

CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 1 of 9

Title

AP-009 WORK AUTHORIZATION AND CONTROL

EFFECTIVITY AND APPROVAL

Revision 0 of this procedure became effective on 11/20/89. This procedure consists of the pages and changes listed below.

<u>Page No.</u>	<u>Change</u>	<u>Date Effective</u>
1-9	0	11/20/89

SUPERSEDED

By AP-009 - Rev. 1

Supersedes Procedure No. None

Approvals

Written By

Date

Cognizant Director

Date

[Signature]

11/20/89

Allen R. Whiting

11/20/89

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 2 of 9

AP-009 WORK AUTHORIZATION AND CONTROL

1. **INTRODUCTION**

Work Authorization and Control is the procedure used to authorize, monitor and provide a basis for controlling costs, determining the rate of progress (schedule) and evaluating a project's performance (scope of work). It is a system which provides information that can be used by managers to make the most efficient use of time and money and which can support management decisions and assessments of options. This procedure will be coordinated with the Nuclear Regulatory Commission (NRC) work authorization and control procedures to the extent practicable.

2. **BACKGROUND**

The Center for Nuclear Waste Regulatory Analyses (CNWRA) contract is unique in many ways. It requires a combination of technical, scientific and regulatory resources to provide the NRC with a center of excellence in support of its high-level waste (HLW) regulatory and management responsibilities. Furthermore, it is required that CNWRA be able to respond quickly and effectively to both planned and unplanned tasks. A large number of concurrent activities, numerous CNWRA staff members and support staff from other organizations will be needed to respond to these tasks which will require monitoring to ensure appropriate interfaces among tasks, individuals and organizations. These activities must be conducted, often without complete information, to achieve all the objectives of the program. Activities will be subject to changes by forces external to the program and will be subject to internal and external integration review. Documentation of all activities and their associated costs and schedules is required in sufficient detail to support an audit. The ability to properly control work is determined by who does what, when it is done, and the potential impact on other work.

This administrative procedure defines requirements to establish and maintain work authorization and control. It requires integration among organization, work plan (schedule), manpower (resource) plan, budget, project control and change control. To this end, the cost, schedule, and control aspects are implemented using the IBM Application System (AS). Work scope will be controlled by assessing usefulness to the NRC regulatory program analysis [Program Architecture (PA)].

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 3 of 9

3. DEFINITIONS

3.1 Class 2 Modifications

Modification(s) requiring no change of schedule, cost, or scope of work which may be agreed to by the respective Center and NRC Element Managers. Either the Center or NRC may issue a request for contract modification(s) identifying and describing the modification(s) and stating it will have "No Impact" on the existing program.

3.2 Class 1 Modifications

Modification(s) of existing work requiring change of schedule, cost or scope of work which will require submission to and approval by the CCB and NRC. In this case, modification(s) evaluation will follow the procedure identified in 6.1.

4. PURPOSE AND SCOPE

This administrative procedure defines the guidance required to establish work authorization and control procedures for managers.

Responsibilities apply specifically to this procedure, are derived from, and augment, the organizational responsibilities established in the Center Quality Assurance Manual (CQAM), the Systems Engineering Management Plan (SEMP), the Center Management Plan (CMP), Operations Plans and Project Plans. Other administrative procedures will be established that will augment and interface with these work authorization and control procedures. Procedures for the Change Control Board (CCB), as well as technical operating procedures and quality assurance (QA) procedures, will interface with this procedure. When developed, interaction between the Center and NRC will modify some of the control procedures and responsibilities under a teaming concept. The establishment of cost and scheduling records will be used as guidelines of actual performance when new work is scheduled and costed.

This work authorization and control procedure will:

- o Establish a cost, schedule and scope of work control system, based on budget and resource limitations, including the data developed and required for Program Architecture, as applied to the NRC regulatory program;

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 4 of 9

- o Establish procedures for integrating new projects, modifying existing projects, and orderly closing out of completed projects;
- o Identify problems related to cost, schedule, and scope for resolution by management in a timely manner;
- o Establish a method of controlled response to the changing needs and requirements of NRC;
- o Establish requirements for preparation and maintenance of records and reports.

