Anderson process, including a reporting procedure to be developed (KH-H&S)</p> <p>Compensatory Action: Utilize DOE Handbook #DOE-HDBK-1089-95 (Rev 1) (Guidance for Identifying, Reporting and Tracking Nuclear Safety Noncompliance's) as well as a draft internal procedure and flowchart for this process</p>	<ul style="list-style-type: none"> •9/30/96 •WP-83311 •95-004412 95-004413 •High High

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No.	10 CFR 830 120 QA Criteria	Imp Issues	Implementing Infrastructure Programs	Implementation Issue	Scheduled Completion Funding Source PATS Number Significance Level
13	(c) (2) Performance (1) Work Processes CONTINUED	Yes		<p>Deficiency: Site procedures and other work control documents (excluding IWCP work packages) need to be reviewed and updated, revised, rewritten as a job instruction, deleted or developed, as appropriate to reflect the IMC concept, organization, and desired method of doing work. Some SSOC facility-specific and support organization procedures need to be developed/revised and implemented.</p> <p>Implementation Activity: Define the requirements for the documentation life cycle. Review and revise the Site document hierarchy, as appropriate. Develop the criteria for elimination of unnecessary or obsolete documentation. Develop a Site Documentation Requirements Manual. Develop an implementation plan for revising procedures and work control documents (KH-H&S). Based on assigned scope of work, and applicable documentation requirements, prepare/revise facility and support organization procedures (SSOC).</p> <p>Compensatory Action: George O'Brien letter to "All Site Personnel," dated 6/29/95, instructed the Site to use the existing procedures until properly revised or canceled. The letter transmitted information for correlating old EG&G organizations with new Kaiser-Hill and Principal Subcontractor organizations with new operational title changes, and provided points of contact for procedures within each Site organization. It also emphasized that if employees were "uncertain about what to do, how to do it, or what procedures apply" to their work, that they should stop and contact their manager, supervisor, or foreman. The schedule for procedural updates will be driven by Responsible Managers on an as needed basis, but as a minimum, will meet the periodic review requirements specified in 1-A03-PPG-004, Procedure Edit, Review, and Comment. Kaiser-Hill Team activities will be conducted in accordance with current practices until needed procedures are developed/revised.</p>	<p>•3/30/98 •included in existing work package funding •95-004416 •96-001847 •Medium</p>

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Imp Issues	Implementing Infrastructure Programs	Deficiency Implementation Activity Compensatory Action	Scheduled Completion Funding Source PATS Number Significance Level
14	(c) (2) Performance (1) Work Processes CONTINUED	Yes		<p>Deficiency: Building 991 procedures have not been developed and approved for operation of certain vital safety systems, including Utilities Operations Procedures</p> <p>Implementation Activity: Material movements to/from B991 and B886 will be performed using currently approved procedures</p> <p>Trained and qualified Operations Support Specialists from B707 are used in the performance of B991 material transfers</p> <p>Surveillance procedures for Fire Suppression and Fire Detection Systems will be prepared</p> <p>Existing Standard Operating Procedures (SOPs) will be converted to Level 4 procedures (SSOC)</p> <p>Compensatory Action: All fissionable material is contained in sealed Department of Transportation shipping containers, and will continue to be stored in these containers</p> <p>Operations personnel conduct system walkdowns to ensure the adequacy of process operations, and the operation of vital safety systems and administrative programs in preparation for performing activities</p>	•3/31/97 •WP-21110 WP-033201 •95-004414 •Low

