



Revision 0

**Quality Assurance Program Plan (QAPP)
95-QAPP-001**

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This plan does not supersede any other procedure or plan

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1. INTRODUCTION

Rocky Mountain Remediation Services, L L C (RMRS), as a subcontractor to Kaiser-Hill Company L L C (K-H), is responsible for the waste management, environmental restoration, decontamination and decommissioning (D&D), and related engineering and construction activities at the Rocky Flats Environmental Technology Site (Site) The general scope of work is defined and implemented under the provisions of contract no KH00003NS1A

To meet the contractual obligations and assure that the customers of RMRS are receiving products and services that meet their specifications, RMRS has developed this Quality Assurance Program Plan (QAPP) that describes roles, responsibilities, and methodologies for ensuring compliance with DOE Order 5700 6C, and 10 CFR 830 120 Since the Order and Rule are inclusive of the same criteria, RMRS incorporates the requirements into a single QAPP The primary distinction between the two requirements is the enforcement and applicability Enforcement is defined in 10 CFR 820 Subpart B and F, which indicates the potential remedies afforded DOE up to and including criminal prosecution and fines From the perspective of applicability, 10 CFR 830 120 applies only to nuclear facilities/activities Currently, based on assessments by EG&G Rocky Flats, Inc , the following RMRS managed facilities at the Site are considered nuclear facilities and subject to enforcement action under 10 CFR 830 120 (Ref K-H QA Manual, DRAFT)

Building 569 (Crate Counter)	Building 664 (Waste Storage/Shipping)
Building 666 (TSCA Storage)	750/904 Pads (Mixed Waste Storage)
Building 884 (RCRA Unit 13)	Building 964 (Drum Storage, Low Level Hazardous)
Operable Unit 2 (OU2) (903 Pad Remediation)	Building 906 RCRA Unit 15 (904 RCRA Unit)

As more determinations are made with regard to the applicability of 10 CFR 830 120, and as baseline assessments continue, the RMRS QAPP will be modified to reflect the most current decisions concerning applicability in the specific buildings referenced above

This QAPP will be reviewed annually by the organizations indicated on the cover and revised as necessary by the RMRS Quality Assurance (QA) organization Generally, this QAPP was developed using, as guidance, the Site procedure for development of quality assurance plans This QAPP is currently controlled and distributed under an approved, document control system

2. PURPOSE

This QAPP defines the strategy and controls currently employed, or to be developed and implemented by RMRS to consistently deliver products and services that meet the requirements of customers/stakeholders

The QAPP serves as a map of the current controls employed by RMRS, and presents a concise strategy for the continuing development of the RMRS QA Program. Currently, RMRS is implementing the controls established by EG&G Rocky Flats, Inc., prior to K-H assuming operations responsibility for the Site. Due to the difference in mission, the program developed and deployed by EG&G is not specifically aligned or suited to the operational responsibilities of RMRS. Accordingly, this QAPP describes near-term implementation of the existing controls and defines the process, through implementation tasks (Appendix A), by which specific RMRS controls will be developed and implemented.

3. SCOPE

This QAPP is relevant and applicable to the specific operations of RMRS and its subcontractors defined in this section, and where applicable, to the interface controls between RMRS and K-H, and between RMRS and other K-H subcontractors.

As stated in Section C 2 of the RMRS contract (KH00003NS1A), RMRS shall execute all work assigned in the areas of environmental restoration (ER), environmental protection (EP), waste management (WM), related engineering and construction, and such other related activities as directed by the K-H Contracting Officer, provided sufficient funds are made available. As required, RMRS organizations will develop Letters of Intent to state agreed upon methods for interfacing and for delivery of products and services between K-H and other subcontractor organizations. The scope of RMRS's contract, while specifically agreed to and implemented through Project Authorization Directives (PADs), is specified in the contract as

Management and Administration (RMRS Technical and Administrative Services): RMRS shall implement an innovative and efficient management system for ER/EP/WM projects, and shall implement quality, timely, and cost effective programs and operations, and shall manage the EP/ER/WM projects using integrated program plans provided by the Contractor. RMRS shall implement a surveillance and reporting system to ensure compliance with applicable human health, safety, and environmental regulations, consent orders and agreements, and applicable DOE Orders and Standards and quality assurance requirements. The RMRS organizations that are categorized as *Management and Administration* interface internally with all other RMRS organizations, and externally with K-H and other subcontractors through contractually specified requirements.

Environmental Restoration (ER) Projects: This program includes characterization, assessment, and cleanup of contaminated facilities and surrounding areas which are no longer in use at the Site. These efforts will be accomplished by the development and implementation of a program that is compliant with the Interagency Agreement (IAG) of January 22, 1995 and the DOE Site Strategic Plan, and is in concert with the DOE, regulatory groups, and other stakeholders. The RMRS ER organization interfaces with all RMRS organizations, K-H, Safe Sites of Colorado (SSOC), and Dyncorp.

As indicated previously, RMRS currently implements the infrastructure system deployed by EG&G Rocky Flats, Inc. A part of that system was the QAPJP and QA Program description developed, in part, to support the IAG. Currently, RMRS is required to continue to administer and implement these documents as they directly support the IAG. However, RMRS will develop a QAPP, and cancel the existing QAPJP and QAPD when the IAG is superseded by a new compliance agreement.

Waste Management (WM) Operations: RMRS will conduct waste management activities in a manner such that similar wastes are managed consistently and in compliance with all applicable regulatory requirements, using controlled and effective integrated programs. Such activities are inclusive of (1) timely characterization, appropriate consolidation and segregation of waste, (2) treatment that complies with storage and/or disposal criteria, (3) shipment of waste for treatment, storage and/or disposal as expeditiously as requirements allow and (4) maintenance of adequate permitted waste storage space at the Site to accommodate waste generation and waste backlog. The RMRS WM organization interfaces with all RMRS organizations, K-H, Safe Sites of Colorado (SSOC), and Dyncorp.

Environmental Protection (RMRS ER Organization): RMRS will ensure that all environmental protection activities are conducted in compliance as necessary with air, water, and ecological monitoring and reporting requirements as described in national, state, and local environmental laws and regulations, as they apply to the Site. Environmental protection activities are inclusive of (1) surface water management which entails the operator of the pond systems and monitoring the water quality and quantity, (2) providing ecology and watershed management including performing natural resource damage and ecological risk assessments, buffer zone (access) management, and threatened and endangered species and wetlands protection, (3) supporting the NPDES/FFCA Compliance Programs, i.e. the Drain and Tank Study implementation, pollution prevention plans, and internal waste stream analyses, (4) developing the required environmental reports and NEPA documents necessary to support projects and the sitewide commitments, and (5) supporting additional efforts such as permitting and regulatory strategies, performing groundwater monitoring, and maintaining environmental data management. The RMRS ER organization is responsible for Environmental Protection Activities and interfaces with all RMRS organizations, K-H, Safe Sites of Colorado (SSOC), and Dyncorp.

Engineering/Construction Management (RMRS Engineering/Construction/D&D): RMRS will ensure the project implementation of services in construction and construction management for all line items, capital equipment, general plant projects and expense projects related to Environmental and Waste Treatment Operations. Such implementation is inclusive of preparation of all conceptual design reports, complete project management responsibility for all title design engineering packages, construction management, and start-up actions. The RMRS E/C/D&D organization interfaces with all RMRS organizations, K-H, Safe Sites of Colorado (SSOC), and Dyncorp.

Building Management (Non Organization Specific): RMRS shall ensure that nuclear and non-nuclear waste buildings, where RMRS is building manager, comply with the appropriate safety procedures and infrastructures as described by Conduct of Operations, Conduct of Maintenance, and Work Control documents and that the modification or repair of systems and processes can be accomplished to allow certain treatment, packaging, transportation and/or storage functions to occur

Environmental and Material Technology Development (RMRS Technical and Administrative Services): RMRS shall provide services related to the development of processes and technologies for waste treatment, environmental restoration, water and soil monitoring, decontamination and decommissioning, and radioactive assay RMRS developed process shall be integrated into existing systems to resolve complex problems related to backlogged waste, normal waste generation and future wastes generated by ER and D&D activities Development of technologies will meet existing regulatory requirements and future requirements of Site specific plans and compliance agreements RMRS shall facilitate the transfer of RFETS technologies to the private sector

Safety (RMRS ESH&Q): RMRS shall implement a behavior-based safety program that results in continuous improvements in safety performance RMRS shall ensure that activities needed to safely operate a facility such as operations management, utilities, maintenance, nuclear safety activities (some buildings), environmental compliance, health and safety practices, technical and custodial support are provided Other activities include radiological and industrial safety, As Low As Reasonably Achievable (ALARA) compliance, lockout/tagout controls, filter changes, monitoring and control rooms and vital safety systems operation, security alarms, the central and secondary alarm stations, etc RMRS shall ensure that, where required, Criticality Safety Limits (CSOLs) are complied with RMRS safety is responsible for facilitating document control, job specific safety training, and staffing, as they specifically relate to safety

