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Integrated Services Management System (ISMS)
A Management and Decision Making Tool

David S. Barber, Dorothy L. Brockman, Lawrence D. Buxton,
Judith W. Mead, L. Patrick Murphy, Donna H. Renaud

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INTEGRATED SERVICES MANAGEMENT SYSTEM (ISMS)

A Management and Decision Making Tool

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ABSTRACT

This document provides information concerning the Integrated Services Management System (ISMS) that was developed for the Laboratories Services Division during the period February 1994 through May 1995. ISMS was developed as a formal method for centralized management of programs within the Division. With minor modifications, this system can be adapted for management of all overhead functions at SNL or for sector level program management. Included in this document are the reasons for the creation of this system as well as the resulting benefits. The ISMS consists of six interlinked processes; Issues Management, Task/Activity Planning, Work Decision, Commitment Management, Process/Project Management, and Performance Assessment. Those processes are described in detail within this document. Additionally, lessons learned and suggestions for future improvements are indicated.

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PREFACE

The Value of the Integrated Services Management System

As the name implies, the Integrated Services Management System (ISMS) is a *management system.* It is a defensible method for determining requirements, constructing work packages to meet those requirements, allocating resources to accomplish the work, planning work execution, and assessing the performance of the work. All these activities are accomplished in a logical and systematic manner. The system is designed to provide sufficient information concerning alternatives to allow managers to make the *best decisions possible that are defensible* to any person or organization that reviews the decision making process.

The *Integrated* portion of ISMS relates to the integration of the work within the various Centers of the Laboratories Services Division. Laboratories Services Division (LSD) presently consists of eight Centers with different missions in support of the Laboratories. The Centers; Sites Planning & Integration, Sites Operations, Safeguards & Security, Environmental Operations, Logistics Management, Safety & Health, Facilities Operations & Maintenance, and Facilities Development, have activities that compete for indirect funding. Many activities are also funded by direct programs. The ISMS is a method of comparing the relative benefits and impacts of activities from all the Centers. Thus decisions can be made concerning activities from different Centers when applying resource constraints.

The ISMS is a centralized management system. The work of the Division and the Centers is determined by establishing a work breakdown structure to the work package level. These are named activities and each is described in an *Activity Data Sheet (ADS).* Each ADS contains the statement of what work will be performed, the drivers for that activity (why the activity needs to be done), and the resources required to accomplish that activity. The writer of the ADS may also describe the expected benefits accrued from the activity and the impacts of not accomplishing the activity. Managers review their ADSs to ensure the information is complete and accurate. Each Center appoints a scoring board to determine the relative priority of each ADS according to a predetermined set of attributes established by the Division. The Director ensures the priority of the activities within the Center reflect his/her vision. The decisions on what work will be accomplished are made at the Division level. These decisions are made by the Directors and the Vice President in a group called the LSD Management Team. The emphasis in these decisions is the work to be accomplished not the budget requested. The Vice President, as the Chair of the LSD Management Team, makes the final determination of approved activities *within* the resource constraints. Thus the decisions are made centrally, yet each manager and director has considerable influence in the decisions.

Although the most evident value of ISMS is the determination of work to be accomplished within a resource constraint environment, it is not the *main value* of the system. The greatest benefits of the system occur during the analysis of the work being accomplished within the Division. The ADSs give the beginning information for review and discussions to assist in making cost effective and efficient processes and projects. During the determination of the benefit or impact of a particular ADS (scoring sessions), there have been very constructive discussions of *why* the work is needed. It becomes very obvious if justifications for accomplishing the tasks are *just* based on previous accomplishment of the same activity. These discussions were most useful when managers were the participants. Using the ADSs, duplicate work can be identified within the Center's activities or among Centers. Also, activities that require significant resources can be targeted for reengineering or efficiency studies. Overhead functions within each Center and department can be reviewed to ensure that they are providing significant benefit for the cost. Those methods that are found to be very efficient can be applied across all Centers. Additionally, services support required for new SNL initiatives can be integrated and the cost of that support known before the initiative is implemented. This will ensure that cost effective support is provided at the onset of the program.

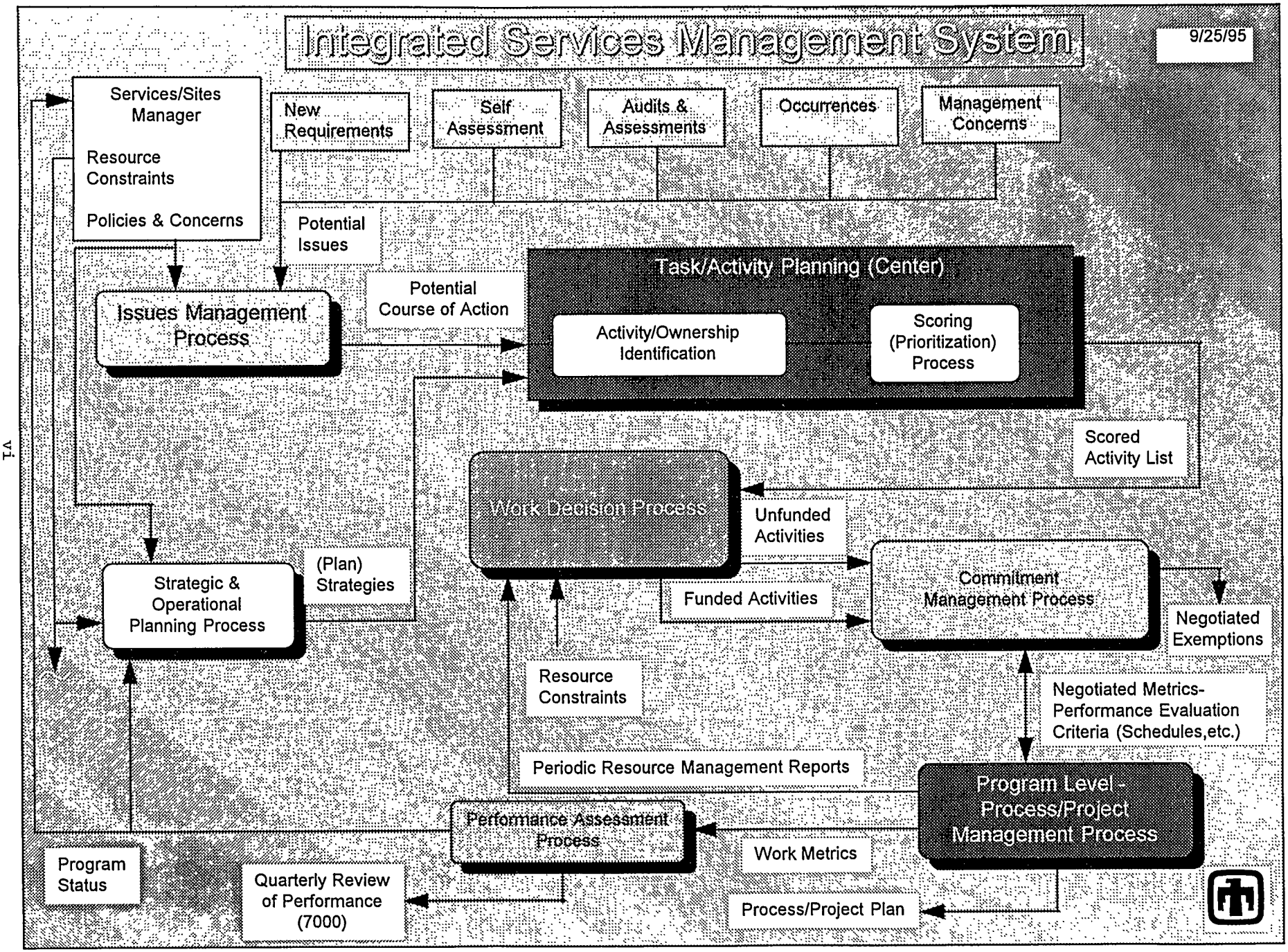
Other valuable elements in the ISMS are the Issues Management and Commitment Management Processes. Both are methods to record and track items that affect the work of the Division. Issues are basically potential new work requirements. They are identified from new regulations, orders or laws, occurrences, assessments, or management initiatives. When the issue is identified and described, the decision maker selects the owner of the issue to study the problem and determine different alternatives for resolution. The decision maker can then select the best alternative. The Commitment Management Process identifies and tracks the commitments that have been made to internal and external organizations and agencies. It can help ensure that milestones and deliverables are met. Both Issues and Commitments are referenced in the applicable Activity Data Sheets and this connects the work to the requirements.

To be a complete management system, plans for the work need to be written and the execution of that work assessed. The execution of the work is normally left to the Centers, however, requirements are needed from the division level. These requirements are written in the Project/Process Management and Performance Assessment Processes. Before execution, all work should have a written plan. This plan need not be detailed, but should contain some basic information. Requiring a written plan ensures that the manager or leader in charge has thought through all aspects of the execution of that activity and provided the basis for coordination. Managers should also know how their programs, projects, or processes are progressing. The Performance Assessment Process is a method of tracking the metrics and milestones for activities.

In order to effect efficiency savings and manage this system, an *independent and unbiased* organization must be created. This organization would translate the data submitted into useful information for the decision makers. The organization must be empowered to ensure that accurate data is submitted. Members of this organization must be able to

understand the work being requested and accomplished. Only then will the full value of this system be recognized.

The following sections of this report describe each of the main processes of the ISMS in considerable detail as well as provide an overview of the system.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9/25/95
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1.0 INTEGRATED SERVICES MANAGEMENT SYSTEM OVERVIEW

1.1.0 Purpose, Scope, Benefit & Ownership

1.1.1 Purpose

The Integrated Services Management System (ISMS) is a formal system designed to assist the Management Team in negotiating expectations with customers and regulators and in consistently managing all work performed and/or managed by the Laboratories Services Division at Sandia National Laboratories.

1.1.2 Scope

The ISMS applies to all work (processes and projects from all customers, regulatory and management sources) in all Centers in the Laboratories Services Division. The major processes are: issues management, task/activity planning, resource management, commitment management, program/process management and performance assessment. Interaction is maintained with corporate organizations including the Administrative Management Council (AMCO), corporate requirements, corporate issues management, the California Site ES&H organizations, and other laboratory organizations external to the Laboratories Services Division which have input to the DOE ES&H Management Plan. Outside organizations which receive information or reports generated from the ISMS include the various organizations within the Department of Energy and external regulators.

1.1.3 Benefit

Implementation of the ISMS has the following benefits:

1. Work elements are consistently defined within the funding and staffing constraints.
2. Prioritization process results are used to support SNL senior management and DOE/KAO negotiation leading to realistically constrained commitments.
3. Work elements can be correlated to commitments and regulatory, external, and internal requirements.
4. Allocation of limited resources is based on management's evaluation of averted risk.
5. Establishes a consistent basis for comparison of diverse activities.

1.1.4 Ownership

The ISMS is owned by the Laboratory Services Division Vice President and the Directors on the Management Team. The ISMS processes were developed, maintained and improved by the Services Management System Office (SMSO).

1.2.0 Definitions

These are general definitions which apply to the overall ISMS. Definitions specific for each process will be contained with the documentation of that process.

1.2.1 Management Team

The Vice President and Directors of the Laboratories Services Division.

1.2.2 Validation Board

A Management Team-appointed Board that reviews the content and scoring of the Activity Data Sheets (ADSs) for consistency and appropriateness.

1.2.3 Center Scoring Board

A Director-appointed Board that reviews the content of a Center's Activity Data Sheets to determine appropriateness and scores each activity using the ISMS Prioritization Scoring Process.

1.2.4 Center ISMS Point of Contact

A Director-appointed person in each Center through whom ISMS information, other than budget information, and tasking slows between the SMSO and that Center.

1.2.5 System Administrator

A Director-appointed person whose responsibilities include ISMS data collection, data integrity, data archival for that Center, training any data entry clerks that are manipulating ISMS data and software confirmation and distribution within the Center.

1.2.6 ISMS Budget Point of Contact

A Director-appointed person in each Center through whom budget information flows between the SMSO and that Center.

1.2.7 Activity Data Sheet (ADS)

A form on which the preparer describes the work to be done, the drivers and customers for the work, commitments against which the work is to be managed, resources required to accomplish the work, and objectives and milestones for the work.

1.3.0 Overview of System

1.3.1 The ISMS was developed for use within the Laboratories Services Division of Sandia National Laboratories and, after full implementation, ISMS will be offered to the other indirect and direct funded programs as a model management system which can be tailored for use within these programs. The applications to date include environmental programs, safety and health programs, safeguards and security operations, facilities operations. logistics operations, and sites planning, integration and operations.

1.3.2 The major processes of the ISMS are issues management, task/activity planning, work decision, commitment management, program/process management and performance assessment. The system is intended to strengthen and formalize the elements of the management process.

1.3.3 Input to the ISMS comes from a number of sources.. Strategic information obtained from the Division's Strategic and Operational Plans, Division and Center goals and objectives, and performance assessment measurements are provided by the Management Team as guidance to the Managers and are used by the Managers to plan work which supports the business thrusts of the Laboratory Sectors and meets the Division goals and objectives. Issues arising from new requirements, assessments and audits, and management and customer concerns are captured by the Management Team for inclusion in the ISMS and provide additional information for planning work elements. Other sources of planning information include Laboratory and Division Policies with respect to use of people and other resources.

1.3.4 The Management Team, using the information tools provided by the issues management and task/activity planning processes, determines and negotiates the work which will be funded. Work that is funded and commitments that have been made to internal and external customers are reported from the commitment management process. Exemptions or

extensions are negotiated with internal and external customers regarding work that is not funded. Commitments can only be added to the commitment management process by a member of the Management Team.

1.3.5 Periodic reviews of the funded work, and performance assessment metrics allow the Management Team to determine the "health" of their processes and projects during the fiscal year.

1.3.6 Each of the major processes which has been developed, including any subprocesses, is described in more detail in a section of this document.

1.4.0 Flow Diagram

See "Integrated Services Management System Flow Diagram", located after the "Executive Summary".

1.5.0 Implementation Responsibilities

The following are the implementation responsibilities for the major organizations and players in the ISMS.

1.5.1 Services Management System Office (SMSO)

a) Communicate with customers and stakeholders to ensure that the processes meet their needs and expectations.
b) Provide accurate, relevant information from the ISMS database to the Management Team, managers, AMCO, DOE/KAO, and others as required or requested.
c) Using feedback from customers and lessons learned, continually strive to improve the processes which comprise the ISMS.
d) Train and assist employees with preparation of the information for the ISMS database.
e) Review input to the ISMS from the Centers to ensure consistency and quality of information.
f) Develop new processes as needed to meet customer and stakeholder needs and expectations.

1.5.2 Management Team

a) Communicate with and support the SMSO to ensure that the processes meet the needs and expectations of the Team.

b) Appoint Scoring and Validation Board Members and points-of-contact needed to support ISMS implementation.

c) Participate in determining the values of the Management Team for application in the ISMS prioritization process.

d) Prepare for and participate in determining which work will be undertaken in each fiscal year.

e). Negotiate consistent expectations with customers and regulators based on management decisions with respect to funded and unfunded work.

f) Support their organizations' people serving in the various capacities described in this plan.

g) Involve themselves in all aspects of ISMS implementation to promote line management accountability for planning and results.