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No.	10 CFR 830.120 QA Criteria	Yes	Implementing Infrastructure Programs	Schedul Completion Funding Source PATS Number Significance Level
15	(c) (2) Performance (1) Work Processes CONTINUED	Yes		<p>(Institutionalization) •9/30/97 •WP-44302 •WP-84310 •96-000788 •10 (Development of authorization basis documents) •7/30/98 •WP-44302 •WP 84310 \$1,300,000 will be needed in FY98 •96-000788 •10</p>
<p>Deficiency The current authorization basis documents need to be revised. The new Site Authorization Basis Process currently being developed and demonstrated has not been completely institutionalized in procedures. The existing authorization basis documents for Site facilities were not developed for the current facility missions. The existing authorization bases define a conservative safety envelope that is sufficient for safe execution of near-term baseline and risk-reduction activities which support the Site's cleanup mission. However, the facilities have not had the appropriate maintenance to ensure reliability or availability of identified safety-related equipment. Because of this degradation of safety equipment which results in out-of-tolerance OSRs, activities have been authorized using JCOs and resulting compensatory actions to ensure adequate safety margins exist for safe performance of the activity. As discussed in other sections of this Attachment, Personnel Training and Qualifications, Quality Improvement, Document and Records, Work Processes, Design, Inspection and Acceptance Testing, Management Assessment, and Independent Assessment have not been fully implemented at the Site. This makes operation of the facilities in compliance with these requirements very difficult and results in frequent and repeated noncompliances, many of which are noncompliances with 10 CFR 830 120.</p> <p>Implementation Activity: 1) The process for developing new safety-basis authorization documents will be piloted at Buildings 440 and 771. The process is being conducted under the DOE Work Smart Standards closure process, which is an application of graded approach to the selection of standards. The implementation of the selected standards will be described in a formal plan that will be approved by DOE, RFFO as an integral part of the Authorization Agreement. This implementation plan will be an application of the graded approach to the conduct of activities in Buildings 440 and 771. This pilot, therefore, will be a specific application of graded approach for implementing QA requirements. Implementing work control documents will be subject to the independent review process described in Section 8 of the IP. 2) (continued)</p>				

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Implemented	Implementing Infrastructure Programs	Scheduled Completion Funding Source PATS Number Significance Level
15	(c) Performance (1) Work Processes CONTINUED	Yes		<p>The experience gained during development of the new safety-basis authorization document at Buildings 440 and 771 will be used to institutionalize the authorization-basis process 3) Authorization-basis documents are being developed or revised to better reflect the current mission and facility conditions Graded application of QA Rule requirements will be defined and implemented as part of the development/revision process 4) Develop and implement similar authorization basis documents for the remaining nuclear facilities (KH-SETS)</p> <p>Compensatory Action: The authorization basis and compensatory measures that have been put in place allow the Site to accomplish activities on a case-by-case basis</p> <p>The current authorization basis is described in documents such as the facility Safety Analysis Report (SAR) and other safety analysis, Hazard Classification documents, the Technical Safety Requirements, DOE-issued safety evaluation reports, and facility-specific commitments made in order to comply with DOE directives Hazard Category 2 and 3 facilities are required to maintain the limiting conditions for operation (LCO) section of the SARs, which were established as part of the authorization basis to maintain the safety of the facilities</p> <p>Most of the LCOs are contained in the operational safety requirements section of the SARs, some have been revised to meet DOE Order 5480 22, Technical Safety Requirements (for example building 559), and some have been incorporated in a Basis for Interim Operation (for example building 886) The LCOs must be met or remedial action taken up to and including termination of operations in order to maintain compliance with the authorization basis Since July 1995, SSOC has initiated extensive repairs to restore reliability and availability of the safety-related equipment identified in the existing authorization bases An additional effort is also under way to upgrade the existing Operational Safety Requirements and Technical Safety Requirements through page changes to ensure they properly reflect the controls (continued)</p>