4. RESPONSIBILITIES

- 4 1 The RMRS President is responsible for
- Establishing overall policy and management direction for the RMRS QA Program
 - Serving as the final decision authority for QA issues which cannot be resolved at lower management levels
 - Ensuring that contract modifications are formally reviewed to determine RMRS capabilities and effectiveness in meeting contract change
- 4 2 All RMRS Vice Presidents and Management are responsible for
- Providing resources necessary to implement the QAPP
 - Defining training and qualification requirements for RMRS personnel
 - Delegating responsibility for RMRS training development and implementation to the Vice President of Technical Assurance
 - Ensuring that QA requirements are incorporated in documents that govern quality affecting, and the procurement of items and services

- Ensuring timely corrective action for identified quality problems
 - Ensuring that applicable QA requirements are passed down to RMRS and lower tier contractors, as appropriate
 - Developing and maintaining for RMRS the Program for Due Diligence and program for ensuring compliance with the Price-Anderson Amendments Act
 - Subscribing to and deploying interface controls for the Sitewide Deficiency Tracking and Corrective Action System
 - Ensuring the effective implementation of business service and finance controls
- 4 3 The Vice President, Technical and Administrative Services, is responsible for
- Ensuring that QA requirements are incorporated in documents that govern quality affecting work, and the procurement of services
 - Assessing the adequacy of controls established to meet QA Program requirements applicable to business services, technology development, and finance, and ensuring effective implementation
- 4 4 The RMRS Director, Environment, Safety & Health and Quality is responsible for
- Providing resources to the QA organization necessary to implement QA Program responsibilities
 - Interfacing with RMRS senior management on quality related issues
 - Assessing the adequacy of the QA Program
 - Reviewing quality data to determine measures to strengthen the RMRS QA Program
 - Interfacing with K-H and other subcontractors relative to QA issues
- 4 5 The Manager, RMRS Quality Assurance, is responsible for
- Developing, preparing and maintaining the RMRS QA Program to meet the requirements of 10 CFR 830 120, DOE Order 5700 6C, and contractually mandated requirements
 - Obtaining signatory approval of the RMRS QAPP from Kaiser-Hill
 - Establishing direction and guidance for defining, implementing, and maintaining the RMRS QA Program
 - Ensuring establishment of QA procedures and instructions to meet requirements of the RMRS contract and Site Quality Assurance Program
 - Identifying, reviewing, and approving selected procedures to implement the RMRS QA Program
 - Directing the conduct of audits and surveillances of organizations for compliance with established quality requirements and achievement of quality objectives
 - Ensuring, in coordination with the responsible implementing organizations, the assurance which are not in compliance with the QA Program, are properly identified and corrected
 - Providing organizational assistance, and indoctrination and training in quality practices, procedures, and regulations
 - Supporting Design Review and Readiness Review activities

- Issuing orders to stop work or to control further activities when significant conditions adverse to quality require immediate corrective action
- Developing and providing periodic assessment reports on the status of the QA Program to RMRS Management and K-H

4.6 All RMRS personnel are responsible for

- Performing activities in accordance with approved documents
- Identifying and participating in quality improvements
- Knowing customers, suppliers, and processes with which associated
- Exercising stop work authority over significant conditions adverse to quality
- Attending training

5. DEFINITIONS

Definitions are as defined in the Site Quality Assurance Program Glossary, administered by K-H

6. PROGRAM REQUIREMENTS/IMPLEMENTATION

This section of the QAPP identifies the QA elements of the RMRS QA Program and defines them in the context of implementing programs and controls

While infrastructure is inferred for the activities identified in the following sections, specific procedures are identified in Appendix B, which presents controls available to RMRS as they align with the DOE Order 5700 6C and 10 CFR 830 120 criteria. RMRS will delete, revise, and add procedures, as required, to eliminate redundancy and develop specific control strategies for implementing the RMRS QA policy and philosophy. This approach is inherent in the Implementation Tasks identified in Appendix A of this QAPP, which will be revised as required upon completion of baselining assessments in support of 10 CFR 830 120. While appended to this QAPP, Appendix A is separately controlled to allow for revisions and updates without re-issuance of the QAPP. The RMRS QA organization is cited with responsibility for maintenance of the appendix, and regularly issues revisions. Additionally, completion of the implementation tasks is contingent on budget availability.

6.1 *Quality Assurance Systems and Description*

Commitment to the RMRS QA Program is evidenced by the signatures affixed to the front of this QAPP. The QAPP is binding on all RMRS personnel. RMRS personnel understand the program's impact from training, indoctrination, and the commitment evidenced by management. This QAPP is, by design, intended to be revised, as RMRS increases efficiency and effectiveness, and as our customers continue to define requirements in the RMRS scope of work.

RMRS requires that activities be appropriately planned in accordance with the provisions of this document, and that when activities deviate from planned outcomes and indicate significant conditions adverse to quality, RMRS personnel are required to stop the process until corrections can be made

The RMRS QA Program, defined herein, is comprised of the RMRS contract (KH00003NS1A), this QAPP, the existing infrastructure controls list in Appendix B, the EG&G QAPJP, and the EG&G QAPD. The RMRS QA Program, while maintaining consistency with the Site QA Program, will undergo revisions to enhance overall effectiveness and alignment with the RMRS scope of work

6.1.1 Policy and Mission

The mission of RMRS at the Site is to provide environmental restoration, waste management and D&D services. The highest priority of RMRS, while accomplishing the mission, is to accomplish our work in a manner that assures employee safety. RMRS contends that safety and quality are integral components to the successful accomplishment of our mission. Accordingly, a rigorous Quality Assurance Program will be implemented to ensure that compliance with applicable laws, regulations, and DOE orders is achieved, and that such compliance is appropriately documented and maintained.

To achieve the mission, it is the policy and commitment of RMRS to meet the needs of the Site stakeholders by providing products and services that consistently exhibit a high degree of inherent quality. RMRS will also accomplish the mission in a manner that is efficient and meets the predetermined performance standards.

RMRS places accountability for quality with the individuals accomplishing the work activities, and further holds those individuals accountable for seeking means to continuously improve. RMRS will promote quality program requirements being integrated into functional operations, and will establish programs by which the achievement of quality is constant, and inherent to the process. RMRS provides its participants with the tools, continuing training, and latitude to do the right things, above merely doing things right.

RMRS management shall take a *no-fault* position when employees identify quality deficiencies, and shall not take nor delegate reprisals against employees identifying deficiencies.

RMRS operations, to achieve the most efficiency and establish best in class operations, embraces the graded approach for controlling processes, whereby the degree of control is commensurate with the risk of the activity or process, as established by RMRS.

6.1.2 Management and Organization

General

Management responsibility and commitment to the RMRS QAPP is by signature to this document

The RMRS organization is depicted in Appendix C. The management of each organization, in conjunction with the Human Resources Manager or designee, are responsible for hiring qualified personnel and providing any additional skills required prior to assigning the employee specific project duties. Each employee shall be trained to the requirements of this QAPP as a part of the project-wide training program.

RMRS QA Organization

The RMRS QA Manager is designated by the RMRS President as the representative for quality assurance activities, and is responsible and authorized to stop work when significant conditions adverse to quality are detected. The QA Manager reports directly to the RMRS ESH&Q Director, and is responsible for assessing the effectiveness and compliance of RMRS to the quality concepts, requirements, and directives identified in this QAPP and associated implementing procedures. At the discretion of the QA Manager, QA issues may be directly reported and resolved with the RMRS President. The RMRS QA Manager is also responsible for documenting identified deficiencies, facilitating appropriate corrective actions, verifying corrective action effectiveness, and tracking deficiencies to preclude recurrence and promote continuous improvement.

The RMRS QA organization plans and performs assessments of RMRS activities and processes to determine the health and effectiveness of the RMRS QA Program and determine compliance with QA requirements. Assessments are conducted by trained qualified personnel who are afforded autonomy in the RMRS organizational structure and report to the QA Manager, who may direct that assessment results be forwarded directly to the RMRS President. Assessment personnel are afforded full access to records, procedures, program plans, and related matter while performing assessments.

6.1.3 General Principles

In the context of the specific scope of work presented in Section 3, RMRS is contractually obligated to develop and implement a QA program that complies with DOE Order 5700 6C for all activities that are not, by definition, a nuclear activity. Further, RMRS is responsible to develop and implement a QA program that complies with 10 CFR 830.120 for all RMRS activities that are, by definition, nuclear activities. In addition to these requirements, RMRS identifies and implements best practices and standards to enhance the overall effectiveness of the RMRS QA Program.

The RMRS QA Program is inherent with the work being performed. This is accomplished during the planning of work, through the participation of quality professionals. The RMRS QA Program is limited in the use of in-process inspections, since QA participation in the planning process reduces the need for inspection. The primary principle supported is that the achievement of quality is embedded in the work processes, and that assessment should only be a tool for monitoring and continuous improvement.

The relative similarities of the Rule and the Order precludes the need for developing separate programs for compliance. Accordingly, RMRS has developed a single comprehensive program, defined herein, that establishes compliance with both requirements and differs only from the perspective of applicability and enforceability. From the perspective of applicability, the distinction bounds the QA program by placing 10 CFR 830.120 on the higher risk side of the activity spectrum, and allows less stringent application of DOE Order 5700.6C controls on the activities with inherently less risk.