1.6.0 Interfaces

The interfaces between the ISMS and organizations outside of the Laboratory Services Division are:

a) AMCO

AMCO has the requirement to manage the indirect budget for SNL. The council determines the overhead rate which is charged to direct programs. In addition, they determine the FTE and budget targets for each Division. The Laboratories Services Division integrated work elements, with the resources required for each element, are submitted by the SMSO for negotiation and allocation of resources by AMCO.

b) DOE/KAO

DOE/KAO has DOE oversight responsibility for SNL to ensure that the Lockheed-Martin SNL contractual requirements are met and that appropriate action is taken with respect to other DOE Orders and Notices. The SMSO integrates work element information from the ISMS and prepares and submits the DOE ES&H Management Plan through DOE/KAO. The ISMS provides information to the Management Team for negotiating requirements and deferral of or exemption from requirements.

c) Corporate Requirements Office

The Corporate Requirements Office is responsible for identifying the laws, orders, and regulatory requirements applicable to SNL. The interface with this office is discussed in the Issues Management section of this document.

d) Contract Compliance/Administration Office

The Contract Compliance/Administration Office is responsible for assuring consistency with the Lockheed-Martin SNL contract with the DOE. The interface with this office is discussed in the Issues Management section of this document.

e) SQLC

The Sandia Quality Leadership Council (SQLC) has the overall management responsibility for SNL. The ISMS provides management information to the Laboratories Services Division Vice President to inform and negotiate with the SQLC.

f) SNL Organizations or Programs, as Requested

The ISMS is to be a model for management systems for other SNL organizations or programs. The ISMS Model can be modified for use in a specific organization or program.

g) Customers for Laboratories Services Division Support

Customers for support from the Laboratories Services Division provide information on required services and negotiate with the operational Centers the extent to which these services will be provided by those Centers. The results of these negotiations are included in the work elements integrated into the ISMS.

The specific interfaces among the various processes within the ISMS and the interfaces of those processes with other organizations, processes or programs are described in each section of this plan.

1.7.0 Forms and Templates

The forms and templates specific to each process and included in the section in this plan for that process.

1.8.0 Implementation

1.8.1 There are three phases for the implementation of the ISMS. Phase I of the ISMS (Task/Activity Planning and Work Decision) was implemented for FY95. This phase included developing work breakdown structures for each Center and describing the service Centers and the indirect-funded work of the Center in discrete packages. All work other than "core" was analyzed and scored based on the averted risk in eleven categories. The

Management Team used this information to make decisions concerning work priorities for FY95.

1.8.2 Phase II of the ISMS which added the Issues Management and Commitment Management was implemented during FY95.

1.8.3 Phase III of the ISMS included adding the Process/Project Management Process and the Performance Assessment Process to complete the Management System.

1.8.4 The method of implementation for each major process (and subprocess) is described in the section for that process.

2.0 ISSUES MANAGEMENT PROCESS

2.1.0 Purpose, Scope, Benefit, and Ownership

2.1.1 Purpose

The Issues Management Process is an integral part of the Integrated Services Management System (ISMS). The process provides a method to identify, analyze and manage those issues considered to be emerging or in existence within the Laboratories Services Division .

2.1.2 Scope

The Issues Management Process is part of the ISMS and applies to all organizations within the Laboratories Services Division.

Issues addressed by the Issues Management Process may be minor and require only a few hours to solve or may require extensive resources and considerable time to analyze and resolve. Many issues will be drivers to develop activities using the Task/Activity Planning Process. Certain issues are of concern to the Management Team and will be formally managed using the Issues Management Process. Other issues will not meet these criteria and will be managed within the Division Centers .

All staff members and managers in the Laboratories Services Division can propose issues for incorporation into the Issues Management Process through their Center Director or the Vice President. Additionally, organizations within the Laboratories Services Division that track, monitor, and report on division-wide issues may identify potential (emerging) issues for consideration by the Management Team. The DOE offices and other organizations outside the Laboratories Services Division can request an issue be considered for entry into the Issues Management Process through a Center Director or the Vice President. The Vice President and the Management Team will decide issues to be formally managed at that level.

2.1.3 Benefit

a) The primary benefit of the Issues Management Process is to provide a method to ensure that issues of concern to the Division are systematically recognized and addressed. The Issues Management Process provides a method to ensure that those issues are tracked and reported until a decision on their disposition is made.

b) This process provides a means to review decisions made on previous issues and identify activities connected with those issues.

c) The Vice President can use this system to ensure that issues of concern to all Centers, but not clearly the responsibility of any Center, are being addressed. By identifying a single issue owner, responsible for providing coordinated courses of action, the Vice President can determine if progress is being made on the analysis of the issue. In addition, no issue will be "overlooked" in the course of reviewing and resolving current issues.

d) Corporate SNL issues that are owned by the Division can be tracked and the status incorporated into the SNL system.

e) The Issues Management Process provides a means to relate work activities and commitments to decisions made on issues. Therefore, the management decision related to an issue can be documented and the related work activity justified. By using the related approved activities or commitments, the status of the solution to the issue can be determined.

2.1.4 Ownership

The Issues Management Process is owned by the Vice President of the Laboratories Services Division. The Services Management System Office, was responsible to the Vice President for developing and maintaining the Issues Management Process.

2.2.0 Definitions

2.2.1 Issue

An issue is a point or matter of discussion, debate, concern, or dispute for which no clear consensus resolution is available. An issue requires that an action or group of actions take place to cause its resolution. For an organization, an issue is a condition or pressure, either internal or external, that if allowed to continue, will have a significant effect on the functioning of the organization or its future interest. Note that an issue can also be an opportunity that if not fully recognized and understood could be lost to the organization.

2.2.2 Division Issue

An issue that is of concern to the Management Team of the Laboratories Services Division.

2.2.3 Issue Owner

An individual within the Division who is responsible to analyze the issue, coordinate input for solution, develop courses of action to resolve the issue, and recommend a course of action to the appropriate manager for decision.. For those issues to be formally managed at the Division level, the issue owner will be a manager. The issue owner is not necessarily the owner of the actions to resolve the issue.

2.2.4 Decision Maker
A manager within the Division who has the authority to approve the issue resolution strategy and appoint solution owners.

2.2.5 Solution Owner
An individual within the Division who is responsible to take appropriate actions to resolve an issue or a portion of an issue.

2.3.0 Overview of Process (refer to flow chart in Appendix A)

2.3.1 Identification of Issue

a) The Issues Management Process begins with the identification of an issue presented to or currently within the Division. Issues come from many different sources including findings from appraisals, findings from occurrences, corporate requirements, concerns raised from new or existing laws, regulations, and orders, concerns of management, concerns of customers, and requirements from other sources .

b) Within the Division, there are several sources of issues. External and Self-Assessments may have findings that have significant impacts on how Division activities are conducted and resources managed. Findings are assigned owners through the Appraisal Management System. In analyzing the finding, this owner should determine if the finding will require additional resources or significantly change present processes. Those identified as having significant impact should be entered into the Issues Management Process using the issue data form.

c) Occurrences may also indicate a significant change is necessary. Owners of the findings from occurrences also determine if the finding will require additional resource or significantly change present processes. Again, those findings having significant impact should be entered into the Issues Management Process using the issue data form.

d) Emerging issues can be identified by analyzing trends in occurrence reports, audit and appraisal findings, self-assessment findings, proposed new laws, orders, or regulations, public concerns, and long term goals and plans. These emerging issues will be submitted to the appropriate director for identification as a potential Division issue.

e) External to the Division, senior management (i.e., President or Executive Vice President of SNL) may ask that the Division study or solve a concern. Special support for new work may come from the Sector Offices that are responsible for direct funded work for the laboratories. Issues and concerns may be identified by DOE/KAO or DOE/AL. Trends and anticipatory issues that are of significance to the Division may also be identified from the Corporate Issues Identification Council (part of the Corporate Issues Management System). Many of these types of potential issues will be identified to the Vice President or a Center Director. These requests or concerns become potential Division issues.

f) Additionally, compliance with new, modified or proposed laws, regulations, and orders may become an issue. Determination is made by the Responsible Individual (RI) that compliance significantly impacts the resources or existing processes. Those having significant impact should be entered into the Issues Management Process using the issue data form.

g) The Division managers may have concerns that need to be addressed. Additionally, customers of the Division services may express concerns that should become issues. Those concerns can be entered into the Issues Management Process for study, resolution strategies, and decision. The appropriate director will decide if those concerns are raised to the Management Team level.

2.3.2 Determination of Issue Level

a) Those issues that do not require the attention of the Management Team can be managed within the appropriate Center. Resolution of the issue may be accomplished within approved work or by developing a new or modified Activity Data Sheet(s) (ADS) described in the Task/Activity Planning Process (see Section 3).

b) Those issues that are significant to the Vice President and the Management Team are formally managed by the Issues Management Process. Potential issues are presented to the Vice President and the Management Team for a decision to enter the Issues Management Process and subsequently, determination of the issue owner. Criteria

are established to assist in this process (see Appendix D of this section.) Those issues that are not accepted as a Division issue will be returned to the original owner for resolution as described in the paragraph above.

2.3.3 Assignment of an Issue Owner

Identification of the issue owner is critical for the Issues Management Process. Issue owners are assigned by the appropriate level of management. The appointment of a person to analyze and develop the course(s) of action for resolution of a Division issue are by the Vice President and the Management Team. The issue owner for these issues must be a Manager, Director, or the Vice President. The issue owner, however, is *not necessarily* responsible for the actions to solve the issue.

2.3.4 Responsibilities of the Issue Owner.

The issue owner is responsible to analyze the issue, coordinate input for solution, develop courses of action to solve the issue, and recommend a course of action to the decision maker. For Division issues, resolution strategies need to be presented to the Vice President and the Management Team. The issue owner may a assemble a team to assist in analysis and developing courses of action particularly when several organizations may be involved with the issue. Alternate courses of action should be developed and the ramifications studied. Included are the resources (i.e., funds, time, people) required for each course of action and the risks or benefits involved. Resolutions that involve SNL line organizations should be coordinated through the Line Implementation Working Group (LIWG). Upon conclusion of the study, the issue owner must decide if the issue can be solved within the already approved work of the organization. In this case, the source of the issue needs to be informed.

2.3.5 Action Review and Approval.

The decision maker evaluates the impacts of the proposed course of action with the ramifications and risks of those actions. This evaluation may show that the course of action may need to be revised or rescoped by the issue owner. The decision maker decides if the resolution actions are within the work authorized for his/her organization and can be accomplished. The decision may be to accept the risk of the issue not being resolved. For a Division issue, the Management Team may decide that the issue would be more appropriately solved by an organization(s) outside the Division.

2.3.6 Appointment of Solution Owner(s).

The decision maker identifies owners of the actions to solve the issue. These owners may need to create or write Activity Data Sheets (ADS) and complete actions as described in the Task/Activity Planning Process (see Task/Activity Planning Process, Section 3). Subsequently, the resolution of this issue may become a commitment (see Commitment Management Process section, Section 5).

2.3.7 Issue Tracking

The status of the issue can be actively tracked from the date that the issue is entered into the Issues Management Process until the decision is made on resolution. Each Center establishes procedures for collecting the data for each issue and its policy for tracking issue status. Issues that are managed at the Division level are submitted to the Services Management System Office for incorporation into the database. Centers update the status of those Division issues. Periodic reports are generated by the Services Management System Office showing the status of the Division issues..

2.4.0 Flow Diagram

The flow diagram for the Issues Management Process is found in Appendix A.

2.5.0 Roles & Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Issues Management Process:

2.5.1 Services Management System Office.

Develop and maintain the Issues Management Process. Represent the Laboratories Services Division on the Corporate Issues Identification Council.

2.5.2 Issue Owner

Analyze the issue, and determine resolution strategies and ramifications. Specific responsibilities include:

a) Developing alternate resolution strategies, including the action of not resolving the issue, and selecting a preferred course of action.

b) Deciding if the issue can be resolved within the scope of the approved and funded activities of the organization.

c) Coordinating possible resolution strategies with organizations affected by the issue or possible actions.

d) Serving as the point of contact of the issue.

e) Keeping the status of the issue current in ISMS.

2.5.3 Decision Maker

Evaluating the impacts of the proposed resolution strategies. Deciding the course of action to resolve the issue, and identifying and directing the solution owners to take action.

2.5.4 Vice President, Laboratories Services Division & Management Team:

Deciding issues to be formally tracked as Division issues by the Issues Management Process, the issue owner, and the course of action to resolve the issue. Specific responsibilities for Division issues include:

a) Deciding if the issue is within or lies outside the responsibilities of the Division.

b) Evaluating the impacts of the proposed resolution strategies.

c) Identifying and directing the solution owners to take action based on the decision.

2.5.4 Solution Owner(s):

Taking appropriate action based on the decision by the decision maker.

2.6.0 Interfaces

2.6.1 Interface of Issues Management Process with the ISMS Task/Activity Planning and Commitment Management Processes.

a) When resolution of an issue leads to work that must be accomplished within the Division, the Center Director or the Management Team decides if approved activities need to be changed or new activities created. If the resources required are significant, Activity Data Sheets (ADS) will need to be modified or written. This is part of the

Task/Activity Planning Process (see Section 3). Within the ADS, a cross reference will be made to the issue by use of the issue number.

b) Resolution of an issue may quickly lead to a related commitment. ADSs generated as a result of this issue will cross reference both the issue number and the commitment number.

2.6.2 Some interfaces with other processes and sources of issues or organizations both within the Division and external to the Division are described below.

a) The Appraisal Management Department maintains the list of and tracks audits, Tiger Team findings, and appraisals. Those corrective actions that require significant resources or work for more than one Center, are candidates to become a Division issue within the Issues Management Process. However, the Appraisal Management Department will continue to maintain the details of the audit or appraisal. Additionally, the manager of the department will review appraisals to determine if there are trends that indicate a larger emerging issue(s).

b) The Emergency Management Department maintains the Occurrence Management System. Certain findings from occurrences may be issues particularly if the corrective actions require significant resources. Again, the Emergency Management Department will maintain the details of the occurrence. Additionally, the manager of the department will review occurrences to determine if there are trends that indicate a larger emerging and potential Division issues.

c) The Requirements Management Office works with the SNL Corporate Requirements Office to identify the laws, orders, and regulatory requirements for SNL. Responsible Individuals (RI) and Order Experts (OE) are assigned for each requirement. Certain requirements may become issues based on effort necessary to come into compliance. Additionally, the manager of the department will determine if there are trends in laboratories wide support activities that indicate a larger emerging and potential Division issues.

d) The Strategic and Operational Planning develops the strategic and operational plans for Laboratories Services Division. This organization works with the corporate strategic and operational planning. This support may be of a magnitude that significant Division effort is required. The Director of Sites Planning and Integration Center will decide if these future support requirements are potential Division issues.

e) The Risk Management and NEPA Department may propose Division issues as a result of reviewing the documentation for SAs and SARs. In addition, NEPA documentation may show the need to solve certain issues within the Division. These potential issues should be referred to the Director, Sites Planning and Integration Center.

f) The External Interface and Corporate Issues Management Department has the requirement to develop an issues management system for SNL. They will focus on issues affecting SNL as a whole and will determine issue owners at the Division level. Issues that are assigned to the Vice President Laboratories Services Division most likely should be incorporated into the Issues Management Process. Also, segments of the corporate issues that are assigned to another vice president and that significantly effects the Laboratories Services Division will be included in the Division Issues Management Process. Additionally, a member of the Laboratories Services Division will serve on the Corporate Issues Identification Council. Emerging issues that have a significant effect on the Laboratories Services Division plans and operations will be discussed with the Vice President and the Management Team for possible inclusion into Issues Management Process.

g) The Corporate Requirements Office is responsible for identifying the laws, orders, and regulatory requirements applicable to SNL. The Requirements Management Office will interface with that office and may refer potential issues to the Issues Management Process.

h) The Contract Compliance/Administration Office is responsible for assuring consistency with the Lockheed-Martin SNL contract with the DOE. The Requirements Management Office will interface with that office and may refer potential issues to the Issues Management Process.

i) The Line Implementation Working Group (LIWG) consists of representatives from the line organizations who work to ensure that requirements identified by the Laboratories Services Division can be efficiently and effectively into the organizations outside that Division. Issues may be identified as a result of that coordination effort. Any potential issues should be submitted through the manager of the Requirements Management Office.

j) Most issues will originate within the Centers as the programs and projects are being executed. As problems and concerns are raised within the Center, they need to be evaluated as potential issues within the Center and potential Division issues.