ID No	10 CFR 830 120 QA Criteria	Imp Issues	Implementing Infrastructure Programs	Deficiency Implementation Activity (Responsible Organization Compensatory Action)	Scheduled Completion Funding Source PATS Number Significance Level
15	(c) (2) Performance (1) Work Processes CONTINUED	Yes		and limits required by the existing hazards and accident analysis. An interim program is being maintained to ensure all work activities are performed safely and within an adequate authorization basis. This includes screening and evaluating all proposed activities by the Unreviewed Safety Question process and by development of Activity Control Envelopes (ACEs) for activities requiring characterization of hazards and controls. In March 1996, an Authorization Agreement was signed between Kaiser-Hill and DOE, RFFO that established the Master Activity List and the current bases for authorizing each of the Mission Program activities on the Master Activity List.	
16	(c) (2) Performance (11) Design CONTINUED	Yes	CCCP / COEM Software Management Program	Deficiency: Failures of various organizations to comply with the Site Software Management Program constitutes programmatic breakdown. Quality assurance controls for developing, obtaining, deploying, or using software contained in 1-45000-CSM-001 are not being followed, the procedure is outdated since the cancellation of DOE 1330 IC. Implementation Activity: Issue will be addressed by revision of 1-45000-CSM-001 to incorporate 10 CFR 830 120 requirements using a graded approach (KH-F&A). Compensatory Action: Use existing procedure until revised. Software with significant safety implications (for example WEMS and SAN) have existing user organization-specific enhanced design and configuration controls, these will be maintained until incorporated into Site process via procedure revision.	•2/10/97 •WP 83605 •96 000787 •6
17	(c) (2) Performance (11) Design CONTINUED	Yes		Deficiency: Criticality safety evaluations performed prior to March 1991, do not clearly document double contingency. Implementation Activity: Review criticality safety evaluations performed prior to March 1991 and validate double contingency. Compensatory Action: When new activities are scheduled and the corresponding criticality safety evaluation predates March 1991, a review for double contingency is performed and documented before the activity is carried out.	•9/30/97 •\$1 000,000 is needed in FY97 for contracting this work •96 001822 •10

Attachment 1
Implementation Issue Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

ID No.	10 CFR 830 120 QA Criteria	Imp. Issues	Implementing Infrastructure Programs	Implementation Analysis Completion Action	Scheduled Completion Funding Source PATS Number Significance Level
18	(c) (2) Performance (11) Design CONTINUED	Yes		<p>Deficiency: There is unmeasured fissile material in process systems managed by SSOC. The criticality safety of this hold-up has not been evaluated.</p> <p>Implementation Activity: Measure the hold-up in process systems. Based on measurement data, develop safety bases for material held-up in process systems.</p> <p>Compensatory Action: When criticality safety evaluations are performed for activities which could disturb hold-up materials, conservative evaluation assumptions are used regarding the amount of material held-up in process systems, or measurements of the hold-up are performed.</p>	<ul style="list-style-type: none"> •7/31/98 •\$300,000 (unburdened) is needed for FY97 •\$300,000 (unburdened) is needed for FY98 •96-001825 •10
19	(c) (2) Performance (11) Design CONTINUED	Yes		<p>Deficiency: The methodology for placement of criticality detectors has not been fully validated.</p> <p>Implementation Activity: Validate methodology for placement of criticality detectors.</p> <p>Compensatory Action: The methodology has been reviewed by the Site criticality safety staff and by criticality safety specialists from Los Alamos National Laboratories, the Savannah River Site, and an independent contractor. Questions about the methodology were raised, but no actual deficiencies have as yet been identified. The developer of the methodology has been contracted to answer these questions. If resolution of the questions results in deficiencies, appropriate actions will be taken.</p>	<ul style="list-style-type: none"> •9/30/96 •WP-31111 •96-001821 •10

Attachment 1
Implementation Issu Matrix For
Quality Assurance 10 CFR 830 120 Implementation Plan