5. WORK AUTHORIZATION AND CONTROL RESPONSIBILITY

- 5.1 Responsibility is paired with authority and accountability. This procedure delegates the authority and defines the accountability for personnel to perform work authorization and control procedures. Fundamental organization responsibilities are described in the CMP, SEMP, and CQAM. The roles of Element Managers and Principal Investigators regarding specific responsibilities in the area of work authorization and control are described in both the Operations Plans and the Project Plans.
- 5.2 The Director of Systems Engineering and Integration (SE&I) is responsible for promulgation, revision, and compliance evaluation with the procedure. This Director provides recommendations to the Technical Director on cost, scope of work and schedule impacts, and acts as head of the CCB. Advice to the Technical Director and President of impending cost and schedule changes is given so that time extensions or modifications may be obtained from NRC in a timely and contractually correct manner.
- 5.3 The Director of Information Management System is responsible for the operation and maintenance of the IBM Application System (AS), and for assisting NRC in establishing interfaces with the AS. The Director coordinates and oversees establishment, preservation and dissemination of output records from the computer system. In addition, he is accountable for operation and continual development of the system and is responsible for providing periodic status reports from the AS.
- 5.4 Any staff member may recommend the identification/development of a new task or modification of an existing one to the cognizant Element Manager.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 0

ADMINISTRATIVE PROCEDURE

Page 5 of 9

- 5.5 The Director of Administration maintains cost records (estimated versus actual) and cost reporting systems in addition to preparing invoices. Implementation of project management documentation, developing and maintaining a work breakdown structure, and sustaining cost account and resource codes for the system are all the responsibility of this Director. He will act as CNWRA representative to the SwRI Contracts Office.
- 5.6 The Director of Quality Assurance identifies the need for QA on project work and reviews budget and schedule impacts. Additionally, he monitors implementation of the Decision Support System for key decision points on selected tasks and acts as a member of the CCB.
- 5.7 The Manager of Waste Systems Engineering and Integration (WSE&I) has the responsibility for day-to-day implementation of the work control procedure. Advice and decision-making regarding relevance of work input to the Program Architecture (or a potential work output) are part of this Manager's responsibilities, as is providing the Director of SE&I with value of work trade-off analyses. The Manager of WSE&I is a member of the CCB.
- 5.8 Element Managers/Principal Investigators are charged with day-to-day implementation of cost/schedule and scope of work. They provide timely input to the Manager of WSE&I regarding possible Program Architecture and changes in work demands. They shall be responsible for ensuring the AS database is correctly updated as directed by the Manager of WSE&I. Element Managers are responsible for the maintenance and update of project records. Principal Investigators will establish, maintain and keep the project records while the project is active.
- 5.9 The Technical Director will review and approve all work and act to adjudicate work priorities and resource assignments that are unresolved by the Director of SE&I.
- 5.10 The Director of the Washington Office will review new work from a total programmatic perspective and provide advice to the Technical Director and President. He is a member of the CCB.

6. PROCEDURES

The following detailed procedures apply to establishment, authorization, evaluation, documentation, modification and completion

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 6 of 9

of work. The annual development of operations plans and the work prescribed therein becomes part of the contract, is considered new work, and will require NRC approval (Class 1).

6.1 Review and Authorization of New Work

New work may be recommended by any individual at the Center via submitting a work task for approval to the cognizant Element Manager who, after appropriate review, will bring such requests to the CCB. As a minimum, new work will be developed according to cost, schedule, scope of work and resource impact information derived from the AS. New work requests or responses to the Program Element Plan will be submitted in the following format (note that annual Operations Plans and updates are considered new work):

- o Objective
- o Technical Approach
- o Justification
- o Task Description
- o Milestones/Deliverables
- o Required Expertise
- o Estimate of Resource Requirements and Availability
(information derived from AS)

The CCB will review all work requests using the following criteria:

- o Impact on Cost/Schedule
- o Resource Availability
- o Relevance and Importance of Task to the NRC Program and Projected Plans (Program Architecture Context)
- o Redundancy of the Task
- o Integration Required with Other Elements

Decision of the CCB will be in writing and signed by all members, in accordance with the CCB procedure. Upon approval of the CCB, the new work will be submitted to the Technical Director for final approval prior to submission to the NRC Contract Officer.

NRC may also initiate new work. Work requested by NRC will follow the same review and authorization procedure regarding Center-originated tasks.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 7 of 9

6.2 Authorization of Approved Work

By definition, all Class 1 work requires the NRC Contract Office to issue a directive to initiate work. This will include the annual approved Operations Plans and any Class 1 modifications to these plans. New work or modifications of existing work will require approval by the CCB and the Technical Director.

6.3 Modification(s) of Existing Work

Prior to its completion, work currently assigned may require modification(s) based on additional knowledge gained, or, a necessary change in program direction.

Modification(s) of existing work as defined in 3.0 may originate at either the Center or NRC. Approval and authorization of modified Class 1 work will be treated as new work.