2.7.0 Forms and Templates

2.7.1 Sample Issue Data Sheet is included in Appendix B.

2.7.2 Sample Issue Summary Report is included in Appendix C.

2.8.0 Implementation

2.8.1 This process can be implemented on a time scale consistent with customer requirements.

2.8.2 Centers may establish a system to manage issues that are within their Center.

2.9.0 Performance Assessment

2.9.1 This process will be continuously improved as the implementation evolves. Any person with knowledge of this process may suggest changes to the Services Management System Office. Minor changes to the process will be approved by the manager, Services Management System Office. Major changes in the process will be approved by the Vice President, Laboratories Services Division.

2.9.2 Formal surveys on the effectiveness of the Issues Management Process should be circulated periodically. This survey is distributed to all those that have been involved with the process during the implementation. Proposed changes to the process based on suggestions and recommendations resulting from that survey are presented to the Vice President.

2.9.3 The Performance Assessment Process, include metrics necessary to help ensure a quality Issues Management Process, assesses the efficiency and effectiveness of the Issues Management Process. (See Section 7)

2.10.0 References

2.10.1 "Introduction to Issues Management Techniques," course presented on 8/17-18/94, by Bill Ashley of Ashley and Associates, 1942 Cheshire Lane, Wheaton, Ill.

2.10.2 "Issues Management and Sandia National Laboratories," by Michael DeWitte, SNL Organization 12650, dated 8/11/92.4.

2.10.3 "Issues Management, The INEL Perspective," by Terry Pierce and Galyn Broers, EG&G Idaho, Inc. Idaho National Engineering Laboratories, dated 5/6/92.4.

2.10.4 "Revised Process Description for the FY95 Version of the ISMS," by Paul Wood, CYCLA Corp. dated 1/30/92.4.

Appendix A **Issues Management Flow Diagram**

Appendix B **Issue Data Sheet**

Appendix C **Directions for Completing Issue Data Sheet**

Appendix D **Issue Summary Report**

Appendix E **Criteria for determining a 7000 Issue**

11/7/94
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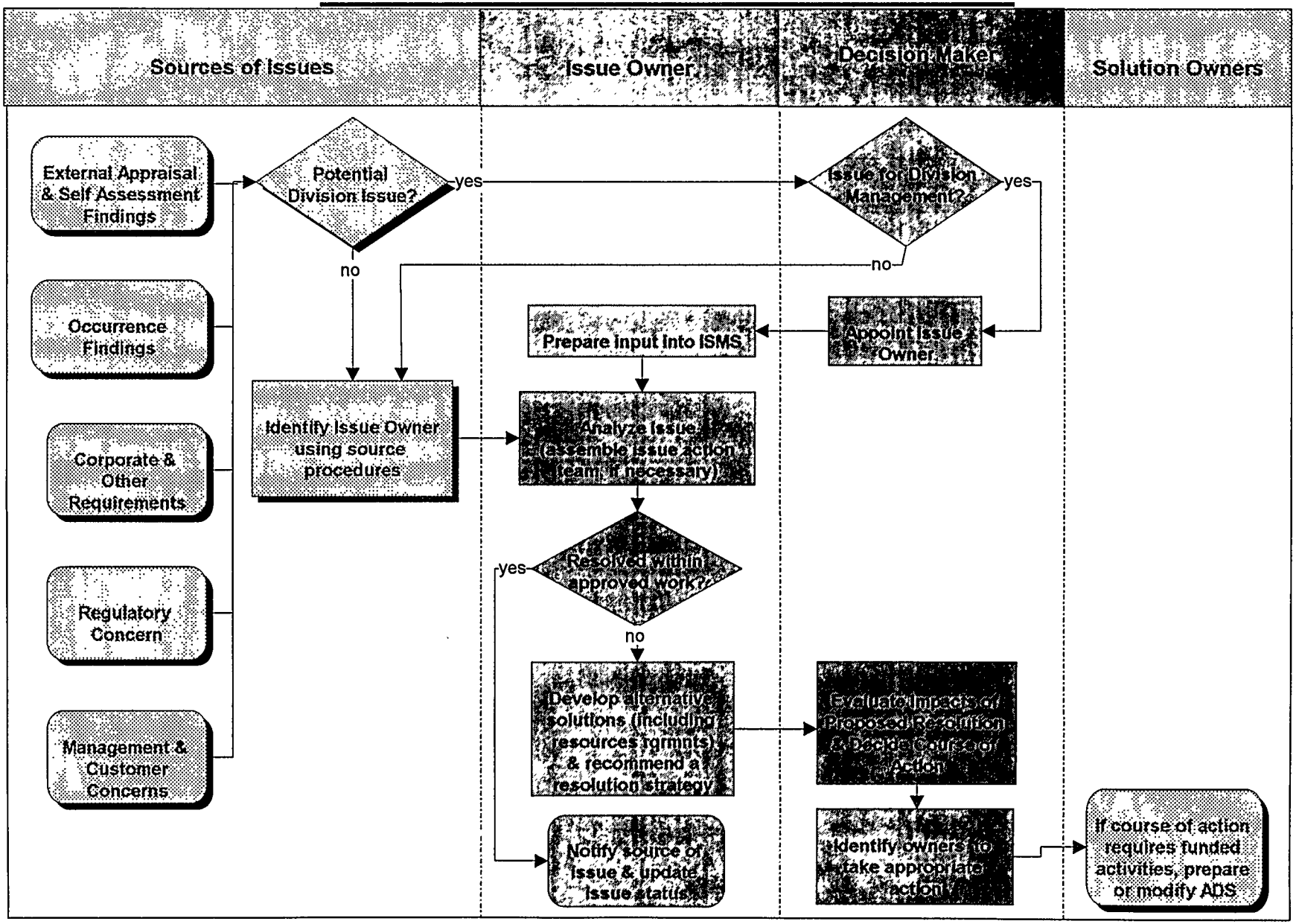
ISSUES MANAGEMENT PROCESS



SANDIA NATIONAL LABORATORIES
LABORATORIES SERVICES DIVISION

ISSUE DATA SHEET

(Attach additional pages as necessary)

(For Data Entry Use Only) ⇨ [ ]
ISSUE Number

Date:_____

1. Issue Title: _____

2. Issue Source (Select one only):

Appraisal Finding	_____	**Regulatory Concern**	_____
Self Assessment	_____	**Management Concern**	_____
Occurrence	_____	**Customer Concern**	_____
Corporate Requirement	_____	**Other Requirement**	_____

3. Additional comments to describe the source of the issue: _____
_____

4. Issue Owner _____ **5. Org/MS** _____ **6. Date Issue Identified**_____

7. Issue Description: _____
_____
_____
_____
_____
_____

8. Comments on Issue (if any): _____
_____
_____
_____

9. Related Issue Number(s) (if any):_____

10. Identifier where specific information can be found (if any):_____
_____
_____

STATUS:

Accepted as a Division Issue? Yes No if Yes, date accepted	__/__/__	*Decision: Do:*
Owner identified:	__/__/__	*Defer:*
Resolutions Presented to Decision Maker(s):	__/__/__	*Rescope:*
Decision Made:	__/__/__	*Transfer:*
Name of Decision Maker(s):		*Accept Risk:*

Comments:_____
_____
_____
_____
_____

APPENDIX C

DIRECTIONS FOR COMPLETING ISSUE DATA SHEET

Definition of an Issue **- An issue is a point or matter of discussion, debate, concern, or dispute for which no clear consensus resolution is available. An issue requires that an action or group of actions take place to address the issue. For an organization, an issue is a condition or pressure, either internal or external, that if allowed to continue, will have a significant effect on the functioning of the organization or its future interest. Note that an issue can also be an opportunity that if not fully recognized and understood could be lost to the organization.**

ITEM	DATA REQUIRED	DIRECTIONS
	ISSUE Number	The official issue number will be computer generated at the time the data is input into the computer system.
	Date	Enter the date as Month/Day/Year (e.g., 10/31/94) that the Issue Data Sheet is being prepared.
1.	Issue Title	Enter a short descriptive title (no more than 50 characters).
2.	Issue Source:	Select one only that best describes the source.
	Appraisal Finding	Issue is a result of a finding from an appraisal.
	Self Assessment	Issue is a result of a self assessment (i.e., done by SNL).
	Occurrence	Issue is a result of an occurrence or a root cause analysis of occurrences.
	Corporate Requirement	Issue is a result of a requirement from SNL above Division level.
	Regulatory Concern	Issue is a result of a regulatory concern originating from a law, regulation, or DOE order.
	Management Concern	Issue is a result of a management concern generated from an observation, a change in a policy, or a new way of doing business,
	Customer Concern	Issue is a result of a concern raised by a customer.
	New Requirement	Issue is a result of a new or proposed requirement not otherwise indicated.
3.	Additional Comments to describe the source of the issue:	Describe the source of the issue in more detail. This may be a reference to a specific appraisal, assessment, occurrence or requirement. It may describe how the issues was raised.
4.	Issue Owner	Enter the name of the individual who owns the issue (i.e., ultimately responsible for ensuring that resolution strategies are developed and presented). This is *not necessarily* the individual(s) that resolve the issue.
5.	Org/MS	The organization number and mail stop of the Issue Owner.
6.	Date Issue was Identified	Enter the date the issue was identified to Division as Month/Day/Year (e.g., 10/31/94).
7.	Issue Description:	This is a description of the issue to be addressed. Enough detail should be included here to ensure that the concern is understood. Differences should be described that separate this issue from other similar issues either previously or currently being addressed. If necessary, attach additional sheets.
8.	Comments on Issue:	Describe any comments generated by the issue. For example, this section could be used for a discussion of major points of this issue, or a statement of owner's interpretation or understanding of the issue.
9.	Related Issue Number(s)	If there are issues that are related to this issue, indicate them here.
10.	Identifier where specific information can be found	If additional information is available in documents or databases, describe those sources of information (e.g., SIMS, audit, finding).
	STATUS	Indicate if the issue has been accepted by the Management Team as a *Division issue.* Indicate the dates when specific actions concerning this issue have taken place as Month/Day/Year (e.g., 10/31/94). List the name(s) of the individual(s) that made the decision on the issue resolution. Also indicate the category that best fits the decision on the issue resolution.
	Comments	Indicate any comments concerning the status of the issue. Describe when actions will take place or clarification of the decision made.

ISSUE SUMMARY REPORT

(indicates headings in report, not format)

Division Issues

Issue No.	Issue Source	Issue Owner & Org	Title	Date Ident.	Date Owner Assigned	Date Presented to Decision Maker	Decision (i.e., do, defer, rescope, transfer, or accept risk)

DIVISION ISSUES CRITERIA

1. ***Only the Vice President and Division Directors can decide if an issue will be tracked as a Division Issue in the ISMS Issues Management Process.***

2. Listed below are criteria useful in deciding if an issues is a Division Issue:

A. Magnitude or Severity of Impact

- The issue may have a severe impact on Laboratory safety, health, or the environment.
- The issue may severely impact the execution of Laboratory programs.
- The issue may severely impact the security of Laboratory personnel, information, equipment, or facilities.
- The issue may be very damaging to the Laboratory's image.
- The issue may result in a considerable savings or loss of resources.
- The issue may have considerable effect on Laboratory or Division efficiency.

B. Risk

- The issue may result in an unacceptable risk to the Laboratory's personnel, environment, operations, equipment, or facilities.

C. Ambiguity of Responsibility

- The issue has major impacts on more than one Division Center.
- The issue is a Division responsibility, but is not a direct responsibility of any one Division Center.

D. Breadth of Impact

- The issue has a major impact on the entire Laboratory.
- The issue has a major impact on Division operations.

E. Senior Management Concern

- The issue is a concern of the President or Executive Vice President of the Laboratory.
- The issue is a concern of the Sandia Quality Leadership Council.
- The issue has been given to the Division Vice President for resolution.

F. Long Resolution Time Frame

- The issue will take many years to analyze and resolve.

3.0 TASK/ACTIVITY PLANNING PROCESS

3.1.0 Purpose, Benefit, Scope, and Ownership

3.1.1 Purpose

The Task/Activity Planning Process is an integral part of the Integrated Services Management System (ISMS). This process provides a systematic, consistent method for documenting what work needs to be performed and applying a benefit/impact scoring to the work.

3.1.2 Scope

This process is part of the ISMS and applies to all Centers. All employees and managers in the Division may submit work requests with approval of their Center Director. Centers within the Division that track, monitor, and report on Division work will use the data generated by Task/Activity Planning Process to ensure there is no duplication of effort. Organizations outside the Division can request that work be identified and ADSs be submitted to ISMS through Task/Activity Planning Process via a Center Director or Vice President.

For each Center, work is described in Activity Data Sheets (ADSs) which are then scored by a Center Scoring Board. The ADSs and scoring for the work are submitted to the Services Management System Office. The Services Management System Office integrates the data for all of the Division, and produces Division-wide reports. The integrated scoring data is analyzed for consistency across the Division by the Validation Board.

3.1.3 Benefit

a) The primary benefit of the Task/Activity Planning Process is to provide a method to ensure that all work elements are documented and scored consistently across the Division. The Management Team is the primary customer for this process.

b) By describing all work elements, each Director may identify the Center's work responsibilities to the rest of the Management Team. This can result in a better understanding of each Center's work by the other members of the Management Team, a means to integrate activities of all Centers affected by this work, and a synergistic approach to performing the work.

c) The Vice President can use this process to ensure that work for all Centers is being addressed systematically. The identified work owner is responsible for providing a coordinated course of action used by the Vice President and the Management Team to identify the value associated with the work to be performed.

d) This process will aid in determining the value of proposed new work compared to work that is already being performed.

e) The Task/Activity Planning Process provides a means to relate work activities to requirements, issues, commitments and other work across the Division. Therefore, management decisions related to work can be made based on understanding the impacts to other areas if the work is not performed.

3.1.4 Ownership

The Laboratories Services Division Vice President owns the Task/Activity Planning Process and all sub-processes. The SMSO was responsible for developing and implementing the Task/Activity Planning Process. The sub-processes are as follows:

a) Prepare New or Revised ADS
b) Scoring Board Scores ADSs
d) Integrate into Division ISMS data
c) Validation Board Review of ADSs

Changes to the overall Task/Activity Planning Process must be approved by the Vice President. Sub-process changes may be made by the Services Management System Office with concurrence by the users. The users of the sub-process may request the Services Management System Office make changes. The sub-processes are intended to specify at least the minimum requirements for the users of the sub-processes. The users of a sub-process may choose to implement additional requirements as appropriate to aid in management of their work.

3.2.0 Definitions

3.2.1 Work

Activities directed toward fulfilling requirements, issues, or commitments.

3.2.2 Credible

Offering reasonable grounds for being believed.

3.2.3 Center Director Adjustments

Values added or subtracted from scoring values to reflect the overrides to scoring by the Director.