6.1.4 Graded Approach

As indicated, RMRS will follow a graded approach, developed by K-H, that is inclusive of the following considerations:

- Relative importance to safety, safeguards, and security
- Magnitude of any hazard involved
- Life cycle stage of a facility
- Programmatic mission of a facility
- Particular characteristics of a facility
- Other relevant factors as deemed appropriate

To implement the graded approach, RMRS will, during the revision of procedures, incorporate varying degrees of control, appropriate for the activity.

6.2 Personnel Qualifications and Training

Personnel shall be qualified to perform their respective tasks based on a combination of related experience, education, and training. Education and experience shall constitute the primary means of qualification. RMRS will consider that the defensible competency of individuals performing the work is also a factor in the mitigation of risk and will include qualification as a risk mitigator in the graded approach methodology.

Training shall be appropriate for the complexity and hazards of the work involved. Typical training methods include computer based training (CBT), classroom instruction, required reading, and on-the-job training.

Qualification requirements and training records shall be maintained and retrievable through the project managers, procurement and contractual agreements, and at a centralized training record repository, maintained and operated by RMRS

Evidence of qualification shall be established through documented records, such as sign-in sheets, certificates, transcripts, registrations, and specific training records (e g , output from training group databases)

6.2.1 Personnel

The Training User's Manual (TUM), administered and controlled by K-H, establishes the processes used by management to determine and document employee job requirements, including education, training, experience, and certifications, and for establishing qualifications RMRS currently implements the provisions of the TUM and controls specific training activities through lower tier procedures

The qualification and training process is designed to enable RMRS to determine and document job-specific and general training requirements for each employee, and to ensure that qualifications and training are maintained current for their work assignment Training methods include formal training conducted by qualified instructors, briefings conducted by management approved personnel, required readings, workshops, seminars, and awareness training

QA training is provided to RMRS personnel as part of orientation to the Company and every two years thereafter The training is provided by the RMRS Training organization, with development support by the RMRS QA organization Records of training are documented in the same manner as for other employee training, in accordance with TUM requirements Line management plans and budgets for QA training as part of work and project planning Building or Area-Specific-Training is conducted to familiarize personnel with the facilities they use, including safety, security, and support systems Additionally, mandatory training addressing environmental, safety and health, and other applicable requirements and issues are to be completed by RMRS employees

6.2.2 Quality Professionals

The RMRS QA Manager establishes requirements for the competency of individuals planning , developing, assessing, and inspecting QA related work activities Auditors, assessors, inspectors, and personnel conducting surveillances shall have training, qualifications, technical knowledge, and experience commensurate with the scope and complexity of the activities being evaluated Evidence of competency, and maintenance of competency will be established and recorded under approved processes

6.3 Improvement

Several approaches shall be implemented to continuously improve the quality of RMRS products and services. These approaches include the following:

Management will foster a *no-fault* attitude where all personnel are encouraged to identify and report problems to the appropriate level of management for the purpose of corrective action.

Management shall empower personnel to eliminate ineffective management systems and improve performance by driving decision-making authority to the lowest effective organizational level where the maximum expertise is localized.

When appropriate, management will encourage the use of established management tools, such as statistical methods, to improve and substantiate confidence in program and project decision-making.

Management shall track and monitor the disposition of failures and significant deficiencies through interface with a sitewide tracking system implemented and maintained by K-H. The extent of causal analysis and corrective action shall be commensurate with the significance of the failure or problem. Lessons learned shall be communicated to staff from management when appropriate.

6.3.1 Problem Prevention

RMRS management prevents quality problems by the implementation of this QAPP, organizational structure, surveillance, monitoring, and corrective action. Specifically, Quality Assurance Coordinators, matrixed to the line organizations, participate in the planning process, review work control packages prior to implementation, and conduct surveillances of work as it is being performed. QA and line management monitor performance through trend analysis and periodic reports, and make adjustments to processes to continuously limit the number of item and process failures. Problem prevention, while not controlled by a specific procedure, is a strategy that is facilitated through the other programs, procedures, plans and instructions defined herein, of which training and the employment of competent individuals is a key factor.

RMRS subscribes to the Site lessons learned program, and uses information from the program as a means of preventing problems. Additionally, RMRS fully discloses known deficiencies and occurrences as a means of supporting the prevention of similar situations in other organizations at the Site and across the DOE complex.

6.3.2 Item and Process Improvement

RMRS staff identify and initiate improvement to products and services by following the instructions of procedures for self evaluation, quality improvement and the Sitewide Commitments Management Process. The QA organization, as members of the Total Quality Management Council, enhances this process by sharing information and facilitating the identification of customers and suppliers to the line organizations. The service of the QA organization provides a comprehensive and holistic approach to overall process improvement.

6.3.3 Employee Participation

Employee participation in the assurance of quality and the continuous improvement process is gained through the support of management, specific training on process improvement and process improvement tools, taking ownership of their processes, and actively seeking means to improve those processes. RMRS management participates with K-H and other subcontractors on the Total Quality Management Council for establishing consistent means for employing improvement methods and measuring the effectiveness of improvements. These methods and approaches are promulgated to employees through working groups and participation on Process Development and Improvement Teams (PDITs).

6.3.4 Control of Nonconforming Items and Activities

Items that do not meet established requirements are identified, segregated, controlled, documented, analyzed and corrected in accordance with approved procedures. Activities and process that do not meet established requirements are identified and corrected in accordance with the corrective action process described in Section 6.3.5.

6.3.5 Corrective Action

Conditions adverse to quality are identified and corrected utilizing the Sitewide Commitments Management Process. Correction may include the use of Conduct of Operations procedures, Conduct of Engineering procedures, or nonconforming items procedures. Wastes being submitted for certification that do not meet certification requirements are identified through the NCR process (Ref 6.3.4), and corrected according to specific waste management approved processes. The causes of deficiencies are determined, to the degree appropriate for the condition, using approved processes.

When conditions adverse to quality are identified and require the cessation of operations to prevent continued deficiencies, the stop work process is initiated.

The process will be continued only after appropriate analysis and actions are taken to preclude recurrence of the adverse condition or appropriate controls have been initiated to mitigate potential consequences to an acceptable risk level, pending final resolution. Additionally, products or services deployed under the adverse condition will be identified and corrected as appropriate in accordance with the provisions for nonconformances.

6.3.6 Trend Analysis

The RMRS QA organization is responsible for timely analysis of item and service quality. Information to support trending is gained through audit reports, inspection reports, surveillance reports, corrective actions, self-evaluations, performance indicators, and lessons learned. Trends in deficiencies are analyzed in accordance with procedures.

6.3.7 Reporting

Except as may be required by compliance agreements, specific reporting requirements are based on the content of the RMRS WBS (reference RMRS contract Section H 2) which is in development for FY96. Provisions are included in the RMRS programs and procedures currently utilized, or to be developed, for identification and evaluation of conditions that may be reportable to K-H and DOE. In addition, RMRS implements the requirements and provisions of the Occurrence Reporting Process, by which significant occurrences are reported, categorized, and distributed across the DOE complex to preclude recurrence at other sites.

6.4 Documents and Records

Quality affecting documents, such as work plans (including Integrated Work Control Packages), standard operating procedures, health and safety plans, etc., shall be controlled, where control is constituted by the following criteria:

- documents are prepared in accordance with approved processes
- documents receive the required reviews and approvals
- documents are uniquely identified and their distribution tracked,
- personnel who need the documents to perform work receive the latest approved versions of the document
- superseded or voided documents are removed from service

Essential policies, plans, procedures, decisions, data, and transactions of RMRS will be documented to an appropriate level of detail and receive management, peer, and QA reviews, as appropriate. The objective shall be to maximize the utility of records and data for accomplishment of performance objectives while minimizing the cost of information management and paperwork for RMRS and its lower tier contractors.

Quality records, as defined by approved processes and subordinate plans, including digital data stored electronically, are prepared and managed to ensure that information is retained, retrievable, and legible. Quality records resulting from direct measurements or sampling activities shall be authenticated by the originator and subsequently authenticated by a peer review. Peer review will constitute record approval.

Data that are input from quality records shall be reviewed by someone other than the data entry person, and the hardcopy must be authenticated by the reviewer. Errors on quality records shall be documented and corrected in accordance with approved instructions, and information on the error and correction will be retained for trending purposes. Authentication is also required for corrections. Evidence of authentication is retained as a quality record.

6.4.1 Document Control System

All documents that affect the quality of RMRS operations are controlled. Sitewide document control is the responsibility of Dyncorp, and RMRS will transmit approved documents to Dyncorp for reproduction and controlled distribution. Currently, RMRS controls existing documents in accordance with approved infrastructure procedures. RMRS work and project budget documents are controlled in accordance with the existing Management Control System procedures. RMRS correspondence is currently controlled by instructions developed as an interim measure. The instructions will be formalized into a procedure to consistently control and track RMRS correspondence.

6.4.2 Records Administration

Except for RMRS training records, and as specifically excluded by Contract KH00003NS1A, Section H 4, records relative to the products and services of RMRS will be submitted to Dyncorp for retention through controlled means. Until controls are established, RMRS programs will continue to capture, retain, and maintain records in accordance with existing processes.