No	10 CFR 830 120 QA Criteria	Imp Issues	Implementing Infrastructure Programs	Implementation Activity (Responsible Organization) Compensatory Action	Scheduled Completion Funding Source PATS Number Significance Level
20	(c) (2) Performance (ii) Design CONTINUED	Yes		<p>Deficiency: Criticality detector placement evaluations have not been updated and properly documented for Buildings 771, 776/777, 779, and 991 consistent with present requirements</p> <p>Implementation Activity: Confirm the validity of the criticality detector placement evaluations and documentation (1) Survey the identified buildings to determine where documentation is lacking</p> <p>Initiate proper compensatory actions for any areas where coverage is not documented (8/30/96) (2) Formally document detector coverage for the identified buildings (12/30/96)</p> <p>Compensatory Action: Where detector coverage is questioned, or is determined to be deficient, the appropriate restrictions will be placed on the facility, up to termination of operations and evacuation of the facility. These restrictions will remain in place until proper coverage is confirmed</p>	<p>•6/15/97</p> <p>•WP 31111</p> <p>•96 001824</p> <p>•10</p>
21	(c) (2) Performance (ii) Design CONTINUED	Yes		<p>Deficiency: Design controls for nuclear-related environmental software need to be validated [Waste and Environmental Management System (WEMS), Rocky Flats Environmental Data System (RFEDS)]</p> <p>Implementation Activity: Revise I-V51-COEM-DES-210, Design Process Requirements to establish verification and validation for software (KH-SETS)</p> <p>Compensatory Action: A revision to I-V51-COEM-DES-210 is in process to incorporate the requirements for necessary design controls to System Category 1&2 software. A memo from L. R. Bailey, 4/16/96, to Site Engineering Managers requests that changes to Category 1&2 software be as design changes until the procedure is revised</p>	<p>•8/30/96</p> <p>•WP 82011</p> <p>•96 000785</p> <p>•6</p>
22	(c) (2) Performance (ii) Design CONTINUED	Yes		<p>Deficiency: SSOC has not identified design authority/design agent responsibilities</p> <p>Implementation Activity: The following action will be accomplished to implement the Site Engineering and Design infrastructure program and procedures: Establish design authority and design agent responsibilities' (SSOC) (continued)</p>	<p>•9/30/97</p> <p>•WP 31111</p> <p>•96-001243</p> <p>•6</p>

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Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Imp	Implementing Infrastructure Programs	Scheduled Completion Funding Source PATS Number Significance Level
22	(c) (2) Performance (ii) Design CONTINUED	Yes		<p>•9/30/97 •WP-31111 •96-001243 •6</p>
23	(c) (2) Performance (iii) Procurement	No	Procurement - IWCP - CCCP / COEM	
24	(c) (2) Performance (iv) Inspection and Acceptance Testing	Yes	Control of M&TE - IWCP - CCCP / COEM - Procurement	<p>•9/30/96 (DCI) •WP-81404 (DCI) •95-004355 (DCI) •4 (DCI) •6/30/97 (SSOC) •WP-34104 (and various) (SSOC) •96-001848 (SSOC) •5 (SSOC)</p>

Compensatory Action: Letter RMS-018-95 was issued giving SSOC technical support managers the authority to approve Engineering products

Deficiency: Reverse traceability of out of calibration M&TE inadvertently used for acceptance testing is not addressed by program procedures as required by NQA-1, Section 3.2. Not all gauges needed for safety systems are identified or calibrated. Most of the required gauges are known and in the calibration system, but ongoing activities such as OSR verifications and readiness activities are resulting in the identification of additional needs.

Implementation Activity: Procedure 1-197-ADM-12 01, Control of Measuring and Test Equipment will be revised to address this issue (DCI). Complete the identification and calibration of gauges needed for safety systems (SSOC).

Compensatory Action: For M&TE found out of calibration, Metrology has been and is continuing to notify the M&TE users of the condition through instructions and the issuance of a Metrology Variance Report per MI A-00008, Metrology Labs Administrative Procedure so that appropriate corrective action and recalibration can be accomplished and documented (DCI). Most gauges are already in the calibration system. As additional needs are identified during readiness activities, OSR verification activities, and other reviews, gauges are entered into the calibration system (SSOC).

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Quality Assurance 10 CFR 830 120 Implementation Plan