3.2.4 Work Breakdown Structure

A schematic or listing of all work within a process or project, broken down successively into its components. The first level is the Center, the second level is the Work Cost Category, and the third level is the work functional area. Additional levels are at the discretion of each Center.

3.2.5 Line Report

A report printed from the ISMS database that provides summary data for use by the Management Team and managers during the Work Decision Process.

3.3.0 Overview of Process

3.3.1 Inputs

The Task Activity/Planning Process begins with the identification of work to be performed within the Division. Work requests may come from many different sources or issues. Organizations external to the Division (such as DOE/KAO or DOE/AL), and senior management (i.e., President or Executive Vice President of SNL) may directly task the Division to perform some function. Work requests also may come from the Sector Offices that are responsible for direct-funded work for the laboratory. External and self-assessments may generate findings that have major impacts on Division work. Occurrences may also indicate a significant change to work is necessary. All requests that could result in Division personnel performing work should use the Task Activity/Planning Process.

Once the need for work has been identified, then a determination must be made if the work is already defined in an existing Activity Data Sheet (ADS). If the work is within the scope of an existing ADS, then the manager of that work must determine if changes need to be made to that ADS to represent additional work required. For example, a revised ADS would be necessary if additional budget is required to perform new work,

or the statement of work may need to be modified to specify that ten tests will now be required instead of five tests. If a change to an ADS is required, then the revised ADS must be generated following the sub-process "Prepare New or Revise ADS".

3.3.2 Sub-processes

3.3.2.1 Prepare New or Revised ADS

This sub-process identifies the steps needed to either prepare a new ADS or revise an existing ADS. The owning manager first decides if the work fits into the existing work breakdown structure (WBS) for the Center. If the work does not fit into the WBS, then (s)he takes action to revise the WBS, or (s)he may determine that the work is not the responsibility of that Center and will notify the originating issue owner. If the work belongs to the Center, the manager assigns an individual knowledgeable about the work to prepare or revise an ADS. Using the instructions provided (either hard copy or hands-on training), the ADS preparer creates or revises the ADS documentation and forwards the document to the manager. *Note: The ADS preparer must identify all work to be performed, including segments of managed work that are conducted outside his/her Center.* The manager reviews the ADS and either approves or returns the ADS to the preparer for revision. After the manager approves the ADS, (s)he forwards it to the Center Scoring Board. Each Center may require additional steps to be taken in conjunction with this process, but those steps are Center-specific and not a part of this process.

3.3.2.2 Scoring Board Scores ADS

Each Center is responsible for appointing a "Center Scoring Board" that is responsible for scoring each ADS for that **Center**. All ADSs must be scored. The sub-process provided is intended to specify the minimum requirements. Additions may be made to the process to meet Center requirements. Contact the Services Management System Office to suggest improvements to the sub-process.

The Scoring Board reviews each ADS and determines if the description of work is adequate to score the activity. In addition the Scoring Board reviews the Benefit/Impact Evaluation to determine if the appropriate categories have been selected and to apply the scenarios (with and without the ADS) provided by the ADS preparer. (Note: Some Centers assign responsibility for preparing the Benefit/Impact Evaluation to the Scoring Board while

others request the ADS Preparers complete that information.) The Scoring Board is responsible for ensuring that the Benefit/Impact Evaluation is credible and acceptable. If the Benefit/Impact information is considered incomplete or inaccurate by the Scoring Board, the Scoring Board determines what categories are appropriate, determines the consequences with and without the ADS, and scores the activity. The Scoring Board must determine if the resulting scores for this activity reflect the relative value of the activity compared to other activities across the Center. The Scored ADS is then forwarded to the Center Director for review.

Rescoring: The scoring and rescoring sub-process is shown in the flowchart titled: 'Scoring Board Scores ADS'. Scoring Boards may choose to rescore for several reasons:

a) The Validation Board requested that the Scoring Board reevaluate scoring and the Scoring Board agreed to do so.
b) The activity, as scored, resulted in a significantly higher or lower score than would be expected.

In either of these cases, the Scoring Board has two options; they may re-score the activity, or they may recommend a Center adjustment to the Director. Recommending a Center adjustment is useful to preserve the initial scoring data or to bring a problem to the attention of the Director.

Review by Center Director: The Center Director reviews all ADSs for the Center to ensure that the work is properly scoped and the information provided is adequate and appropriate. In addition, the Center Director reviews the scoring of each ADS to determine that the relative benefit/cost of a given activity meets with his/her approval. If the relative position, based on score, of an activity is not in agreement with the Director's view of priorities, then the Director may apply a director adjustment (with a written justification). Once the adjustment is applied, the relative position of the activity should reflect the Director's priorities. After the Director's review, approval, and adjustment, the information for all the scored ADSs is forwarded to the Services Management System Office for integration into the Division ISMS data.

3.3.2.3 Integrate into Division ISMS Data

A rollup diskette is submitted to the Services Management System Office from each Center whenever ADS data changes. After

receipt, Services Management System Office personnel will run checks to determine if certain characteristics of the data are correct. If errors exist, the data is returned to the Center point of contact for correction. After all edits are completed, the Services Management System Office will consolidate the data for the Division and apply the prioritization algorithm. For each ADS, the routine computes and adds the scores for all attributes. Known adjustments are added to the raw scores and a benefit/cost ratio is calculated based on the adjusted scores and the requested funding. Once the benefit/cost ratio is calculated and the data is sorted, a prioritization number is assigned to each activity. The prioritization number represents the value of the activity as compared to all the activities within the Division. Reports are generated and include, but are not limited to, the Ten Line Report, printed ADSs for the Validation Board, Center reports, etc. Information from this sub-process will be forwarded to either the Validation Board or the Management Team, depending on the nature of the latest ADS modifications. All new ADSs are forwarded to the Validation Board. Revised ADSs for which scoring has been changed and/or the description of work has been changed are also forwarded to the Validation Board. If changes are inconsequential, such as minor changes in dollars requested and/or improvement of the description of work, then the revised ADSs go directly to the Management Team.

3.3.2.4 Validation Board Review of ADSs

The Validation Board represents the interests of the Division and the Laboratories, not the individual Centers. The Validation Board sub-process, shown in the flowchart titled "Validation Board Review of ADSs," is intended to help the Centers be consistent in scoring and in the detail of work descriptions. The Validation Board may modify this sub-process while still meeting these goals. Requested modifications should be documented and submitted to the Services Management System Office.

The Validation Board reviews each ADS and determines if the description of work is adequate for independent parties to score the activity. If the ADS information is inadequate, the Validation Board shall negotiate with the ADS preparer to revise the ADS. If the ADS preparer agrees to revise the ADS, the Board will review this revision after the ADS is resubmitted as specified in 3.3.2.2 and 3.3.2.3 above. If no agreement is reached, or no change is required, the Validation Board will proceed to review the scoring.

The Validation Board reviews the scoring information including the benefit/impact evaluation and the category scores. If the information provided is inadequate, the Validation Board shall negotiate with the appropriate Center Scoring Board to make changes. The Validation Board also has the right to contact the ADS preparer to get additional information. If an agreement to change the information is reached, the ADS is returned to the Scoring Board and the revised ADS is resubmitted as specified in 3.3.2.2 through 3.3.2.3 above starting with the review by the Center Director. The information, modified data and Validation Board comments, are entered into the database.

The Validation Board will determine a benefit/impact evaluation that is credible and acceptable, determine the scores for the appropriate categories, and document as appropriate. The Validation Board analyzes the resulting scores for consistency with the Scoring Board's Scores as well as the relative scoring across the Division. If the scores are not consistent, an adjustment to align the scores will be recommended to the Management Team.

The Validation Board should document the any changes requested but not made and provide an explanation for the disparity in scores. The Validation Board will document the difference of opinions by presenting both sides of the points of contention. The recommended adjustment and all other documentation are forwarded as appropriate.

3.4.0 Flow Diagram

The flow diagrams for the sub-processes of the Task/Activity Planning process are found on the attached pages.

3.5.0 Roles & Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Task/Activity Planning Process:

3.5.1 Services Management System Office

a) Develop and maintain the processes that will monitor the work
b) Integrate all ISMS data into a single database for the Division
c) Communicate to all Centers any changes to requirements or processes and notify users of upcoming revisions
d) Develop and revise computer programs as necessary, e.g. prioritization routine

e) Verify that data received is in the correct format and that processes are being followed
f) Incorporate changes to process, when appropriate, as requested by users
g) Provide training

3.5.2 Center Director

a) Assign Center Scoring Board
b) Nominate members to Division Validation Board, if desired
c) Review ADSs for appropriate scope of work and requested funding and approve all ADSs
d) Decide if the work can be performed within the scope of the approved activities of the organization
e) Apply Director's adjustments to ensure work is in the appropriate priority order
f) Accept or reject ownership of work for the Center
g) Establish performance metric requirements for the Center ADSs
h) Retain information on all Center ADSs for five years
I) Ensure that only work defined in approved ADSs is being conducted

3.5.3 Owning Organization Manager

a) Identify candidate areas of work
b) Determine the ADS preparer
c) Evaluate the proposed courses of action defined in the ADS
d) Approve the content of the ADS, including but not limited to, the description of work and the cost estimate.
e) Notify the ADS preparer of funded/unfunded status of the ADS and other issues that can affect the work.
f) Ensure that all involved organizations are considered in the ADS preparation.
g) Prepare monthly spend plans.

3.5.4 ADS Preparer

a) Attend training classes
b) Complete required documentation
c) Ensure that cost estimates have sound basis

3.5.5 Scoring Board

a) Review ADS benefit/impact evaluation to ensure they are credible
b) Review ADS description of work to ensure it is adequate and credible
c) Determine if the categories selected are the appropriate ones in which activities should be scored

d) Score every ADS for the Center
e) Ensure that Center ADS scoring represents appropriate values associated with the work

3.5.6 Validation Board

The Validation Board is tasked to ensure that ADSs scores are consistent across the Division. In order to accomplish this task, the Validation Board must review all new ADSs and most revised ADSs.

3.5.7 Center Point of Contact

Provide any and all technical information required. Also, coordinate transfers of all data and documentation between Services Management System Office and the Center.

3.6.0 Interfaces

3.6.1 All interfaces are to other ISMS processes.

3.7.0 Forms and Templates

3.7.1 A sample Activity Data Sheet and instructions are included at the end of this section.

3.8.0 Implementation

These processes can be implemented on a time scale consistent with customer requirements.

3.9.0 Performance Assessment

See Section 7.0.

3.10.0 References.

None.

Appendix A:

- **Steps to take when new work is identified**
- **Steps to take when minor changes occur in work scope or resource estimates are improved**
- **Steps to take when Division funding changes (additions or reductions)**

Appendix B: Task/Activity Process Flow Diagrams

Appendix C: Activity Data Sheet and Instructions

Steps to Take When New Work is Identified

Assume that a new request, not identified previously, has reached your desk. What do you do?

1. Prepare an ADS describing the new proposed activity and what will be accomplished. You have to examine any related ADSs to determine the incremental activities and cost required to perform the new request.

2. Have your Center's Scoring Team score the new activity

3. Slot the new activity into your Center's prioritized list of activities and then answer the following questions.

   a. Is the new activity more important than your Center's lowest funded activity?

   b. If the answer to (a) is no, but it has a higher score than your most important unfunded item, then bring the item to the Management Team for an evaluation of the relative merits of doing that work versus the funded work of the other Directors. A decision will be made to either move funding from one Center to another or to request additional funding from AMCO.

   c. If the answer to (a) is yes, can you stand to let the item(s) that fall off the list go undone?

   d. If the answer to (c) is yes, then you change your resources to work on the new item, notify your customer that the work fell off of the list due to more pressing requirements and re-negotiate any related commitment, and send a new ISMS disk and notification to the SMSO of the change in ADSs.

   e. If the answer to (c) is no, then the Director brings the item(s) that fell off the Center's list to the Management Team for an evaluation of the relative merits of doing that work versus the funded work of the other Directors. A decision will be made to either move funding from one Center to another or to request additional funding from AMCO

Note 1: All new ADSs and revised ADSs for which scoring has been changed or the description of work has been changed must be reviewed by the Validation Board prior to bringing the ADS to the Management Team.

Note 2. Major changes in proposed work scope of existing activities should be treated as "new work" and have separate ADSs.

Steps to Take When Minor Changes Occur in Work Scope or Resource Estimates are Improved

The resource targets for each Center are based on approval of certain tasks and activities to be performed. It is assumed that the resources associated with those activities are estimated as accurately as possible based on the knowledge existing at the time the work was initially described and the estimates prepared. However, it is recognized that, as contractors are used instead of Sandians and slight changes in work scope are made, the resources required for any given activity can be somewhat higher or lower than that which was assigned to that ADS.

The related question therefore is, "What freedom does the Director have to move resources between approved activities to accommodate such needs?

The basic philosophy is that each Director and the Vice President have a contract to accomplish the funded work with the resources provided to that Center in total. Therefore, the Director can move resources among the **APPROVED** ADSs to accomplish the work. However, as those resources are adjusted, the ISMS file must be updated to reflect those changes. Any ADS adjustments of more than a 20% dollar change requires a written explanation on the notification to the SMSO.

The Director can not take resources assigned to do **APPROVED** work and do work described in an **UNAPPROVED** ADS. If the Director finds that the work which has been funded will not require all of the allocated resources, then those resources (amounts of $25K or greater) should be returned to the Management Team for appropriate disposition. In general, excess resources should be used to address the most important **UNFUNDED** ADS within the Division. This ADS may be in the Center which returned the resources or it may be in another Center.

If the scope of an ADS increases significantly because of changing requirements, and the Director cannot accommodate the additional resource requirements within the resources allocated to the Center, then the Director should bring this to the attention of the Management Team to discuss the impact of letting lower priority items in the Center fall off of the list. The Management Team will decide if that item should be the one to fall off of the list or whether additional funding for the Center should be provided either from the contingency or from one of the other Centers. If appropriate, additional funding may be requested from AMCO.