6.4.3 Computer Software and Hardware

A sitewide Software Management Program (SMP) has been established to incorporate software quality assurance controls. The application of software quality assurance controls to specific software is dependent on the importance of its use. Uses range from ordering office supplies to monitoring Vital Safety Systems. Software control also considers costs (purchase, development, replacement, and lifetime maintenance), and the consequence of failure, impact to safety, and potential liabilities. Software quality assurance is achieved through the implementation of approved procedures.

6.5 Work Processes

RMRS processes and activities shall be controlled to a degree commensurate with the risks associated with the process or activity. Controlled conditions shall include, as appropriate to the process, the following:

- Documented and approved instructions that control processes and activities
- The use of suitable, approved equipment in a suitable, approved working environment
- Compliance with reference standards, workmanship criteria, quality plans or other requirements
- Monitoring and control of process characteristics
- Maintenance of process equipment
- Competent workers with traceable qualifications

Process qualification and product acceptance criteria will be defined and documented, and will be utilized for determining effectiveness of processes. As processes consistently reflect improvement, in-process inspection will be reduced. Accordingly, when processes exhibit variations beyond specified tolerances, in-process inspection will increase.

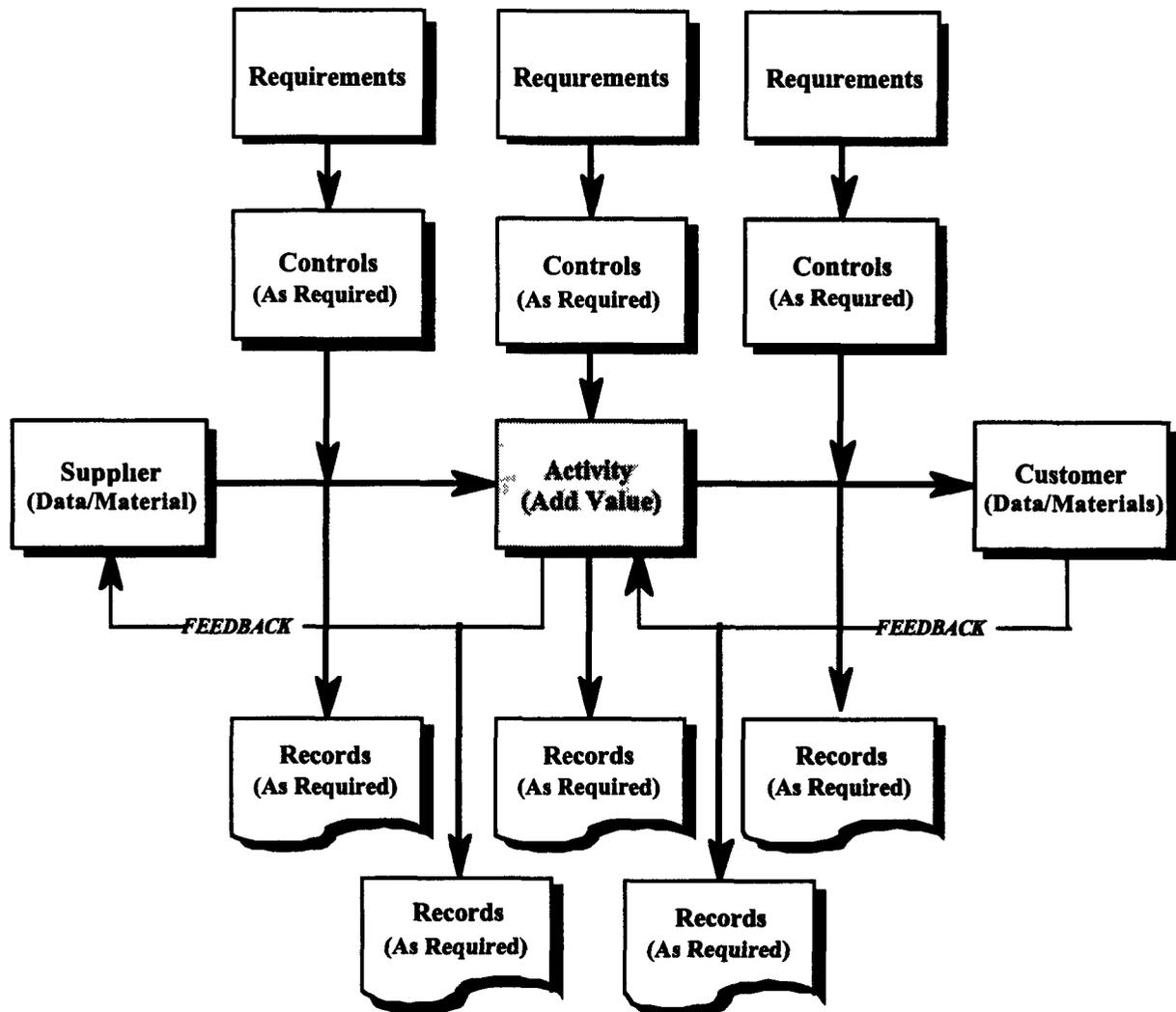
Each organization, through planning and participation on teams, shall document processes and related controls within their respective programs. Figure 1 depicts the application of controls in a process context.

6.5.1 Planning

Work is planned and authorized as described in the Site Management Control System procedures and in accordance with the provisions of the RMRS contract. During the budget call, RMRS identifies specific activities required to be accomplished to meet contract provisions. Activities are planned, scheduled, resource loaded, and documented in work packages that are approved and tracked, and implemented through Project Authorization Directives (PADs). Line managers and work package managers include tasks and resources within work packages to achieve compliance with the customer's QA requirements.

Each RMRS project controlling document shall reference the specific instructions that are applicable to the activities addressed in this document. In the event that an activity described in a controlling document is not adequately addressed by an existing instruction, a new instruction or a temporary or permanent change to an existing instruction shall be prepared, or controls will be specified in the approved project controlling document.

Figure 1



RMRS work processes are currently using instructions, and procedures presented in Appendix B

6.5.2 Instructions and Procedures

Quality affecting activities are prescribed by and performed according to documented instructions, procedures, and drawings. The methods for creating and revising procedures are controlled (Ref 6 4). Specifically, RMRS subscribes to the design control process for the development of instructions and procedures, by which specific inputs and outputs are considered. Instructions provide technical and administrative directions.

The extent of detail is contingent on the complexity and risk of the activity, the experience of the users, and the frequency of performance. Creation and control of drawings is described in the Conduct of Engineering Manual. K-H Engineering provides control and maintenance over RMRS generated design drawings. Maintenance tasks are controlled under the procedures in the Integrated Work Control Program Manual. Work planning and control tasks are controlled under the Management Control System procedures.

6.5.3 Collection and Evaluation of Environmental Data

Activities related to the measurement and data acquisition process include collecting environmental samples, collecting D&D samples and data, and generating analytical and measurement data. In order to ensure that quality data are being generated, quality control is incorporated into the sampling and analytical process through sampling and analysis plans, field sampling plans and the QAPJP. Data, upon which environmental response, D&D, and area/facility/equipment release decisions will be based, must be reduced, validated and reported in a manner that leaves the data defensible. Calculations and models in which data are used to reach decisions must be completed, reviewed, and documented in a manner consistent with this QAPP. Personnel performing calculations must be qualified and must document the calculation in such a manner that a qualified individual could repeat the calculation without consulting the author.

Each ER project controlling document shall include a description of the implementation process and the data quality objectives, as appropriate. The document shall ensure that the activity is conducted in a manner that achieves the project goals while minimizing the cost and impacts on the worker, public health, safety, and the environment, to the extent practicable. For D&D activities this is normally a D&D plan, and for IAG activities it is the applicable work plan or treatability study. Plans in support of IAG activities must conform to this document, the IAG requirements, and the applicable associated Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations and guidance documents. D&D plans shall be consistent with DOE Orders 5400.5 and 5820.2A, and the *DOE Decommissioning Handbook*. D&D plans shall consider the guidance in NUREG/CR-2082, *Monitoring for Compliance with Decommissioning Termination Survey Criteria*, NUREG/CR-5512, *Residual Radioactive Contamination from Decommissioning Technical Basis for Translating Contamination Levels to Annual TEDE*, and NUREG/CR-5849, *Guidance Manual for Conducting Radiological Surveys in Support of License Termination*.

ER field operations and field sampling and measurement activities at the Site shall be conducted in accordance with RMRS approved instructions and plans, which meet the requirements of recognized standards and requirements documents. During the planning of specific projects, RMRS will assess the applicability and needs of the project, and in a graded fashion, apply necessary and sufficient standards and controls.

Data Quality Objectives (DQOs) shall reflect the current guidance established by the EPA (EPA QA/G4), and shall be developed in the planning stage of all environmental data collection efforts. The DQO process is integrated with the development of sampling and analysis plans included in the specific work controlling process. Where data, not generated under the auspices or control of RMRS, is used to support ER decisions, specific verification processes will be employed to assure the data is defensible and appropriate for the application.