6.4 Evaluation of Work

Prior to submission of work for authorization, originators of new or modified work will ascertain the value of the addition or change to the overall NRC program. A specific evaluation must be performed concerning whether such addition or change will improve the input for, or provide an enhanced output of information from, the NRC regulatory program analysis (Program Architecture). For submittal to the CCB and NRC, the results of this evaluation will be indicated.

The second level of evaluation for Class 1 work will be the formal process by an appointed CCB. (See 5.1 and 6.1)

The final authorization and implementation will be the approval of the Technical Director. If the CCB cannot agree on a recommendation or there is disagreement between the CCB and the Technical Director, the President of the Center will retain the final authority. If the work was originated by NRC and there is a disagreement between the Center and NRC, the adjudication mechanism specified in the Contract will be initiated. (Chapter 19 of CQAM applies to designated deliverables.)

6.5 Conduct of Work

New work or modified work must have official approval of the NRC Contract Office. The NRC Contract Office may provide verbal authorization, but this authorization must be confirmed in

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 0

Page 8 of 9

writing. No work is to be accomplished until approval has been granted. After NRC has reviewed and approved the new or modified work task submitted by the Center, the Director of Administration will assign the WBS and account number to the new task and note changes in cost or schedules.

Modification(s) to the AS database will be incorporated by the Director of IMS, and a network and GANNT chart will be produced. Work will be conducted in accordance with the approved task under the provisions of the CQAM and the current Operations Plans or Project Plan directions.

Element Managers are responsible for providing information necessary to establish cost, schedule and resource need requirements within the AS. Upon completion of major or intermediate milestones, Element Managers will insure the AS database is revised to reflect completion of such interim work.

6.6 Reports

Specific periodic reporting requirements are provided in the contract. The Operations Plan and its modifications are contract documents and provide guidance on specific task reports.

The Director of Administration will provide a SwRI Form 01 to the SwRI Business Office when budget changes occur on a project element. Cognizant Element Managers will prepare the Form 01 for the Director of Administration.

The status report on the AS is the responsibility of the Director of IMS. This report is an update of resources, costs and schedules, based on data provided and approved by the Element Managers.

6.7 Records and Terminations

Work performed by CNWRA must be defensible in adjudicatory hearings. To ensure this, project record books will be maintained for all activities that lead to deliverables. Project records may be kept in three-ring, loose-leaf binders, or in file folders, and will provide the following information: (Records of major documents and key interim documents will be maintained on electronic disk, suitable for entry into an electronic file.)

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 0

ADMINISTRATIVE PROCEDURE

Page 9 of 9

- o Description of task (from contract);
- o Record of contract modifications;
- o CCB reviews;
- o Data collected in accordance with CQAM;
- o Decision information such as correspondence and telecons which were used to support CQAM Chapter 19;
- o Log of significant events/meeting minutes;
- o Copy of deliverables and appropriate drafts;
- o List of references used in conducting the project;
- o Anything that may be used to defend the product in a adjudicatory hearing;
- o Date of project termination and reason for termination, if not scheduled;
- o Remarks by Principal Investigator/Element Manager.

Termination of a task will be accomplished by a directive from NRC to terminate the task prior to completion. Information developed by that date will be recorded in the project record book and filed for future reference. Normal termination of a task will occur upon acceptance by NRC of the agreed upon deliverable. The project record book will then be closed and filed for future reference.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 1

ADMINISTRATIVE PROCEDURE

Page 1 of 6

Title

AP-009 WORK AUTHORIZATION AND CONTROL

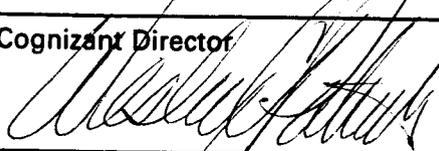
EFFECTIVITY AND APPROVAL

Revision 1 of this procedure became effective on 10/14/91. This procedure consists of the pages and changes listed below.

<u>Page No.</u>	<u>Change</u>	<u>Date Effective</u>
1-6	0	10/14/91

Supersedes Procedure No. AP-009 Rev. 0, Chg. 0

Approvals

Written By	Date	Cognizant Director	Date
	<u>10/14/91</u>		<u>10/14/91</u>

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 1

Page 2 of 6

AP-009 WORK AUTHORIZATION AND CONTROL

1. INTRODUCTION

This procedure is used for soliciting and/or accepting new or modified work scope, providing a basis for controlling element/project costs and determining the schedule for such work scope. It is a procedure which will assist the Center for Nuclear Waste Regulatory Analyses (Center) in making the most efficient use of labor and capital resources and supporting Center management assessments and decisions relative to allocation of such resources.