Steps to Take When Division Funding Changes (Additions or Reductions)

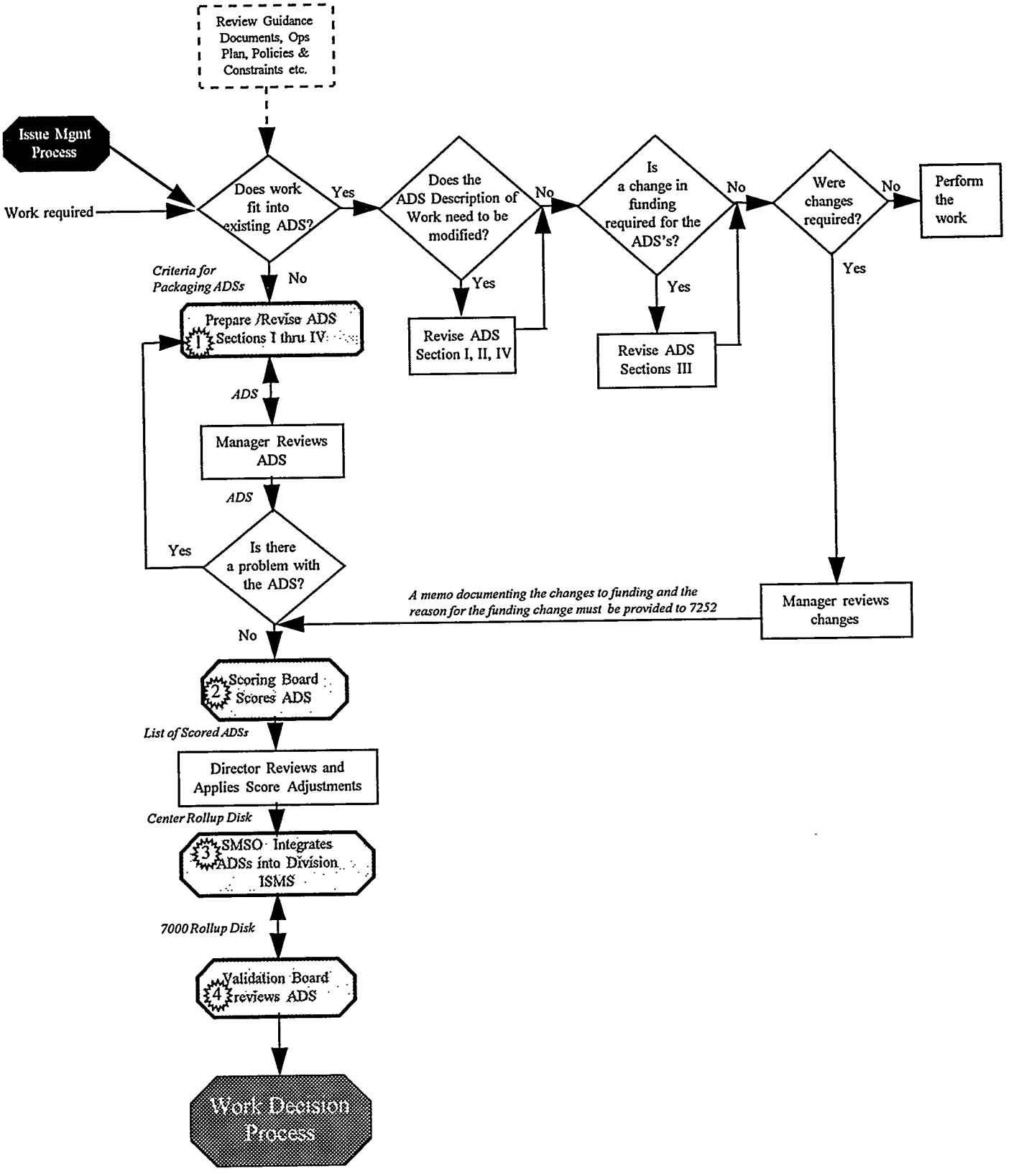
Assuming that the data for both the funded and unfunded ADSs have been kept up to date in ISMS, a current priority-sequenced list for the Division's activities related to that funding source should be prepared.

If the unlikely event that the "unfenced" funding is actually increased, then the Management Team should carefully review the ADSs between the current and new funding lines AND several of the highest priority activities below the new funding line to determine which new activities should actually be approved.

If the funding target is reduced then the Management Team should carefully review the ADSs between the current and new funding lines AND several of the lowest priority activities above the new funding line to determine which activities should be discontinued. Perhaps all of the currently approved compliance and improvement activities need to be carefully reviewed with respect to their impact on existing commitments

Note: Just as we add new activities when we add funding, we generally should cut activities and re-negotiate new commitments rather than "suck up the cut" by shaving activities. We have to be able to tell people the impact of the cuts.

Task /Activity Planning Process Overview



Indicates a subprocess which is further defined on additional sheets

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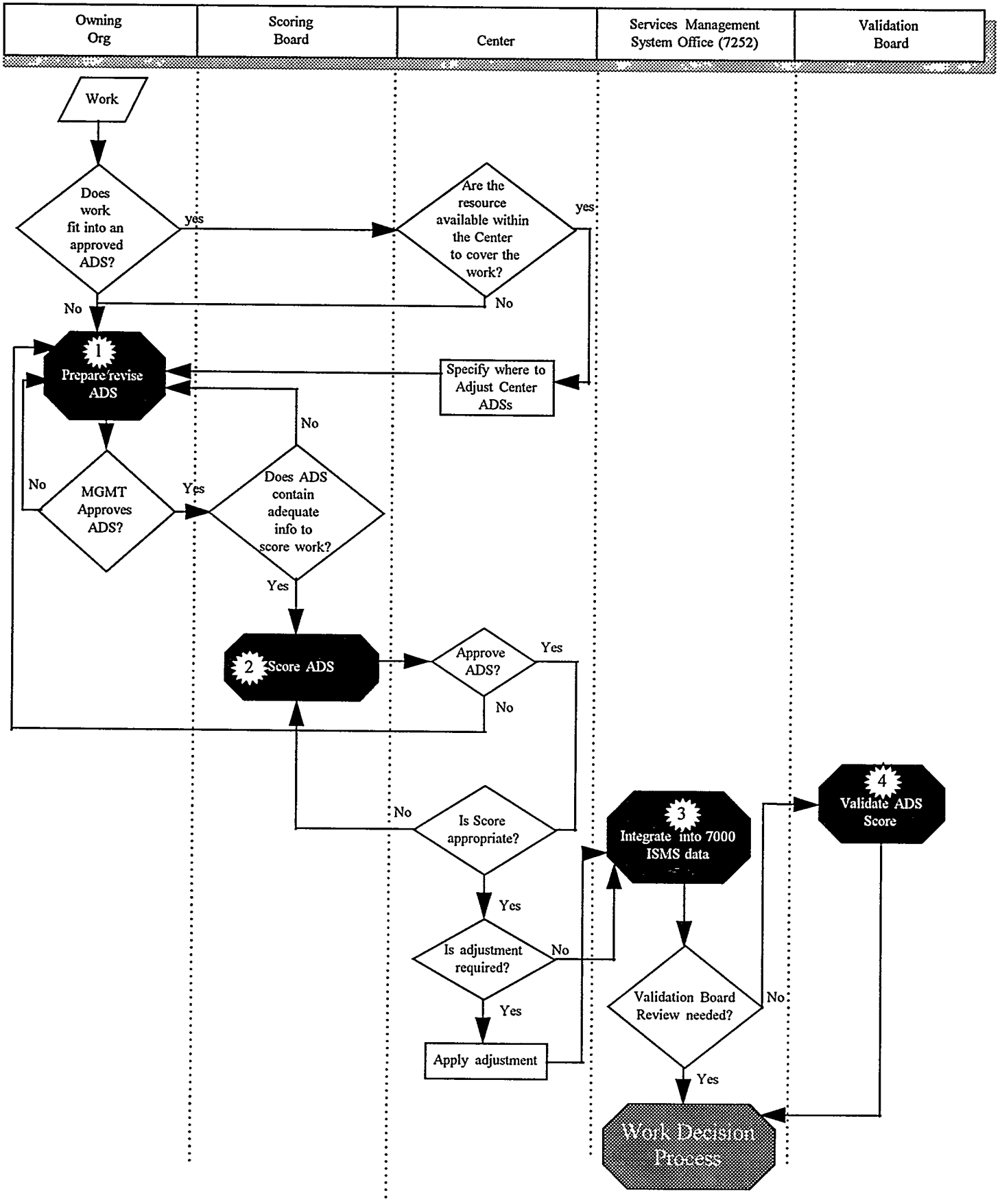
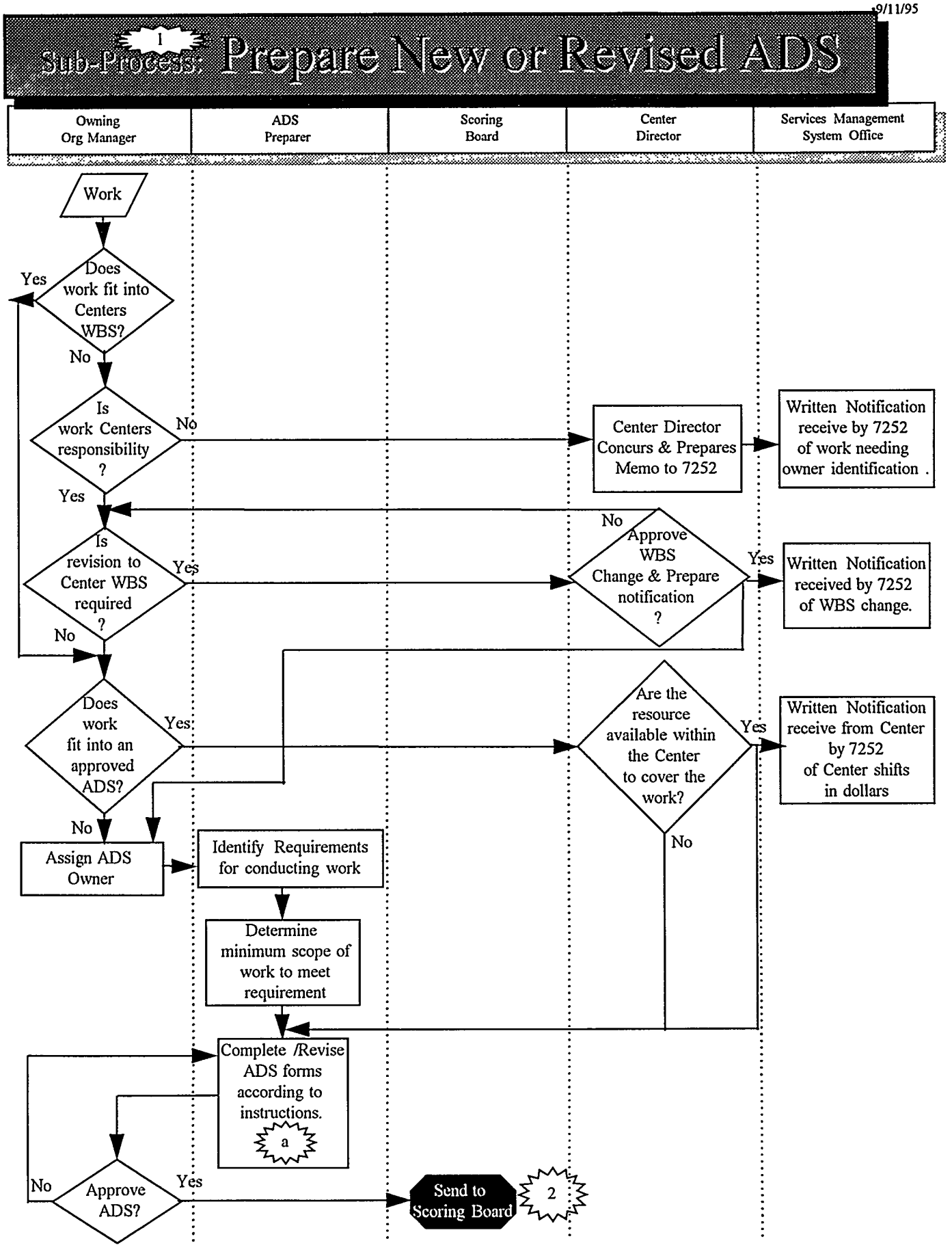
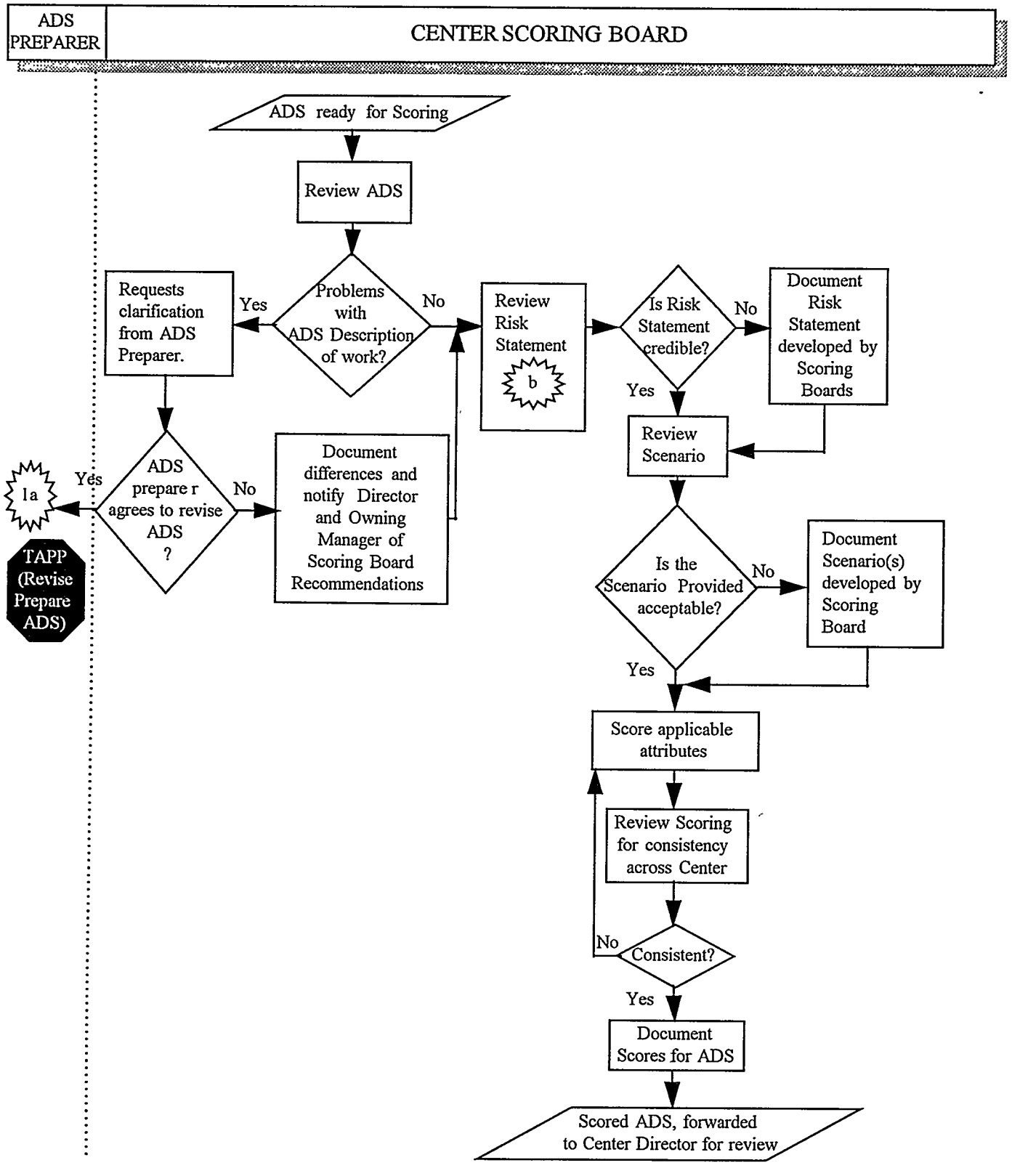
Task/Activity Planning Process