In order to ensure that approved instructions and/or plans are being adhered to during field sampling activities, environmental quality inspections and surveillances will be conducted as described in this QAPP. The specific tasks and frequency of field inspections shall be determined based on the uniqueness and complexity of the specific activity, the experience of those completing the activity, the risks involved in completing the activity, and the involvement of other sources of oversight.

6.5.4 Maintenance

RMRS maintenance is planned, implemented, and controlled through the Site work control processes. Work control to support maintenance is initiated by building and/or operations managers who receive a notification of a deficiency through Site processes, or when a request for a modification is received. Maintenance to equipment, systems, structures, and components are controlled to ensure configuration control.

6.5.5 Design, Construction, and Operation of Environmental Technology

The design, construction and operation of environmental technology complies with the requirements of national standard ANSI/ASQC E4-1994. Environmental technology is either procured in accordance with the procurement sections of this QAPP, or designed and built in accordance with the provisions of the COEM, CCCP, and/or IWCP. Operation of the technology follows the work process controls that are typical for the degree of complexity and specifically comply with the requirements and implementation related to procedure development.

6.5.6 Waste Operations

The generation, characterization, treatment, storage, and disposal of wastes are governed by requirements that depend upon the type of waste being generated. These requirements have been established in regulations, DOE orders, the RCRA permit, and the respective disposal site waste acceptance criteria. Procedures and other controls are established to ensure that the generation and handling of wastes meet governing requirements.

Characterization of wastes is performed according to approved instructions either through process knowledge or laboratory analysis. Waste sampling and analysis plans are developed for wastes to be characterized through analysis. Sampling and analysis plans ensure that the quality of the data collected for characterization meets the requirements of specified standards. DQOs are established for measurement data. The radioactive content of wastes is determined through non-destructive assay operations that use calibrated equipment (Ref 6 8 4). Process knowledge on waste streams is maintained through documentation that is formally controlled and revised.

Process control plans are developed for waste generating processes where subsequent inspection can not verify the quality of the product.

Packaging of wastes is controlled through procedures that ensure wastes are properly identified and segregated to allow for certification and shipment to appropriate disposal Sites. Sanitary waste is shipped to the Site landfill. Certain wastes are reviewed for disallowable contents through real time radiography examination. Wastes are stored in controlled areas depending upon the requirements for that type of waste. The inventory of wastes stored is established and maintained through a computerized database. Instructions ensure the status of the hardware and software in the system.

Procedures governing the characterization, storage, treatment, and shipment of wastes result in the creation of records that provide traceability of the wastes. These quality records are controlled and processed in accordance with the provisions of section 6 4 2 and Site records processes.

6.5.7 Transportation and Shipment of Waste

The K-H Traffic Department has programmatic responsibility for the quality and regulatory compliance with respect to transfer and shipping, and transportation of waste materials. The Rocky Flats Transportation Safety Manual which includes the On-Site Transportation Manual and the Off-Site Transportation Manual provide shipping and transfer requirements and instructions. RMRS provides proper packages for onsite and offsite shipments and provides information for the hazardous waste manifest.

6.5.8 Decontamination and Decommissioning

D&D project control documents shall ensure that the activity is conducted in a manner that achieves the project goals while minimizing the cost and impacts on the work, public health and safety, and the environment, to the extent practicable. For D&D activities, the project controlling document is normally a D&D plan.

D&D plans shall be consistent with DOE Orders 5400 5 and 5820 2A, and the *DOE Decommissioning Handbook*. D&D plans shall consider the guidance in NUREG/CR-2082, *Monitoring for Compliance with Decommissioning Termination Survey Criteria*, NUREG/CR-5512, *Residual Radioactive Contamination from Decommissioning Technical Basis for Translating Contamination Levels to Annual TEDE*, and NUREG/CR-5849, *Guidance Manual for Conducting Radiological Surveys in Support of License Termination*.

6.6 Design

Sound engineering and scientific principles and appropriate technical standards shall be incorporated into designs to assure intended performance. The infrastructure programs (Ref Appendix B) provide controls for the design of items and processes. Design work includes incorporation of applicable requirements and design bases, identification and control of design interfaces, and verification or validation of the adequacy of design products by individuals or groups other than those who performed the work. The verification and validation is completed before approval and implementation of the design.

The design control processes are established for the control of design inputs, outputs, verifications, reviews, changes, modifications, and configuration change control. Design control requirements for procured design and engineering services are incorporated into procurement specifications. The design control program provides documented controls that ensure design interfaces between participating and interacting design organizations. Controls include relative responsibilities, reviews, design basis, deliverables, and associated concurrence and approvals.

RMRS shall follow the DQO process for data acquisition and sampling activities as delineated in the latest EPA. Both the EPA and the DOE Office of Environmental Management (1994) have established the DQO process as policy (EPA QA/R-5 and DOE correspondence, 1994, respectively) for determining the types, quality, and quantity of data needed for environmental and waste management decision-making, while optimizing time and cost considerations.

Design control of computerized systems shall be commensurate with the risks associated with the process that the computer system controls. Systems controlling critical health and safety processes shall be verified and validated under simulated working conditions, prior to actual usage. Such systems shall be tested periodically to ensure functionality.

All facility changes result in revisions to applicable design. Design changes and modifications are reviewed, concurred with, and approved by the same organizations, or acceptable alternates, that reviewed, concurred with, and approved the original design.

The Conduct of Engineering Manual (COEM) and Configuration Change Control Program (CCCP) provide controls to ensure that documents and records are maintained to provide evidence of the acceptability of the design and configuration.

Design records are maintained to support the basis and activities of the design process. Design records include design input basis documents, calculations, approved drawings and their revisions, computer software programs, analysis documentation, and prototype testing data. Documents that support the design configuration and the final performance are verified and retained. Design records are controlled in accordance with section 6.4.2, except design drawings are maintained by K-H Engineering (Ref. 6.5.2).

Analyses are conducted to validate designs and ensure that correct input data and assumptions are incorporated into the program. Design analyses verify correct solutions to physical problems are produced within predetermined limits. The Software Management Program requires that design software, and any changes thereto, be documented, concurred with, and approved by qualified technical personnel. The requirements for computer testing are documented in software development plans and procedures.

Final designs, such as documents, drawings, quality records, or computerized data, shall undergo validation through independent reviews. Independent peer reviews are performed and documented by qualified individuals or groups other than those that prepared the original design. The reviewer may be from the same organization as long as the reviewer did not provide input to the original design. The reviewer may be a supervisor, if other design personnel are not available, and if the supervisor did not perform original design calculations. Verification methods include, but are not limited to, design reviews, alternate calculations, and qualification testing. Verifications are not duplicated for multi-use items intended for the same application. The extent of design verifications is based on complexity and importance to safety and reliability. Reviews shall be commensurate with the scale, cost, specialty, and hazards of the item or activity in question. Management approval, in addition to peer and quality reviews of designs, shall be obtained prior to procurement, manufacture, or construction. Peer and quality reviews are conducted and documented through the comment resolution process.

Qualification testing procedures are established as necessary to verify or validate acceptability of design features. These procedures require equipment to be tested under normal and abnormal operating conditions.

Designs related to special processes, in addition to the requirements of this QAPP, receive additional control consideration. Special process, including welding, heat treating, nondestructive examination, chemical decontamination, etc., must be controlled to a more stringent level, since the resulting quality may not be verifiable without destruction or degradation of the product. Special processes, while controlled by the Site work control process, must be identified by the organization originating the project. Controls shall be developed in accordance with section 6.5.2. The process, utilizing the approved controls, will be implemented by individuals specifically qualified for the process, in accordance with section 6.2.

6.7 Procurement of Items and Services

RMRS shall design and implement a procurement and subcontracts system that complies with the appropriate protocols required by the system developed by K-H RMRS, to be consistent with the present procurement system of K-H, employs procurement levels defined in the Site controls for purchased items and services

6.7.1 Procurement Documents

All procurement documents will receive a documented independent quality review, by RMRS, to assure incorporation of appropriate quality assurance requirements, and additional requirements such as 10 CFR 830 120, and health and safety requirements The RMRS QA organization reviews procurement documents to ensure that the requirements for items and services are clearly depicted, including specific performance requirements Procurement documents for hardware are retained and administered by K-H Procurement documents for services, other than normal maintenance agreements for services, are retained and administered by RMRS in accordance with approved procedures

6.7.2 Supplier Selection

All PL-1 procurements will be purchased from suppliers listed in the Site Approved Supplier Listing (ASL), maintained by K-H On-site evaluation of suppliers for consideration of adding them to the ASL is performed by K-H, with input and participation of the requisitioning RMRS organization RMRS also provides specification input for procurements and develops acceptance criteria to support the dedication process

RMRS takes full advantage of third party certifications and other supplier audits through the use of the Supplier Quality Information Group (SQIG)

6.7.3 Acceptance of Items and Services

RMRS employs methods for the acceptance of items and services that include observation of selected operations at vendor facilities, post-installation testing, dedication, certificate of conformance, receiving inspection by Dyncorp, surveillance or audit, and verification of data RMRS, in accordance with approved processes and guidance, selects the acceptance criteria based on the procurement levels identified in 6 7 Items and services not meeting performance requirements are identified and controlled in accordance with section 6 3 4

6.7.4 Fraudulent Material

Any incidence of fraudulent material found at the Site is required to be appropriately dispositioned in accordance with the nonconforming item controls. Additionally, these instances are to be reported through the Occurrence Reporting Process.