ID No	10 CFR 830 120 QA Criteria	Met	Implementing Infrastructure Programs	Implementation	Scheduled Completion Funding Source PATS Number Significance Level
25	(c) (2) Performance (iv) Inspection and Acceptance Testing CONTINUED	Yes		<p>Deficiency: Nuclear facilities have not fully implemented the Inspection & Acceptance Testing requirements of procedure 1-62300-HSP-11 03</p> <p>Implementation Activity: Identify and develop actions satisfying 1-62300-HSP-11 03</p> <p>NOTE: A task team of SSOC, DynCorp and IMC personnel has been formed to assess the adequacy of previously proposed actions Kaiser-Hill Independent Assessment has identified this noncompliance as a Site-wide mission-critical issue. A cost and schedule for programmatic activities and implementation is to be updated (SSOC)</p> <p>Compensatory Action: The number of pressure vessels in service has been reduced by Lockout/Tagout (procedure 1-15320-HSP-2 08), and several important systems have been walked down (procedure 2-D80-COEM-6 3 13) to identify key valves for priority replacement as funding becomes available. Continued operation without immediate replacement of PRVs is justified based on the premise that the risk associated with continued degradation of confinement equipment and the increased uncertainty associated with material aging under curtailment of operations is high when compared to the lower risk associated with operation of systems without replacement of PRVs. A formal analysis has not been performed for the active pressure vessels in the nuclear facilities. However, management judgements leading to the prioritization of maintenance repairs support the premise</p>	<ul style="list-style-type: none"> •9/30/96 •WP-95801 •96-001145 •High

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Implementation Issue Matrix For
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ID No	10 CFR 830 120 QA Criteria	Imp. Issues	Implementing Infrastructure Programs	Deficiency: Self-evaluations and Management Assessments are not being performed consistently across the Site due to procedural inadequacy Implementation Activity: Develop and implement company-specific Management Assessment procedures to implement the Site Level Management Assessment Program [(KH-SSOC)-9/30/96, (RMRS)-9/30/97] Compensatory Action: Site managers will continue to apply established assessment approaches (e.g. procedures 1-11000-ADM-16 10, Self Evaluation Program, and 2-B52-ADM-02 01, Independent Assessment) until the company-specific management assessment procedures are developed	Scheduled Completion Funding Source PATS Number Significance Level
26	(c) (3) Assessment (i) Management Assessment	Yes	Commitments Management and Corrective Action Process - Management Assessment - Compliance Management	Deficiency: Although independent assessments are being performed, Site-wide programmatic compliance and audit planning methodology has not been defined or applied to ensure overall Quality Program coverage SSOC does not have independent assessor resources Implementation Activity: Revise the assessments procedure to include a Site-wide programmatic audit planning methodology to address overall quality program coverage (KH-H&S) Staff SSOC QA organization with the appropriate skill mix (including independent assessment resources) Issue schedule and begin conducting independent assessments (SSOC) Compensatory Action: Utilize the existing independent assessment procedure until revised and apply appropriate programmatic audit planning pending procedure revision Current Independent Assessment activities are being performed to meet the intent of the requirement Kaiser-Hill has developed a schedule to cover the appropriate requirements for Independent Assessment including SSOC programs SSOC continues to provide team members to participate in selected Kaiser-Hill Independent Assessments	<ul style="list-style-type: none"> •9/30/97 •WP-83402 (K-H) •93-003824 (K-H) •Medium •WP-31111 (SSOC) •96-001157 (SSOC) •7 RMRS to pursue \$38,000 in FY97 budget •96-000780 (RMRS) •10
27	(c) (3) Assessment (ii) Independent Assessment	Yes	Independent Assessment	Deficiency: Although independent assessments are being performed, Site-wide programmatic compliance and audit planning methodology has not been defined or applied to ensure overall Quality Program coverage SSOC does not have independent assessor resources Implementation Activity: Revise the assessments procedure to include a Site-wide programmatic audit planning methodology to address overall quality program coverage (KH-H&S) Staff SSOC QA organization with the appropriate skill mix (including independent assessment resources) Issue schedule and begin conducting independent assessments (SSOC) Compensatory Action: Utilize the existing independent assessment procedure until revised and apply appropriate programmatic audit planning pending procedure revision Current Independent Assessment activities are being performed to meet the intent of the requirement Kaiser-Hill has developed a schedule to cover the appropriate requirements for Independent Assessment including SSOC programs SSOC continues to provide team members to participate in selected Kaiser-Hill Independent Assessments	<ul style="list-style-type: none"> •9/30/96 (K-H) •WP-83402 (K-H) •94-007511 (K-H) •High (SSOC) •2/28/97 (SSOC) •WP-31111 (SSOC) •96-001801 (SSOC) •9 (SSOC)