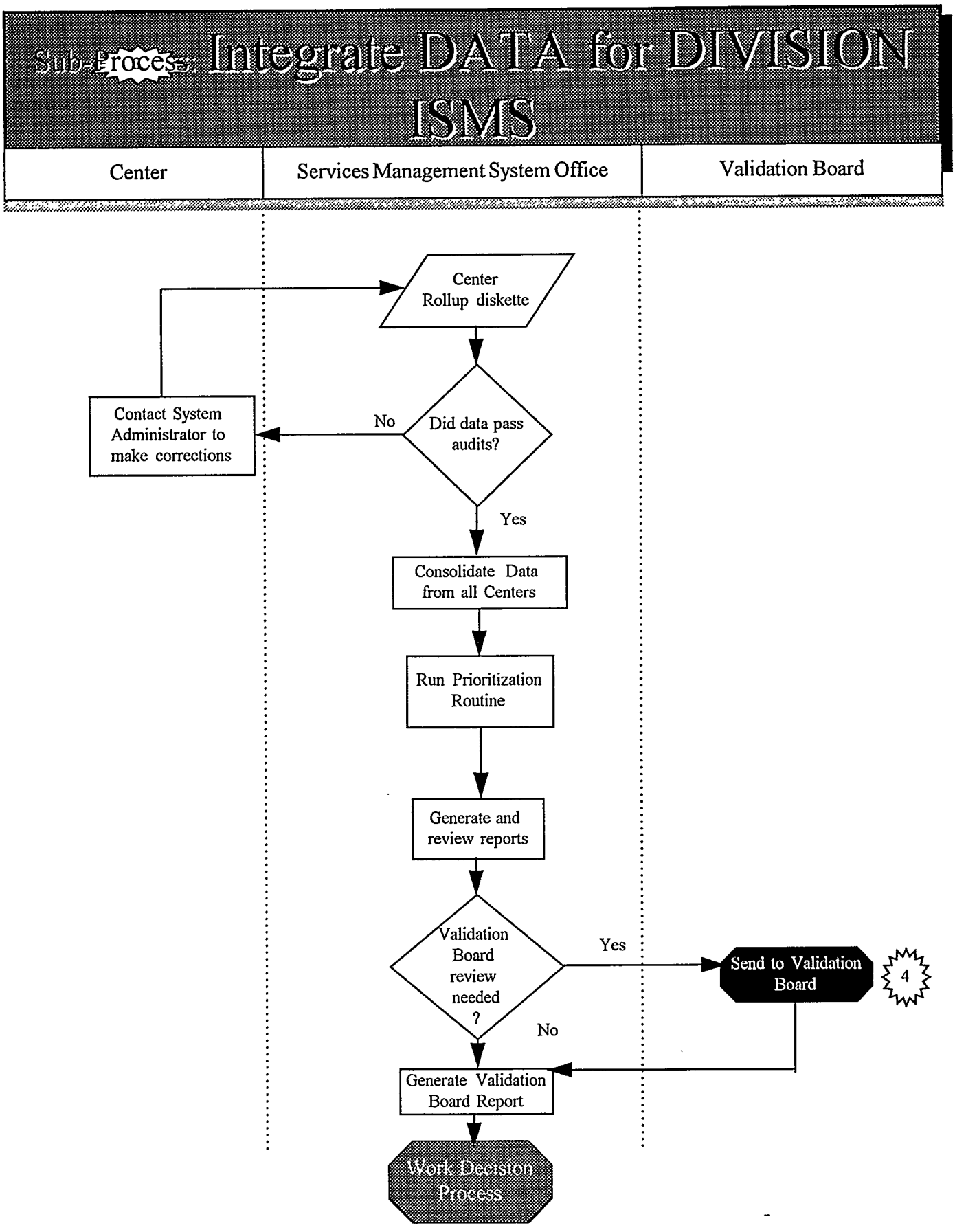



9/11/95
Sub-Process: 1 Prepare New or Revised ADS
Owning Org Manager
ADS Preparer
Scoring Board
Center Director
Services Management System Office
Work
Does work fit into Centers WBS?
Yes
No
Is work Centers responsibility ?
No
Center Director Concurs & Prepares Memo to 7252
Written Notification receive by 7252 of work needing owner identification .
Yes
Is revision to Center WBS required ?
Yes
No
Approve WBS Change & Prepare notification ?
Yes
Written Notification received by 7252 of WBS change.
No
Does work fit into an approved ADS?
Yes
Are the resource available within the Center to cover the work?
Yes
Written Notification receive from Center by 7252 of Center shifts in dollars
No
No
Assign ADS Owner
Identify Requirements for conducting work
Determine minimum scope of work to meet requirement
Complete /Revise ADS forms according to instructions.
a
No
Approve ADS?
Yes
Send to Scoring Board
2

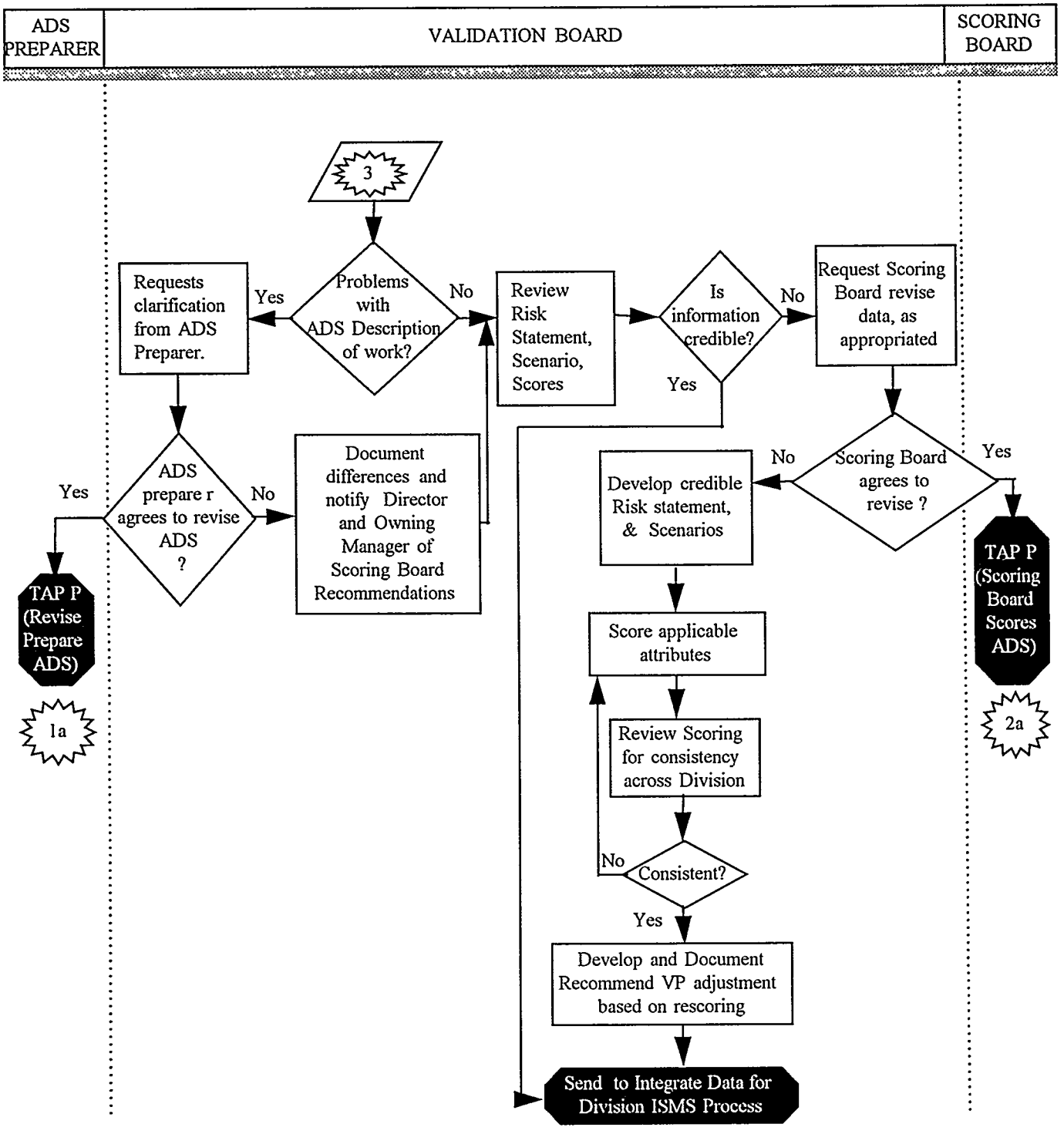
Sub-Process 2: Scoring Board Scores ADS.



Sub-Process: Integrate DATA for DIVISION ISMS



Sub-Process: 4 Validation Board Review of ADS's



*Output: Recommend VP adjustment (or Scoring Board revises scoring) output will reflect Validation Boards results.

Otherwise everything is accepted as scored.

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

(Attach additional pages as necessary)

(For Data Entry Reference Use Only) ⇨ [ ]
ADS Number

Date: _____

SECTION I: ACTIVITY DATA SHEET (ADS) IDENTIFICATION

1. ADS Title: _____

2. ADS Type: *(Select 1 only)* ( ) Core ( ) Compliance ( ) Improvement Funded: _____

3. WBS Number: _____

4.a Related Reference WBS #: _____ **4.b Related ADS #:** _____

5. Specific Identifier for other databases (with more information on the work being done) _____

_____

6. Case No.: _____ **7. Functional Area:** _____

8. Cost Category: _____ (Refer to Appendix A - Cost Categories for ISMS ADS, in the ADS instructions)

9. Related Issues (Issue #): _____

_____

10. Related Commitments (Commitment #): _____

_____

11. Site Code:
( ) All Sites ( ) New Mexico ( ) California ( ) Tonopah ( ) Other _____
Specify

12. Facility Name: *(optional)* _____

13. Activity Category: ( ) On-going Process ( ) New Process ( ) Project, Start Year _____
End Year _____

*** Use Last Name First
14. ADS Preparer: _____ **15. Preparer Org:** _____

16. Preparer MS: _____ **17. Preparer Phone:** _____

18. Preparer FAX: _____ **19. Reviewing Manager:** _____

*** Use Last Name First
20. Director: _____ **21. Director Org:** _____

22. Reviewer Comments *(Optional)* _____

_____

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

SECTION II: ADS DESCRIPTION

23.a Statement of Work *(Attach additional pages if necessary)*
Provide a general description of this activity:

23.b Performance Objective:

23.c Metrics/Milestones:

24. Key Assumptions *(Attach additional pages if necessary)*

25. Driver(s) *(Attach additional pages if necessary)*
Identify the law, order, regulation, or management directive requiring this activity.

	Primary
Type	
Code	
Title	

	Other, Non-Primary
Type	
Code	
Title	

26. Driver Comments *(Attach additional pages if necessary)*

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

SECTION III: ADS RESOURCE DATA

27. People Requirements (SNL FTEs and On-Site Contractors):

SNL FTEs				
Dept.	**FY 95 FTEs** (up to 2 decimals)	**FY 96 FTEs** (up to 2 decimals)	**FY 97 FTEs** (up to 2 decimals)	**FY 98 FTEs** (up to 2 decimals)

On-site Contractor Man-Years
FY 95
FY 96
FY 97
FY 98

28. Total Operating Cost (SK):

FY	Direct Charges	Service Centers	SNL Labor Costs	Total Cost
1995				
1996				
1997				
1998				

FY	Total Cost
1999	
2000	
2001	

29. Resources

Resource Estimate Notes & Planning Assumptions:

Resource Constraints:

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

Long-Term Resource Needs:

_____

_____

_____

30. Non-Operating Costs (SK)

Fiscal Years	Capital Equipment	General Plant Project (GPP)	Line Item Project (LIP)
1995			
1996			
1997			
1998			
1999			
2000			
2001			

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

SECTION IV: ADS BENEFITS/IMPACTS *(Attach additional pages if necessary)*

31. Describe the **benefits/impacts** associated with this activity, in the appropriate categories.

Worker Safety & Health

Public Safety & Health

Environmental Risks

Safeguards and Security

Regulatory Compliance

Public Assessment

ACTIVITY DATA SHEET

SANDIA NATIONAL LABORATORIES

Employee Ability and Efficiency

Facilities and Equipment

Business and Financial Management

Cost Savings and Losses

Employee Motivation

Science & Technology (Lab Mission)

DIRECTIONS FOR COMPLETING ACTIVITY DATA SHEET

Activity Selection Criteria

All activities must meet the following requirements:

- Represent a substantially independent task or set of tasks with a measurable end product or service.
- Include management and administrative expenses that are attributable to the performance of the activity.
- Be subdivided into separate ADS when a different customer or funding source is involved.
- Generally should not require less than $50K or one-half FTE effort.
- Generally should not require more than $1M or 10 FTE effort.
- Should be an activity that both the manager and director have determined is the most viable from alternatives considered.

Item #	Data Required	Directions
	ADS Number	The official ADS number will be computer generated at the time the data is input into the ISMS computer system. (You may choose to establish a preliminary numbering system to help track your Center's ADSs.)
	Month/Day/Year	Enter the date that the ADS is being prepared.
1.	**ADS Title**	Enter a short descriptive title to be used for quick reference that is distinct from other similar titles and **begins with a verb**. Succinctly, include the product or service. (Limit - 50 characters)
2.	**ADS Type**	Select only one from the choices listed.
	Core	A core activity is that portion of continuous activities **currently performed** that are considered essential by the associated Director and Vice President to maintain **minimum** acceptable levels of performance and compliance with contractual requirements (including laws and regulations).
	Compliance	A compliance activity is a new or additional corrective action required to bring SNL processes or facilities into **minimum** acceptable levels of compliance with all laws, regulation, DOE Orders, and other contractual requirements. Compliance activities may entail multi-year implementation, costs that would significantly impact the ability to perform core activities, or would involve significant additions to core in subsequent years to maintain compliance.
	Improvement/ Enhancement	An improvement/enhancement activity is an activity (over and above core and compliance activities) that will raise the level of performance; lower risks to personnel, the environment and property; lower risks of non-compliance; or reduce the long-term cost of performing core activities. These activities do **not** automatically become core activities.
3.	**WBS Number**	Enter the Center's work breakdown structure (WBS) number that corresponds to this activity. (Center directed)
4.a	**Related WBS #**	Identify the WBS number for activities that are related (dependent on) to the activity described in this ADS. (i.e., if this activity is changed, then the *related* activity may have to be changed.)
4.b	**Related ADS#**	Identify the ADS number for activities that are dependent on the activity described in this ADS. (Either this number or the WBS number must be entered to identify activities that are related)

5.	**Specific Identifier for other databases**	This field should contain the specific identifying information necessary to describe what other database contains additional information on this work and where within that database it can be found. (Example: SIMS, Rec. Id. E0037).
6.	**Case No.**	Enter the current year's case number for this activity. If this ADS does not fit in an existing case, enter an unique 4-digit code.
7.	**Functional Area**	Each Center has developed a breakdown of its functional areas. Select the appropriate functional area for this ADS. Examples of functional areas are: industrial hygiene, physical security, preventative maintenance, air quality.
8.	**Cost Category**	Select the one most appropriate category from Appendix A.
9.	**Related Issues**	Provide the issue number for any issue related to this ADS. See the system administrator for the Center's list if not provided. Additional issues may be identified by completing the Issue Data Sheet.
10.	**Related Commitments**	Provide the commitment number for any commitment related to this ADS. If the driver for this ADS is Management Directive, then there might be an identified commitment. See the system administrator for list. Additional commitments may be identified by completing the Commitment Data Sheet.
11.	**Site Code**	Select only one from the choices listed. Note, "other" is to designate locations not listed. If an activity is conducted at more than one of the listed sites, but not all sites, then complete a separate ADS for each site. If "All Sites" is selected, then complete only one ADS for the activity.
12.	**Facility Name** *(Optional)*	This field is optional. If the activity is being performed for a specific facility, indicate the specific geographical location. Examples are Tech Area V, Building 858, etc.
13	**Activity Category**	Check on-going, if the activity was initiated prior to the budget year. Check new process, if the activity will commence during the budget year. If the activity is a project, check the box and enter the start and end dates. Select only one of the three options.
14.	**ADS Preparer**	Enter the name of the person preparing this ADS. Enter the last name first.
15.	**Preparer Organization**	Enter the organization number of the person preparing this ADS. Enter the last name first.
16.	**Preparer MS**	Enter the mail stop number of the person preparing this ADS.
17.	**Preparer Phone**	Enter the phone number of the person preparing this ADS.
18.	**Preparer FAX**	Enter the FAX number of the person preparing this ADS.
19.	**Reviewing Manager**	Enter the name of the manager responsible for reviewing this ADS. Enter the last name first.
20.	**Director**	Enter the name of the director approving this ADS submittal. Enter the last name first.
21.	**Director Org.**	Enter the organization number of the director approving this ADS submittal.
22.	**Reviewer's Comments**	This space is provided for recording comments by the reviewing manager and director. Comments may include additional information that would affect the prioritization scoring.