6.7.5 Identification and Control of Items

RMRS employs Site control systems for identification, maintenance, and control of items, including consumables. The controls ensure that items are properly labeled, tagged, or marked, and that only appropriate items are used for the application. When physical marking is unachievable, item identification is facilitated through serial number or other traceable means. Site controls ensure that items are identified, handled, stored, transferred, and shipped in a manner that prevents loss, damage, or deterioration.

6.8 Inspection and Acceptance Testing

Items or activities that require inspections and/or acceptance testing will be specified in work-controlling documentation, such as work plans, standard operating procedures, data management plans, etc. Acceptance criteria and any hold points shall be clearly defined. Measurement and test equipment (M&TE) will be accepted or rejected based on calibration information, including unique identification, traceability, accuracy, resolution, and measurement ranges. Calibrations shall be traceable to consensus standards.

Inspection and acceptance test criteria are defined in procurement documents in accordance with approved procedures. Inspections, when performed by RMRS, are designed and controlled in accordance with approved processes.

Source inspection must be coordinated by the requisitioning organization, in concert with the organization that will actually be performing the source inspection. All source inspections must be performed by personnel qualified in accordance with training and qualification processes. A copy of all inspection results and reports must be forwarded to Dyncorp for record keeping purposes.

Oversight and acceptance of services is the responsibility of the requisitioning organization, and must be performed in accordance with approved Site procedures by qualified personnel. Acquisition Guideline for Requisitioning Items and Services - Standing Order 30 provides instructions for procurement planning.

6.8.1 Receiving Inspection

Items received in the warehouse are inspected by Dyncorp in accordance with the applicable procurement specifications and approved operating procedures. Methods include, as appropriate, visual inspection, examination of labeling and markings, and procurement document review. Prior to release for use, acceptance status is indicated and forwarded with the item. Items failing receipt inspection are dispositioned in accordance with approved processes, including those governing nonconforming items (Ref 6 3 4).

6.8.2 Testing

Testing is conducted by RMRS to verify items and processes perform as planned. Testing is planned and implemented in accordance with approved procedures that include provisions for performing the test, item configuration, environmental conditions, instrumentation requirements, personnel qualifications, acceptance criteria parameters, inspection hold points, and documentation requirements of test data for records purposes.

6.8.3 Status Indicators

The status of items is conveyed through various programs and processes and ensure that items are fit for service or have been appropriately controlled to preclude use. The Sitewide Commitments Management Process provides status indicators for programs, while the process for nonconforming products preclude the inadvertent use of hardware that is not acceptable or within prescribed tolerance. The calibration program ensures that measuring and test equipment are calibrated and that the calibration status is clearly indicated. The respective programs contain provisions for tagging, logging, and other visual displays as may be required.

6.8.4 Measuring and Test Equipment

RMRS controls measuring and test equipment used to verify process parameters and verify specification performance during in-process and final inspections. Control is inclusive of calibration, maintenance, and accountability. RMRS employs a system for identifying M&TE.

Measuring and test equipment are calibrated at regular intervals, or when damage is suspected that may result in the M&TE being out of tolerance. The M&TE calibration program, administered and staffed by Dyncorp provides calibration of equipment to standards that are traceable to national standards.

M&TE found to be out of tolerance are tagged *out of service* and segregated to preclude use. Evaluations are conducted and documentation is prepared to validate previous inspections, tests, and the acceptability of items for which the out-of-tolerance M&TE was used.

6.9 Assessment Program

RMRS shall establish and maintain an assessment program and procedures for planning and implementing assessments. Assessments are broadly construed to be inclusive of audits, surveillance, inspections, reviews, evaluations, appraisals, and process monitoring.

Assessments are scheduled based on the risk and QA performance indicators of the activities being conducted. Except for self-evaluations, assessments are conducted by independent RMRS personnel qualified to assess the area being considered. The results of assessments are documented, brought to the attention of appropriate RMRS management, and are tracked to verify development and effective implementation of corrective actions. In accordance with the requirements of DOE Order 5700 6C, the RMRS QA system will be fully assessed on an annual basis.

6.9.1 Integration

RMRS integrates the full scope of assessments into a single plan that encompasses the varying degree of assessment rigor, and takes into account assessments being performed by various stakeholders. The RMRS QA organization, responsible for conducting assessments other than self-assessments, develops an annual plan that ensures the greatest value from assessment activities by utilizing the appropriate assessment format and preventing duplicate assessments.

6.9.2 Monitoring and Surveillance

As previously indicated, the RMRS QA organization consists of personnel who participate at the line level and are matrixed to the line organizations. These personnel conduct monitoring and surveillance activities as a continuous barometer of quality requirement compliance and implementation. Surveillances, a less formal means of assessment, are planned and conducted in accordance with approved instructions. Personnel conducting surveillances are qualified in the areas being surveilled.

6.9.3 Management Assessments

RMRS management shall periodically (annually at a minimum) evaluate the organization to determine the effectiveness of the RMRS QA Program and overall RMRS organization performance. These assessments shall be documented through annual reports, periodic status reports, or other suitable reporting mechanisms, as may be required by the K-H contracting officer.

Line and senior management periodically assess their operations to determine the adherence to the Quality Assurance Program. Improvements or corrections to operations and performance are documented and implemented. The Site Self-Evaluation Program provides the methodology for self-assessments, and the Sitewide Commitments Management Process provides the methodology for documenting findings and implementing corrective actions.

6.9.4 Independent Assessments

Independent assessments, in contrast to management assessments, shall be performed by personnel who are in an RMRS organization separate from the organization/activity under evaluation for the purpose of maximizing objectivity.

Independent assessments shall

- be based on the RMRS QAPP, and other controlling documents as necessary
- evaluate and measure the performance of work, item, and service quality beyond the mere review of documents and records
- act as management advisory functions
- be conducted such that the organization being assessed is the *customer* of the assessment results
- produce useful feedback on RMRS assets and liabilities with respect to the RMRS mission and performance objectives

The ESH&Q organization within RMRS, afforded autonomy and sufficient authority by the President of RMRS, performs assessments to determine the performance and degree of item and service quality achieved through implementation of the RMRS QA Program. These assessments are coordinated and scheduled to avoid duplication of external independent assessments. RMRS assessments may be scheduled by management to determine the adequacy of performance in particular areas of operations prior to evaluations by other organizations.

The K-H organization performs oversight of RMRS activities, and assesses operations to independently determine the status of implementation and effectiveness of the RMRS QA program. The methods for these assessments and the qualifications of the assessors are as described in approved procedures.

Findings are addressed through the Site commitments management process and are evaluated in accordance with cause analysis and lessons learned programs, as required.

7. REFERENCES

The following references are utilized as sources for obtaining appropriate control requirements and should not be inclusively construed as applicable to all RMRS operations. As indicated in the QAPP, RMRS will, during the planning of specific activities, assess and adopt the necessary and sufficient standards.

DOE Order 5700 6C, Quality Assurance, August 21, 1991

DOE-ER-STD-6001-92, Implementation Guide for Quality Assurance Programs for Basic and Applied Research

10 CFR 830 120, Quality Assurance Requirements, May 1994

10 CFR 820, Procedural Rules for DOE Nuclear Activities, August 1993

DOE, 1994 T P Grumbly Memorandum to Distribution, Institutionalizing the Data Quality Objectives Process for EM's Environmental Data Collection Activities, September 7, 1994

EPA, 1994a EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, EPA QA/R-5, Quality Assurance Management Staff

EPA, 1994b Guidance for the data quality objectives process, EPA QA/G-4

EPA, 1994c Guidance for the data quality analysis process, EPA QA/G-9

Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs, ANSI/ASQC E4-1994, January 1994

DOE Order 490, General Environmental Protection Program, DRAFT, March 1995

Implementation Guide for use with DOE Order 490 General Environmental Protection Program, DRAFT, March 1995

NUREG/CR-5849, Manual for Conducting Radiological Surveys in Support of License Termination, DRAFT June 1992

ASTM C1009, Standard Guide for Establishing A Quality Assurance Program for Analytical Chemistry Laboratories Within the Nuclear Industry, 1989

NVO-325, Nevada Test Site (NTS) Defense Waste Acceptance Criteria, Certification, and Transfer Requirements, latest release for low level waste (LLW) processing, handling, and transportation to NTS

Envirocare Material Acceptance Process Manual

WIPP requirements documents (e g Waste Isolation Pilot Plant Manual, DOE/WIPP-069, etc)
for processing, handling, storage, and transportation under DOE 5820 2A

DOE 1324 2A, Records Disposition, latest release

DOE 5400 1, General Environmental Protection Program, latest release for CERCLA
investigations

Rocky Flats Interagency Agreement, Federal Facility Agreement and Consent Order, 1/22/91, for
sampling and analysis for CERCLA and RCRA investigations

SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods (Laboratory
Manual), latest release for waste characterization sampling analysis and statistical modeling

Part IV of the RCRA Part B permit, Resource Conservation and Recovery Act, latest release

10 CFR 71, Subpart H, Quality Assurance, latest release for user's of the TRUPACT-II vessel
and for any other radioactive waste package required to be licensed by the Nuclear Regulatory
Commission (NRC)

DOE/HR-0066, Total Quality Management Implementation Guidelines, December 1993

RMRS Contract with Kaiser-Hill No KH00003NS1A, July 1995

Kaiser-Hill Interim QAP&IP, DRAFT, August 1995

Kaiser-Hill Quality Assurance Program Criteria, DRAFT, August 1995

Kaiser-Hill Quality Assurance Program Description, DRAFT, August 1995

Kaiser-Hill Quality Assurance Program Glossary, DRAFT, August 1995

Kaiser-Hill Quality Assurance Policy, DRAFT, August 1995

Kaiser-Hill Quality Assurance Manual, DRAFT, September 1995

G O'Brien memorandum to distribution, 1 July 1995, Applicability of Site Procedures

1-C40-QAP-02 01, Preparation, Review, and Approval of Quality Assurance Program Plans,

Appendix A - Implementation Tasks

Tasks identified in this appendix will be revised as required upon completion of baselining assessments in support of 10 CFR 830 120. Since the baselining process is currently being conducted, and since the FY96 budget process has not provided budget for the vast majority of these tasks, RMRS will not presently commit to specific completion dates. As budget issues are resolved and baselining confirms the need for completing the implementation tasks, RMRS will revise and provide commitment dates to the tasks.

While appended to the QAPP, the appendix is separately controlled to allow for revisions and updates without re-issuance of the QAPP. The RMRS QA organization is cited with responsibility for maintenance of the appendix, and regularly issues revisions when significant changes occur.

Implementation Task 1: Revise, as required, the RMRS QAPP and this Implementation Plan to include implementation tasks resulting from baselining activities to support 10 CFR 830 120.

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 2: Formalize RMRS QA policy and mission and incorporate to RMRS policy manual when developed.

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 3: As required, all RMRS organizations will develop Letters of Intent to state agreed upon methods for interface and delivery of products and services between K-H and other subcontractor organizations.

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 4: Develop and implement a controlled process of activity definition (consistent with the K-H activity based management program), qualitative risk assessment, and develop process for employing controls that are commensurate with the risk of activities

Responsible (print) _____ (Sign) _____

Description Due Date
Milestones
1)

Implementation Task 5: Develop and implement a RMRS specific QAPjP, based on benchmarking of similar documents within the DOE complex As allowed by revisions to compliance agreements, and in conjunction with K-H, rescind the EG&G Rocky Flats Inc QAPjP and QAPD

Responsible (print) _____ (Sign) _____

Description Due Date
Milestones
1)

Implementation Task 6: Develop and provide initial QA training to RMRS employees

Responsible (print) _____ (Sign) _____

Description Due Date
Milestones
1)

Implementation Task 7: Develop the RMRS training records database

Responsible (print) _____ (Sign) _____

Description Due Date
Milestones
1)

Implementation Task 8: Develop and implement procedures to demonstrate competency of individuals in the RMRS QA Organization

Responsible (print) _____ (Sign) _____

Description Due Date
Milestones
1)

Implementation Task 9: Define item/process improvement procedure for RMRS and recommend changes to the Site level one procedures to initiate changes to reflect current contract arrangements and interfaces

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 10: Develop and implement a single RMRS specific process of controlling nonconforming items and activities that interfaces with Sitewide Commitments Management Process, Control of Nonconformances process, and interfaces with Plant Action Tracking System

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 11: Adopt or write new controls for determining cause of deficiencies, and recommend changes to Site processes

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 12: In cooperation with the K-H Waste Certification Official, revise existing procedures for waste nonconformances to improve efficiency

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 13: develop and implement RMRS specific procedure for stopping work and coordinate with K-H to revise 1-50000-ADM-15 02 to appropriately reflect current responsibilities

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 14: Develop and implement RMRS tracking and trending system for deficiencies, and forward to K-H any recommended changes of the Site system

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 15: Determine and document the responsibilities for maintaining the WSRIC building books and whether existing procedures should be adopted, or new procedures developed

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 16: In conjunction with sitewide systems, develop and implement the RMRS correspondence control system

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 17: Determine procedure applicability under the new contracting arrangement, and identify what RMRS software controls should be applied and how RMRS will interface with the K-H software controls program

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 18: Define and implement process to assure that QA planning is incorporated into the budget call process and integrated into work packages

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 19: Identify and document all RMRS processes and determine if they are under sufficient control Determine ownership of the procedures and schedule for any necessary revisions

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 20: Determine, develop, and implement, as appropriate, a means for creating and controlling instructions that are not procedures, but meet the requirements of process control

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 22: Review Management Control System Procedures for re-write or revision for inclusion of directions for identifying requirements for Data Quality Objectives and activities

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 23: Review COEM, CCCP and IWCP and adopt or design RMRS specific systems to implement appropriate design controls Provide feedback to K-H for consideration toward Site programs

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 24: Participate with K-H in the definition of the procurement process under the new contracting arrangement

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 25: Adopt or develop RMRS specific controls for Control of Purchased Items and Services, and Inspections

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 26: Develop controls for the process of providing Dyncorp with receipt inspection requirements, and processes for nonconformances related to incoming items

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 27: In conjunction with the Site M&TE program, adopt or write specific RMRS controls for Measuring and Test Equipment, and acquisition of calibration services

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 28: Develop and implement a RMRS specific self-evaluation program and develop controls, as required, for incorporation into PATS Provide feedback to management of sitewide systems

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 29: Develop and implement a RMRS specific integrated plan and controls for performing RMRS assessments, establish integrated assessment schedules, and define/document assessor qualifications

Responsible (print) _____ (Sign) _____

	<u>Description</u>	<u>Due Date</u>
Milestones		
	1)	

Implementation Task 30: In cooperation with the K-H Site program, adopt or write a specific RMRS lessons learned process

Responsible *(print)* _____ *(Sign)* _____

	<u>Description</u>	<u>Due Date</u>
Milestones	1)	

Appendix B - RMRS QA Program Implementation Documents

<p>Quality Assurance Program Requirements</p>	<p>Implementation Program & Infrastructure Documents</p>
<p><u>Management Criterion 1</u> - Program</p>	<p>QA Program Policy Statement Contained in QAP</p> <ul style="list-style-type: none"> • 1-D41-HWRM-22, Interaction with Environmental Regulatory Agencies and Enforcement Inspectors • RMRS Contract KH00003NS1A <p>ER</p> <ul style="list-style-type: none"> • 2-J76-ER-ADM-08 05, Contract Compliance Screening
<p><u>Management Criterion 2</u> - Personnel Training and Qualification</p>	<p>Training Program</p> <ul style="list-style-type: none"> • 1-1000-TUM, Training User's Manual <p>ER Training</p> <ul style="list-style-type: none"> • 2-F94-ER-ADM-01 01, Training • 3-21000-ADM-02 02, Personnel Qualification
<p><u>Management Criterion 3</u> - Quality Improvement</p>	<p>Sitewide Compliance Management Program</p> <ul style="list-style-type: none"> • 1-P04-SCMP-16 00, Sitewide Commitments Management Process <p>Self-Evaluation Program</p> <ul style="list-style-type: none"> • 1-11000-ADM-16 10, Self-Evaluation Program <p>Cause Analysis Program</p> <ul style="list-style-type: none"> • 1-11000-ADM-16 03, Cause Analysis <p>Lessons Learned Program</p> <ul style="list-style-type: none"> • 1-C78-ADM-16 05, Lessons Learned Process <p>Miscellaneous Infrastructure Documents</p> <ul style="list-style-type: none"> • 1-A65-ADM-15 01, Control of Nonconforming Items • 1-D59-TQM-20 01, Quality Improvement Process • 1-D97-ADM-16 01, Occurrence Reporting Process • 1-E93-ADM-16 18, Performance Indication & Trend Analysis • 1-Q05-ADM-02 26, Standards Identification, Assessment, and Noncompliance • 1-50000-ADM-15 02, Stop Work Action <p>ER</p> <ul style="list-style-type: none"> • 3-21000-ADM-15 01, Control of Nonconforming Items and Activities • 3-21000-ADM-16 01, Corrective Action • 2-F73-ER-ADM-21 01, ERP Commitment Tracking
<p><u>Management Criterion 4</u> - Documents and Records</p>	<p>Document Control Program</p> <ul style="list-style-type: none"> • 1-77000-DC-001, Document Control Program • 1-I70-DMR-001, Change Process for Building Books • 2-C48-EWM-PPG-004, E&WM Review and Concurrence of RFP Docs <p>Plant Procedures Program</p> <ul style="list-style-type: none"> • 1-A01-PROC DEV-400, Procedure Process • 1-A02-PPG-003, Procedure Writing • 1-A03-PPG-004, Procedure Edit, Review, and Comment <p>Records Management Program</p> <ul style="list-style-type: none"> • 1-77000-RM-001, Records Management Guidance for Records Sources <p>Configuration Change Control Program/Conduct of Engineering Manual</p> <ul style="list-style-type: none"> • Conduct of Engineering Manual • 1-90953-CCCP, Configuration Change Control Program <p>Integrated Work Control Program</p> <ul style="list-style-type: none"> • 1-74000-IWCP, Integrated Work Control Program Manual