2. BACKGROUND

The Center requires the coordination of technical, scientific, regulatory and materiel resources to provide the Nuclear Regulatory Commission (NRC) with work products (deliverables) consistent with the efficient utilization of such resources identified in NRC approved Operations/Project Plans pursuant to the Center's support of the NRC's High-Level Waste (HLW) regulatory and management responsibilities. Documentation of all activities and their associated costs and schedules is necessary to provide sufficient detail for any audit. The ability to properly monitor the authorization and control of Center work is determined by knowledge of which resources are applied, the timeliness of their employment, and their potential impact on existing and/or anticipated work. The cost, schedule, and control aspects of this procedure will be facilitated by the application of the IBM Application System (AS) software package, and work scope will be constrained by its relationship to the Systematic Regulatory Analysis (SRA) process.

3. DEFINITIONS

The following classes of modifications are covered by this administrative procedure.

3.1 Class 1 Modifications

Any modification(s) of existing work demanding change(s) of cost, schedule or work scope which may be effected after mutual consent of the cognizant Program Element Manager (PEM) and Center Element Manager (EM), with approval of the Technical Director (TD) and subsequent submission of such modification(s) by the Center Director of Administration (DA), via the NRC CNWRA Deputy Program Manager (DPM) to the NRC Contracting Officer (CO) and receipt of formal NRC approval.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

ADMINISTRATIVE PROCEDURE

Proc. AP-009

Revision 1

Page 3 of 6

3.2 Class 2 Modifications

Any modification(s), essentially administrative in nature, requiring no change in cost, schedule or work scope which may be implemented by mutual consent of the cognizant NRC PEM and EM with acknowledgment by the DPM, the TD and the DA.

4. PURPOSE AND SCOPE

This work authorization and control procedure:

- Introduces a cost, schedule and work scope authorization and control system for new and existing Elements/Projects, based on current budget and resource availability and constraints;
- Installs procedures for introducing new Elements/Projects and modifying existing Elements/Projects;
- Includes a basis to identify problems relative to an Element's and/or Project's cost, schedule and work scope for timely resolution by mutual consent of NRC and Center management; and
- Initiates a method of controlled response to the changing needs and demands of the NRC.

5. RESPONSIBILITIES

Responsibility is paired with authority and accountability. This procedure describes the delegation of authority and defines the documentation of accountability for cognizant Center staff responsible for executing work authorization and control practices.

- 5.1** Element Managers, in cooperation with cognizant Principal Investigators (PI), are responsible for the initiation of the appropriate documentation for and implementation of contractually and/or procedurally approved new or modifications to existing work scope, and they will make all necessary updates to project data and/or records. These staff will coordinate with the TD, the cognizant Information Management Systems (IMS) and/or Administration staff members to effect such new work or modification to existing work scope.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 1

ADMINISTRATIVE PROCEDURE

Page 4 of 6

- 5.2 Element Managers, after coordination of work requirements with the cognizant NRC PEM, will make formal requests for new work as well as any changes to existing work via the TD to the DA. These Managers will ensure the efficient execution of any new or modified work scope that is informally or formally approved by the NRC, as may be appropriate.
- 5.3 The Technical Director (TD) will be responsible for the review and approval of all requests from EMs for new or modified work scope, and he will be ultimately responsible for the efficient implementation of such work scope, after either informal or formal approval by the NRC. He will utilize the Deputy Technical Director for Systems Engineering and Integration (DSE&I) to establish and administer a programmatic baseline, as well as policies and procedures relative to the integration of new and modified work scope as they affect existing Element/Project/Task activities. The DSE&I will advise the TD on the projected impact of this work scope on existing Elements/Projects/Tasks and may assist the EMs in preparation of any impact assessment.
- 5.4 The Director of Administration (DA) will act as the liaison with the NRC CO who will provide formal approval of any new or modified work scope, as appropriate. The DA, either directly or through the Contracts Department of Southwest Research Institute (SwRI) will convey to this CO all necessary materials in connection with the solicitation of such formal approval. Any change resulting in a modification to the current version of NRC Contract No. 02-88-005 will require the execution by the SwRI Contracts Department of such modifications pursuant to that contract. Moreover, the DA will coordinate with all cognizant Center staff the presentation of requisite fiscal and/or AS-related information.
- 5.5 The Director of Quality Assurance (DQA) is responsible for inclusion of any QA requirements to a new or modified work scope, as may be contractually or procedurally required.