23.a	**Statement of Work**	In this section, describe the activity being performed. Be descriptive but concise. The 'Ten-Line Report' uses the ADS Title for the first line, and up to 50 characters/line for the next 9 lines. **(If you hit a carriage return before the full 50 characters are used, it counts that as a full line.)** The first 9 lines should contain the essence of the work to be done, with the balance of the description going into more detail.
23.b	**Performance Objective**	Describe what is to be accomplished by this ADS. Be specific about the work objectives, and the performance level of the work. **Provide enough information that someone other than yourself can understand, review, and perhaps approve this activity** with the information given. The objectives (23b) and the metrics/milestones (23c) should be linked to show correlation. (Example, Obj. 1: Improve efficiency of mail sorting, see 23c for an example of a metric.)
23.c	**Metrics/Milestones**	List the metrics/milestones for this activity. Specify what you will measure to determine how well you are achieving the objective(s) and the schedule for completion of the objective(s). Metrics descriptions should clearly indicate to which objective(s) they are linked. (for the example objective in 23b, the metric might be, reduce sorting backlog from 5 days to 3 by March 95; reduce backlog from 3 days to 2 days by June 95.) If an activity is a compliance or improvement activity, also state the metrics for incremental improvement in performance in relation to the associated core activities (e.g., improve response to customer request from 3 weeks [core] to one week).
24.	**Key Assumptions**	Indicate the assumptions used in describing the work including customer demand for services, or other factors that may affect performing the activity.
25.	**Driver(s)**	Indicate the specific reason an activity is required. Regulatory drivers include Federal, State, and Local laws, DOE Orders and other types of government regulations. Management policies and directives are another type of driver. List the one primary driver and other drivers associated with this activity. **Types** are **Law** (e.g., Atomic Energy Act), **Executive Order** (e.g., Federal Use of Alternative Fueled Vehicles), **Order** (e.g., DOE Order), **Regulation** (e.g. CFR), **Standard** (e.g., ANSI or OSHA), **Other** (e.g., California Mine Safety), and **SNL Management Directive**. The **Code** is the reference within the Type (e.g., DOE Order 1240.02B). The **Title** is the title of the Driver (e.g., Unclassified Visits And Assignments By Foreign Nationals).
26.	**Driver Comments**	Provide enough detail such that the reader could find the specific requirement in a source document or identify it as generally accepted business necessity. State specific parts of Drivers affecting the ADS. Examples of source documents are CFR, DOE Orders, SNL Contract requirement, SNL management commitment memorandum, and SNL SLIs.
27.	**FTE Estimates**	By department, enter the number of **SNL FTEs** required to perform the activity for FY95-FY98. Consider the Center FTE constraints, request guidance from your manager if none has been provided (Division 7000 is not anticipating increases in SNL FTEs now or in the near future). Also enter the man-years of **On-site Contractors** (Sandia look-alike) required to perform the activity for FY95-FY98. (This is the work by contractors that are considered on-site, occupying office space, and subject to space charges.)

28.	**Total Operating Cost**	Enter the total estimated cost (in $K) for the activity and cost breakdown for FY95 through FY98. Enter the estimated total cost for FY99 through FY01 (in FY95 dollars). (Warning: a detailed breakdown of costs for FY96 will be required for the FY96 budget call, be sure you have a solid basis for your estimates, accuracy is a major concern.)
	Direct Charges	Enter the estimated direct charge funds required to perform the activities for FY95-FY98. (In FY95 dollars). Direct charges are purchases, JIT, and travel
	Service Centers	Enter the estimated service center funds required to perform the activities. Service Center examples are Facilities, Computing, GSA Vehicles, Purchasing, and Education & Training. (In FY95 dollars)
	SNL Labor Costs	Enter the best estimate for SNL labor cost derived from the FTEs estimated above. For assistance, contact the Center Administrator for FTE rates. Be sure to include appropriate loads.
29.	**Resources**	
	Resource Estimate Notes & Planning Assumptions	Enter the estimating load factors and average FTE rates used for determining total costs and other planning assumptions. Also, consider that number of contractors vs. SNL FTEs can impact costs.
	Resource Constraints	Describe constraints, external or internal, that affect the type of resources that must be used to accomplish the activity, e.g., represented employee agreements, funding type(s), geographical location.
	Long-Term Resource Needs	Estimate the long-term additional resources required to maintain the future core level or to maintain gains made through compliance and improvement activities.
30.	**Non-Operating Costs**	Provided estimated costs for capital, GPP, and Line-Item expenses if this type of funding is necessary for the activities to be performed. This information is to aid in planning, completing this section does not replace the existing funding request process.
31.	**ADS Benefits/Impacts Evaluation**	Describe, in your own words, the **impacts** of not doing this activity, and/or describe the **benefits** of doing the activity. Document your thoughts in each of the appropriate categories (refer to ISMS prioritization descriptions of each category to assist you in completing this section). Only applicable categories should be completed. Your descriptions should make it clear how Sandia is currently handling the need, and what **specifically** will change as a result of this ADS being funded or not funded. (Example: A Chemical Information System(CIS) database currently exists on a stand-alone PC and is periodically updated by line organizations via a "sneaker net". A new CIS system will reside on a network capable of being accessed by many line orgs. at the same time. This should improve efficiency of updating and increases the likelihood of the data being current. Estimated 100 people will each save 1 hour per month by not having to prepare and submit the floppy. In addition, the CIS data clerk will save approximately 20 hours per month by not having to input floppies.)
	Worker Safety & Health	Includes the SNL employees, on-site contractors, other government employees working on-site.
	Public Safety & Health	Includes the general public in the vicinity of the activity.

	Environmental Risks	Includes effects to the land, water, air, vegetation, animals (including endangered species), and historic sites.
	Safeguards and Security	Includes compromise of sensitive and classified information, loss of SNM, loss of classified materials, and general industrial protection of assets.
	Regulatory Compliance	
	Public Assessment	Includes the positive and negative concerns of the local residents.
	Employee Ability and Efficiency	Includes ability to attract and keep high quality employees, and increase efficiency.
	Facilities and Equipment	Includes the importance, adequacy or status, and likelihood of impact on facilities and equipment.
	Business and Financial Management	Includes the importance, adequacy, and likelihood of impact on business and financial activities.
	Cost Savings and Losses	Includes efficiency in time saved/lossed and other cost savings.
	Employee Motivation	Includes ensuring employees are satisfied and motivated.
	Science & Technology (Lab Mission)	Includes improvement and adverse impact of the Lab's ability to meet its mission and strategic plan.

4.0 WORK DECISION PROCESS

4.1.0 Purpose, Scope, Benefit, and Ownership

4.1.1 Purpose

The Work Decision Process is an integral part of the Integrated Services Management System (ISMS). This process provides a method for deciding and documenting what work will be done. Generally, the activities have been scored and prioritized in the Task/Activity Planning Process before the Work Decision Process is implemented. The Work Decision Process addresses the funding and manpower available and assists the Management Team in determining the activities which should be funded.

4.1.2 Scope

This process is part of the ISMS and applies to all work proposed by all Centers. Proposed work must go through this process before it can be authorized and funded.

4.1.3 Benefit

The primary benefit of the Work Decision Process is to provide a common method to evaluate the relative importance of the proposed work and to decide on which activities will be done and which activities must be delayed. While the closely related Task/Activity Planning Process can provide the scores of the individual activities and the relative ranking, it is not a decision making process. The Work Decision Process is the process in which the management team discusses the work proposed and makes decisions based on the information provided by the other processes.

4.1.4 Ownership

The Integrated Services Management System (ISMS) is owned by Laboratories Services Division Vice President, and maintained by the Services Management System Office. The Work Decision Process is a sub-process within (ISMS).

4.2.0 Definitions

4.2.1 Funding Sources

The Laboratories Services Division receives some funding directly from each of the Primary Management Areas (PMAs), and the majority of its funding from secondary areas such as AMCO, (Indirect and Service Centers), and Center Support. The Defense Programs (DP), Energy and Environment, (E&E), and Work for Others, (WFO), PMAs also called Sectors, provide direct funding for specific activities. While these activities do not compete for dollars within the Division, they do have to compete for people.

4.2.2 AMCO

Administrative Management Council. AMCO consists of two separate groups: an executive level group of the Vice Presidents having indirect-sponsored work, and an advisory level group consisting of a representative from each Vice President and Sector. These groups determine the amount of indirect funding which will be made available to the Vice Presidents based on the requests of the Vice Presidents and the activities which will be accomplished with the funding. In addition to managing the indirect funds, AMCO also determines the number of total FTEs which will be allowed for indirect, Center support and service Centers.

4.2.3 Center Support

Activities which are performed by the Center for the benefit of all in the Center. These activities are funded by taxing the labor within the Center.

4.2.4 Service Centers

There are two types of Service Centers. The first type is monopolistic in nature, like Facilities' Utilities/Operation & Maintenance (Utilities/O&M). This service Center has certain activities which are costed in a series of cases and then charged to individual Centers based on the amount of space occupied by the Centers. This type of service Center must have the activities to be performed and the level of those activities approved by an oversight committee. The second type of service Center is purely customer driven. This type of service Center must compete for FTEs but does not have a pre-specified funding level.

4.3.0 Overview of Process

4.3.1 Inputs/Outputs

There are three types of inputs to this sub-process. The first input is a list of activities from the Task/Activity Planning Process. This list has a description of the work and the Center adjusted score.

The second input is a series of constraints. AMCO and the PMAs each provide dollar and FTE constraints for the work for which they are responsible. In addition, each Division has a manpower or head-count target for the end of the year.

The third input is an exception report from the Validation Board which recommends changes to the score of selected activities.

The sub-process has two outputs: The first is a list to each of the Centers of the work which they are allowed to perform and the resources which can be applied to that work. The second output is a list of work which is unfunded and should not be performed. These lists go to the Commitment Management Process.

4.3.2 Preliminary Determination of activities that can be done with available resources.

This sub-process categorizes the activities by funding types and then prepares lists in descending priority (benefit/cost) sequence with a cumulative funds required. As long as the cumulative funds required are less than the funds available, the funding status is "Funded." When the cumulative funding required exceeds the funds available the funding status on the list turns from "Funded" to "Unfunded". Work can be "Funded" but not "Approved" because no bodies are available to do the work.

A similar, but considerably less clear, process is used to determine the work that can be done regardless of funding source with the manpower available.

4.3.3 Generate Proposed Reports of Work

This sub-process provides various reports to the Management Team as requested. There will be several standard reports with an *ad hoc* reporting capability.

4.3.4 Reviews & Modifies

The Management Team reviews and modifies the scores using the exception report from the Validation team and the prioritized activity report. After discussion and the evaluation of impacts and benefits, the Management Team authorizes VP adjustments to the scores and requests that the Centers modify their input and send it back through the work determination step of Task/Activity Planning Process.

4.3.5 Analyze unauthorized work and prepare impact statements

After the initial determination of the work to be done has been made, each Center evaluates the funded work and unfunded work and submits concise impact statements of the work which will not be done to the Management Team.

4.3.6 Review Impact Statements

The Management Team reviews the impact of the work which was not funded and makes a final determination of whether or not the work should be done relative to that which was funded. If some particular piece of work is deemed more important than other funded work, then the appropriate scores will be adjusted and the activities will be sent back to the work determination step. If the particular piece of work is deemed important enough to be done, but not more important than the lowest priority work that was funded, then a decision must be made to request additional funding from the appropriate funding source.

4.3.7 Publish final reports of funded and unfunded work

After the final evaluation of the activities and a determination is made of the work to be done, reports are issued to the Centers.

4.4.0 Flow Diagram

The flow diagram for the Work Decision Process is attached.

4.5.0 Roles and Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Work Decision Process:

4.5.1 Individual Centers

Each Center is responsible for making the changes in its copy of the data base as a result of the deliberations of the Management Team and submitting the revised data to the Systems Management System Office.

Each Center is responsible for understanding its work and the impact of not doing that work.

Each Center is responsible for ensuring that the work authorized is performed, and that work not authorized is not performed.

4.5.2 Services Management System Office

The Services Management System Office is responsible for maintaining the software required to provide the listings and reports requested by the Management Team and for providing the Centers with the reports of the funded and unfunded work.

4.5.3 Management Team

The Management Team is responsible for determining the work which must be done and understanding the consequences of not performing unapproved activities. They have an added responsibility to determine the appropriateness of requesting additional funding from the funding sources.

4.5.4 Validation Board

While the Validation Board is not a part of this process, they do provide an essential ingredient to the decision process . The Board is responsible for reviewing the activities and evaluating the correctness of the scores. In the event they do not agree with the scores, they will prepare a report to the management team to document their disagreement and recommend a new score.

4.6.0 Interfaces

This process has two interfaces with other sub-processes. The first is the Task/Activity Planning Process which provides a combined listing of each Center's scored activities. The second is the Commitment Management Process which receives lists from this process identifying the work that is approved and the work that is not approved

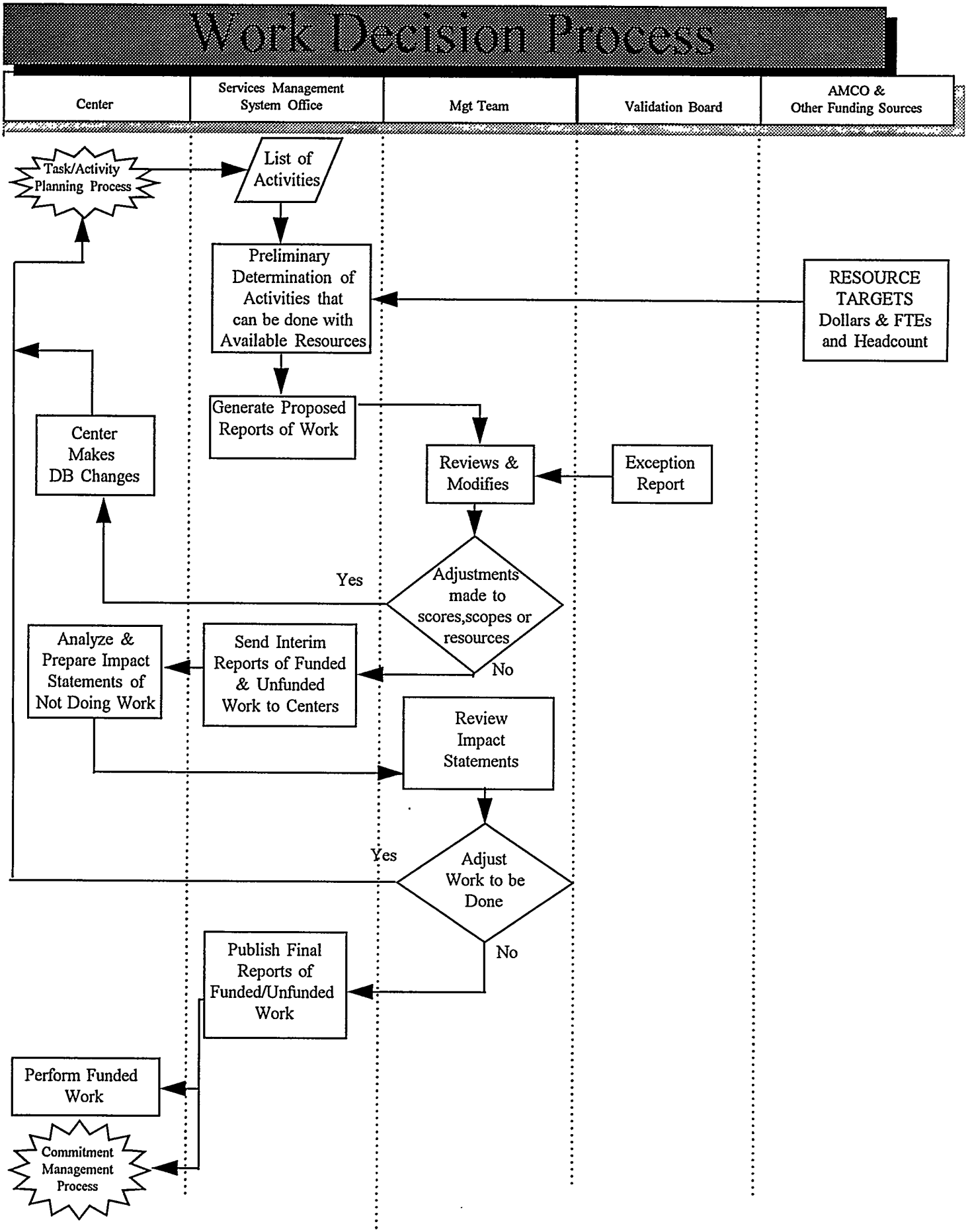
4.7.0 Forms and Templates

This process does not have any forms or templates identified at this time.