Quality Assurance Program Requirements	Implementation Program & Infrastructure Documents
<p>Management <u>Criterion 4</u> - Documents and Records - continued</p>	<p>ER</p> <ul style="list-style-type: none"> • 2-EO2-ER-ADM-05 05, Document Review • 2-EO4-ER-ADM-05 07, ERPD Preparation and Use of Document Modification Requests • 3-21000-ADM-05 08, Forms Control • 2-G01-ER-ADM-06 01, Document Control • 2-N93-ER-ADM-06 04, Map Control • 2-G18-ER-ADM-17 01, Records Capture and Transmittal • 2-S65-ER-ADM-17 02, Administrative Record Document Identification and Transmittal • 2-N96-ER-ADM-17 09, Records Identification, Preliminary Preparation, and Creation
<p>Performance <u>Criterion 5</u> - Work Processes</p>	<p>Management Controls</p> <ul style="list-style-type: none"> • 1-D55-ADM-02 37, Activity Control Envelope Development • 1-H24-ADM-10 01, Startup and Restart of Nuclear Facilities • 1-H48-HR-001, Management Turnover • 1-P04-SCMP-16 00, Sitewide Commitments Management Process • 1-Q05-ADM-02 26, Standards Identification, Assessment, and Noncompliance <p>Processes</p> <ul style="list-style-type: none"> • 1-11000-ADM-16 10, Self-Evaluation Program • 1-40ADM-MCS-1001, Management Control System • 1-40ADM-MCS-1002, Work Package Development & Documentation • 1-40ADM-MCS-1003, Work Breakdown Structure/Baseline Change Control • 1-40ADM-MCS-1004, Work Authorization & Suspension <p>Integrated Work Control Program</p> <ul style="list-style-type: none"> • 1-74000-IWCP, Integrated Work Control Program Manual <p>Plant Procedures Program</p> <ul style="list-style-type: none"> • 1-A01-PROC DEV-400, Procedure Process • 1-A02-PPG-003, Procedure Writing • 1-A03-PPG-004, Procedure Edit, Review, and Comment <p>Operations Programs</p> <ul style="list-style-type: none"> • 1-31000-COOP, Conduct of Operations Manual • Conduct of Engineering Manual <p>ER</p> <ul style="list-style-type: none"> • EMD Operating Procedures (SOPs) Vol I through VII • 3-21000-ADM-03 04, Control of QAA Development • 2-E95-ER-ADM-05 01, Procedure Development • 3-21000-ADM-05 03, RFI/RI Work Plan Development • 2-G06-ER-ADM-05 10, Control of Scientific Notebook Systems • 3-21000-ADM-05 11, Preparation of Instructions • 2-G32-ER-ADM-08 02, Evaluation of ERM Data for Useability in Final Reports • 2-J77-ER-ADM-08 03, Graded Validation • 2-G21-ER-ADM-18 03, Readiness Assessments • 3-21000-ADM-AQD 08, Preparation of EPA Form R <p>Waste Management Program</p> <ul style="list-style-type: none"> • 1-10000-EWQA, Environmental Waste Quality Assurance • 1-I70-DMR-001, Change Process for Building Books • 1-10000-HWRM, Hazardous Waste Requirements • Environmental Protection Management Plan • Rocky Flats Plant RCRA Part B Permit and Compliance Documents • 1-I15-SAN-001, Sanitary Waste Management • 1-B27-REC-001, Rocky Flats Recycling • 1-23000-WMM-001, Misc Waste Materials Management • 1-M60-WPC-001, Waste Process Control • 1-G35-WMM-001, Excess Chemical Management • 1-C88-WP-1027-NONRAD, Nonradioactive Waste Packaging • 1-C80-WO1102-WRT, Waste/Residue Traveler Instructions • 1-M12-WO-4034, Radioactive Waste Packaging Requirements

<p>Quality Assurance Program Requirements</p>	<p>Implementation Program & Infrastructure Documents</p>
<p><u>Performance</u> <u>Criterion 5 - Work Processes - continued</u></p>	<ul style="list-style-type: none"> • 4-D99-WO-1100, Solid Radioactive Waste Packaging Inside the PA • 4-C77-WO-1101, Solid Radioactive Waste Packaging Outside the PA • 1-I34-WO1103-NRWOL, Non-Routine Waste Origination Log Instructions • 1-10000-WRM, 4031, Handling Non-Radioactive/Non-RCRA Regulated Classified Shapes/Tooling for Recycle • 1-Q11-WO-1221, Controls for Movement of Waste Containers • Low Level Waste Management Plan • TRU Waste Management Plan
<p><u>Performance</u> <u>Criterion 6 - Design Control</u></p>	<p><u>Configuration Change Control Program/Conduct of Engineering Manual</u></p> <ul style="list-style-type: none"> • Conduct of Engineering Manual • 1-45000-CSM-001, Computer Software Management • 1-90953-CCCP, Configuration Change Control Program <p><u>Miscellaneous Infrastructure Documents</u></p> <ul style="list-style-type: none"> • 1-C40-QAP-02 01, Preparation, Review, and Approval of Quality Assurance Plans • Nuclear Materials Safeguards Manual • 1-C10-NSM-04 03, Safety Evaluation Screen • 1-C11-NSM-04 05, Unreviewed Safety Question Determination • 1-E33-IWCP-3, Maintenance Work Package Planning Process
<p><u>Performance</u> <u>Criterion 7 - Procurement</u></p>	<p><u>Procurement Program</u></p> <ul style="list-style-type: none"> • Standing Order 30, Acquisition Guidelines for Requisitioning Commodities and Services • 1-50000-ADM-04 01, Control of Purchased Items and Services <p><u>Miscellaneous Infrastructure Documents</u></p> <ul style="list-style-type: none"> • 1-B42-ADM-QP-4A, Procurement of Weapon Materials • 1-90953-CCCP, Configuration Change Control Program • 2-C93-COEM-DES-273, Engineering Standards for Procurement <p><u>ER</u></p> <ul style="list-style-type: none"> • 3-21000-ADM-04 01, Procurement Document Control
<p><u>Performance</u> <u>Criterion 8 - Inspection & Acceptance Testing</u></p>	<p><u>Configuration Change Control Program/Conduct of Engineering Manual</u></p> <ul style="list-style-type: none"> • Conduct of Engineering Manual • 1-90953-CCCP, Configuration Change Control Program <p><u>Integrated Work Control Program</u></p> <ul style="list-style-type: none"> • 1-E33-IWCP-3, Maintenance Work Package Planning Process <p><u>Control of Measuring and Test Equipment Program</u></p> <ul style="list-style-type: none"> • 1-I97-ADM-12 01, Control of Measuring and Test Equipment <p><u>Procurement Program</u></p> <ul style="list-style-type: none"> • 1-50000-ADM-04 01, Control of Purchased Items and Services <p><u>ER</u></p> <ul style="list-style-type: none"> • 3-21000-ADM-08 01, Control and Identification of Items, Samples, and Data • 3-21000-ADM-10 01, Inspections • 3-21000-ADM-12 01, Control of Measuring and Test Equipment
<p>Quality Assurance Program Requirements <u>Criterion 9 - Management Assessment</u></p>	<p><u>Self-Evaluation Program</u></p> <ul style="list-style-type: none"> • 1-11000-ADM-16 10, Self-Evaluation Program <p><u>Sitewide Compliance Management Program</u></p> <ul style="list-style-type: none"> • 1-P04-SCMP-16 00, Sitewide Commitments Management Process <p><u>Compliance Management Program</u></p> <ul style="list-style-type: none"> • 1-Q05-ADM-02 26, Standards Identification, Assessment, and Noncompliance <p><u>Miscellaneous Infrastructure Documents</u></p> <ul style="list-style-type: none"> • 1-H24-ADM-10 01, Startup and Restart of Nuclear Facilities • 1-31000-COOP-002, Internal Surveillance Program <p><u>ER</u></p> <ul style="list-style-type: none"> • 2-G23-ER-ADM-18 05, Environmental Restoration Management Self Evaluation

Quality Assurance Program Requirements	Implementation Program & Infrastructure Documents
	<ul style="list-style-type: none">• 3-21000-ADM-18 02, Surveillance Activities
Assessment Criterion 10 - Independent Assessment	Assessment Program <ul style="list-style-type: none">• 1-G64-ADM-21 01, Quality Assurance Surveillance• 1-H24-ADM-10 01, Startup and Restart of Nuclear Facilities• 2-B52-ADM-02 01, Independent Assessment Miscellaneous Infrastructure Documents <ul style="list-style-type: none">• QP-12A, Internal Quality Audit Procedure• 1-52000-ADM-02 01, Operations Review Committee Requirements

Appendix C - RMRS Organization