6. **PROCEDURES**

The following detailed procedures apply to establishment, authorization, evaluation, documentation and modification of work. By definition, only Class 1 Modifications require the execution of the formal solicitation and approval process both at the Center and the NRC. Class 2 Modifications will be accomplished by interaction between PEMs and EMs, with appropriate notification of and coordination with, as appropriate, the DPM, DA, TD, and DSE&I.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 1

Page 5 of 6

ADMINISTRATIVE PROCEDURE

- 6.1 Element Managers, in cooperation with cognizant PIs, as appropriate, shall introduce requests for new or modified work scope to the TD. This will be accomplished after consultation with the cognizant NRC staff. Such requests, as a minimum, will contain: a) the scope of work, b) its impact on cost, proposed schedule and an AS-assisted resource utilization analysis in sufficient detail for the TD to assess its impact on the existing and proposed work for the Center, c) the relevance and importance of new or modified Element/Project/- Task work to the NRC HLW program, via the application of SRA and projected plans, d) the redundancy and/or integration of the Element/Project/Task to those existing in the current operations/- project plans, and e) the potential for funding by the cognizant offices of the NRC.

The EM, in consultation with both the DSE&I and the DA, shall ensure that all requests contain the above stated information regardless of the origin for any new or modified work scope. In addition, the EM will secure: a) the total Element/Project/Task cost to date (estimate versus actual), b) the labor resource utilization to date (estimate versus actual for both Center and SwRI labor), c) the percent of Element/Project/Task complete to date (estimate by EM of actual progress relative to that estimated in the operations/project plan utilizing the Commitment Control Log and/or Gantt charts), and d) an estimate to complete and the projected impact on the Element/Project/Center in both dollars and time.

The EM shall identify the Element/Project Work Breakdown Structure (WBS) number and Activity number in making this request.

EMs shall not authorize commencement of any new or modified work scope, except for that currently approved by the NRC, until advised by the TD.

- 6.2 The Technical Director, in consultation with the cognizant EM, shall make an impact assessment of any desired new or modified work scope on aggregate Center work. The TD will review all provided technical, AS-assisted resource utilization and fiscal data, and may request additional information to facilitate a thorough appraisal of the impact that any such new or modified work scope may have on existing and proposed Center work.

After this assessment is completed, the TD will make a recommendation to and assist the DA in presenting a formal request to the CO for approval of such new or modified work scope. Upon receipt of CO's formal approval, the TD will so advise the cognizant EM who will authorize the conduct of this new or modified work scope.

**CENTER FOR NUCLEAR WASTE
REGULATORY ANALYSES**

Proc. AP-009

Revision 1

Page 6 of 6

ADMINISTRATIVE PROCEDURE

- 6.3 The Director of Administration, in consultation with the TD, shall forward a formal request for new or modified work scope to the CO for review and action. The DA will ensure that such request contains the necessary technical and fiscal data and/or information conducive to a timely review and approval of this request. Further, the DA shall provide for the revision(s), as appropriate, to the AS-assisted resource utilization, fiscal, and any other relevant project management data.

The DA shall maintain all records concerning the formal solicitation and approval of new or modified work scope, and will coordinate the development and presentation of requisite reports not already available to both the Center and the NRC.

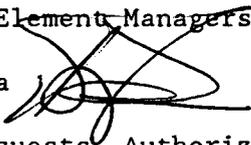
- 6.4 The Director of Quality Assurance, in cooperation with the TD and the DA, will ensure that all documentation pursuant to the formal solicitation and approval of new or modified work scope has been prepared in accordance with all applicable procedures.

7. **RECORDS**

Contractual documentation associated with the implementation of any new or modified Center work scope shall be retained in the project files at the Center and by the SwRI Contracts for a period of six (6) years, as approved by all cognizant audit agencies and its current independent audit firm.

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

M E M O R A N D U M

TO: Directors and Element Managers October 14, 1991
FROM: Henry F. Garcia 
SUBJECT: Center Work Requests, Authorization, and Control (AP-009)

Attached is a copy of Administrative Procedure AP-009 relative to the execution of new or modified Center work scope. As stated, this procedure is effective today, and its implementation will begin immediately.

Please pay particular attention to the responsibilities of Element Managers in response to any requests for changes in Center work scope. Deanna Bump, and/or I can assist you in answering questions relative to the source for the data listed in the attached procedure. In addition, Pat Mackin will help you make any programmatically-relevant review(s) and/or assessments as described in this procedure. We should provide Wes Patrick with a complete set of information concerning any proposed change(s).

This procedure is intended to simplify communications both with the NRC and among the cognizant staff at the Center.

lfg

Attachments

cc: John E. Latz