4.8.0 Implementation

This process can be implemented on a time scale consistent with customer requirements.

Appendix A: Work Decision Process Flow Diagram


Work Decision Process
Center
Services Management System Office
Mgt Team
Validation Board
AMCO & Other Funding Sources
Task/Activity Planning Process
List of Activities
Preliminary Determination of Activities that can be done with Available Resources
RESOURCE TARGETS Dollars & FTEs and Headcount
Generate Proposed Reports of Work
Center Makes DB Changes
Reviews & Modifies
Exception Report
Yes
Adjustments made to scores,scopes or resources
No
Analyze & Prepare Impact Statements of Not Doing Work
Send Interim Reports of Funded & Unfunded Work to Centers
Review Impact Statements
Yes
Adjust Work to be Done
No
Publish Final Reports of Funded/Unfunded Work
Perform Funded Work
Commitment Management Process

5.0 COMMITMENT MANAGEMENT PROCESS (CMP)

5.1.0 Purpose, Scope, Benefit and Ownership

5.1.1 Purpose.

The Commitment Management Process is an integral part of the Integrated Services Management System (ISMS). It provides a consistent method to negotiate major commitments, and to capture and track information, including performance metrics, on those commitments which are of primary concern to the Division Management Team. The output of this process directly interfaces with the Program Level Process/Project Management Process, providing lasting identification of important commitments which are linked to the various activities within the projects and processes.

5.1.2 Scope.

This process is part of the ISMS and applies to all Centers. All personnel in the Division may propose either external or internal commitments for treatment via the Commitment Management Process with approval of their Center Director or the Division Vice President; however, it should be kept in mind that only Directors and above are allowed to make commitments to external entities per Division policy [Ref. 1].

Operations within the Division that track, monitor, and report on lower-level Division commitments (e.g., Work Order progress) will only need to interface with the Commitment Management Process via summaries of their detailed commitments, to ensure no duplication of effort.

Note that, in general, commitments may come from many different people. Commitments can vary from small ones made by project leaders that require only an hour or two for resolution to those that take very significant amounts of resources and time to meet. Most commitments within the Division, however, do not require the attention of the Management Team. To avoid requiring voluminous amounts of information to be formally captured and tracked, preliminary criteria have been developed as shown in Appendix A to ensure that only those major commitments that are significant to the Management Team are included directly within the ISMS database. Those preliminary criteria should be clarified, finalized and approved by the Management Team. They also should be enhanced or improved as experience with this ISMS sub-process is gained.

Of course, any Center Director, as well as the Division Vice President, can capture and track any commitment they deem significant, regardless of the generic criteria. Those commitments which are not destined for tracking using the Commitment Management Process portion of ISMS probably should be maintained by their owner using less formal means.

Individuals outside the Division can request that a commitment be entered into the Commitment Management Process through the appropriate Center Director or the Division Vice President.

It is possible that many commitments made by Division personnel are merely supportive of larger commitments made in the Sandia corporate name which require significant action by members of other line organizations. In some cases, the Division might even have some managerial responsibilities with respect to all the actions required to meet such a broad corporate commitment. However, ISMS, and the Commitment Management Process in particular, currently are not proposed for operation in such a manner as to include all the information related to the supporting activities and commitments being managed by other Divisions.

5.1.3 Benefit.

The primary benefit of the Commitment Management Process is to provide a consistent, documented method by which commitments of concern to the Management Team, the primary customer for this process, can be systematically developed, tied to funded activities, negotiated, tracked, and either met or renegotiated when supporting activities change.

Effective utilization of the Commitment Management Process will provide information to support related negotiations for deferrals, exemptions, and changes in scope of supporting activity packages. It will also provide enhanced visibility of the commitments to all interested parties, such as stakeholders, and specifically will allow shared responsibility between the commitment owner, other members of the Management Team, and staff performing the work which supports the commitment.

Finally, in the spirit of "what gets measured gets done," the tracking and reminder aspects of the Commitment Management Process operation will act as a motivator or "forcing function" for progress of the work which is tied to the commitment.

5.1.4 Ownership.

The Integrated Services Management System is owned by the Laboratories Services Division, and the Commitment Management Process described herein is a sub-process of that system. The Services Management System Office (SMSO), is responsible for developing and maintaining that Commitment Management Process.

5.2.0 Definitions

5.2.1 Commitment.

A commitment is an agreement or pledge made by one person to another person or group of people to do an activity or a group of activities. (Note that receipt of either oral or written communications requesting action does not imply acceptance of a commitment; however, reasonable commitments based on those requests should be negotiated as soon as practical.)

A simple statement of one type of commitment might be "DOE agreed to provide to the Secretary of Energy a Vulnerability Review of Chemical Safety on five facilities at SNL/NM (MDL, PDL, Buildings 805/806/807, Hazardous Waste Management Facility, and the Light Initiated Explosive Test Facility) by April 1994." As will be seen later, this statement has only the characteristics of a Level 1 commitment, because it is not necessarily complete.

5.2.2 Division Commitment.

A commitment which has been made by a member of the Division.

5.2.3 "Commitor".

Person or group of people, such as the Management Team, who make a commitment.

5.2.4 "Committee".

Person or group of people, such as DOE, to whom a commitment is made.

5.2.5 Commitment Owner.

Managers within the Division who are responsible to either use resources under their influence to perform the required activities that allow the commitment to be met or to re-negotiate the commitment. The

commitment owner is not necessarily the owner of all the activities required to meet the commitment.

5.2.6 Commitment Manager (Optional).

An individual within the Division who assists the commitment owner by being very knowledgeable of the negotiations of the commitment itself, the details of the tasks/activities required to meet the commitment, the progress being made toward meeting the commitment, etc. (Note that in many cases the commitment owner might be the commitment manager, as well.)

5.2.7 Status Level of Commitments.

Level 1 - A general commitment to address properly an issue or finding on a schedule consistent with overall management plans and budgets, but without as-yet specifying all the particular activities that will be performed or the metrics, such as schedule, by which completion of those activities will be measured.

(Note that the distinction between an issue and a Level 1 commitment is that the commitment involves a specific pledge which is made by someone to someone else that the issue of interest will be satisfactorily resolved ultimately via new or modified activities.)

Level 2 - A commitment to perform specific activities or produce specific results, such as those needed to add a new logistical process, including definition of all performance metrics and their basis for evaluation which will be used to signify completion of the achieved objective(s).

5.2.8 Well-Structured Commitment.

A well-structured commitment should have the following characteristics:

(a) be based upon a program, project or process having a detailed plan specifying what will be done, the sources of resources needed to perform the work, the metrics of performance (e.g., milestones, on-call response, frequency), and the basis on which those metrics will be evaluated (e.g., by surveying customers, counting rocks, etc.).

(b) come from management influencing those resources needed to perform the work.

(c) identify the "commitor", the "committee", the commitment owner, and the commitment manager.

Because of the first characteristics given above, only Level 2 commitments can reasonably be considered as being "well-structured" commitments.

5.3.0 Overview of Process

5.3.1 The Commitment Management Process often begins with a list of approved and unapproved activities to be performed by, or at least managed by, personnel within the Division. That list is produced by the Work Decision Process.

5.3.2 The list of approved and unapproved activities is first used by SMSO personnel to compile a list of existing commitments in the Division ISMS which show linkage to unapproved activities.

5.3.3 The Management Team reviews the commitment and activity lists and instructs the appropriate commitment owners to negotiate deferrals -- or complete or partial exemptions -- for those commitments which are tied to work that has been terminated or delayed. (It is extremely important that any such deferral or exemption negotiations by the commitment owner be made with the same customers and/or stakeholders as for the original commitments.)

5.3.4 The Management Team reviews the approved work list to determine if any activities have changed sufficiently that other commitments need minor renegotiation with respect to either performance, schedule, or cost. If so, they instruct the appropriate commitment owners to renegotiate those commitments with the original customers/stakeholders, i.e., "committees".

5.3.5 The Management Team reviews all the approved activities from the perspective that new work might be starting which causes some specific customer(s) or stakeholder(s) to desire formalization of a commitment to continue that work and/or to produce specific products. In such cases, the Team should first assign a responsible Director to follow-up on each proposed commitment, to keep from impacting the whole Team.

5.3.6 Identification of the commitment owner by the chosen responsible Director will be critical for this process. In most cases the appropriate owner will be obvious, because it will be the "commitor" of the pledge. For example, an action plan responding to a set of appraisal findings may be a Level 1 commitment which is clearly owned by the Vice President, the signer of that plan. However, that example action plan probably depends on several other related Level 2 commitments by various Center Directors. The hard

part comes in scoping the related commitments by the different Directors, and turning them into solid, specific Level 2 commitments with clearly defined ownership and responsibility.

5.3.7 The decision on whether a Level 1 commitment is needed should generally be made by the responsible Director, based on the urgency of the need for some basic agreement in principle. Level 1 commitments most likely should not be used except for initiating commitment negotiations with external customers or stakeholders. If Level 1 commitments are made, however, their details should be entered into the ISMS database immediately.

5.3.8 Most often, serious commitment negotiation probably will start between the commitment owner and the "committee" by formulation of several rather specific tasks to be performed or results to be achieved, but without the detail necessary for clear identification of the agreement by interested observers.

5.3.9 Detailed negotiation and clarification is critical to forming a Level 2 commitment. In some cases, it may be necessary for the Commitment Manager, under the direction of the Commitment Owner, to orchestrate minor modifications or "tweaks" to existing activity descriptions, resource allocations, etc. in the related Activity Data Sheets (ADSs) to better indicate that some portions of that work are being done in support of a particular Level 2 commitment. If those "tweaks" do not impact other commitments or work approval rationale, they should be allowable without full processing through the Task/Activity Planning Process, although any such changes need to go through sufficient parts of that process to ensure the changes are all correctly captured in the Center and Division ADS databases.

5.3.10 A critical element of the Level 2 commitment-making process is the determination via negotiation of the performance metrics which will be used by both parties to the commitment to determine that the commitment has been met upon completion of the related activities.

These metric negotiations should also include discussions on who will measure what, how they will measure it, and how progress will be tracked, changed and closed out. Formal commitments should be tracked and reviewed for progress periodically by all involved parties, not just the Commitment Owner or the Commitment Manager.

(For project-like activities, milestones are perhaps the most common metric, but they only capture one aspect of the triple-constraint of cost, performance and schedule commonly referred to in quality discussions.

Metrics concerning how well the product or service met the initial goals should also be developed for project-like activities. Cost metrics are relatively easy to develop for project-like activities, however they frequently are not as important to the commitment process as they are to the work decision process.

For process-like activities, the rate of product or service delivery is often a viable performance metric, the timeliness of delivery is a reasonable schedule metric, and the cost per unit product or service is a good cost metric. However, if the activity is a project-like activity to improve an existing process, the increase or decrease in some process variable might be a better performance metric. A related cost metric might be something like the amount of "price" decrease that could be achieved without performance suffering. The schedule metric in this case might be something like the date by which the performance change will be achieved.)

5.3.11 There will often be only simple linkages between a given Level 2 commitment and a single ADS. However, one-for-one linkage is not a requirement of ISMS, and it is not unrealistic to expect that the Division may quickly get to the state of process/project development and management that there are multiple commitments made to different individuals which are closely related and are tied to a single ADS. There also could be multiple ADSs that are tied to a single commitment. The latter situation is perhaps more likely for a Level 1 commitment than for a Level 2 commitment. In any case, indicating all the correct linkages in the ISMS database is an important part of the Commitment Management Process.

5.3.12 To ensure consistency throughout the ISMS, the new or modified commitment data is always first entered into the responsible Center's ISMS database, and then is "rolled up" to the Division ISMS database maintained by SMSO.

5.3.13 For the commitment data present in the ISMS database, periodic reports concerning the commitments in effect will be generated by the Centers and/or SMSO and sent to requesting managers within the Division. As the Commitment Management Process is developed more completely, it is expected that various standard types of reports will be made available. Almost certainly those will include reports on both "upcoming" actions and "overdue" actions which are related to some of the commitments.

5.3.14 A "one-time" portion of the Commitment Management Process is being done as a corrective measure to get the Division from its current state of having only a few documented commitments in ISMS to a better state of having begun to capture many more realistic commitments which are tied

to the authorized work. Via this effort, we may also identify a need for renegotiation of old commitments which are no longer valid. The basic plan for this corrective activity is to have SMSO personnel:

(a) review the existing data in ISMS,

(b) review the existing information in the Case Data Sheets prepared for AMCO for the budget process, and

(c) hold focused discussions with the members of the Management Team or their appointed representatives, and their Department Managers if necessary.

Performing these steps should allow better communication of the types of commitments the Management Team might want to capture within ISMS for later usage, and initial identification of existing current commitments that fit the capture criteria.

5.3.15 As mentioned earlier, many Level 1 commitments may actually be generated initially as management pledges to someone to resolve issues, as part of the Issues Management Process, before ADSs for the supporting activities are developed. Those Level 1 commitments should be either transformed to or supported by Level 2 commitments later as the ISMS process continues via development of funded, supporting activities.

5.4.0 Flow Diagram

The flow diagram for the Commitment Management Process is found in Appendix B.

5.5.0 Roles & Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Commitment Management Process:

5.5.1 Services Management System Office

(a) Maintain the Division ISMS data and perform commitment-related queries against that data, as needed.

(b) Assist Center System Administrators in developing methods of accessing and/or modifying commitment-related data.

5.5.2 Commitment Manager (Optional appointment by Commitment Owner)

(a) Assisting the Commitment Owner in negotiating the details of Level 2 commitments, including metrics and linkages to ADSs and other commitments.

(b) Assisting the Commitment Owner in ensuring the accuracy of the commitment-related data in the Center's ISMS database, and the appropriate "roll-up" of that data to SMSO.

(c) Assisting the Commitment Owner in being properly informed of the status of the activities supporting the commitments.

5.5.3 Commitment Owner

(a) The commitment owner usually should be a manager, director, or the vice president. That is because this person is responsible for managing his/her own resources in a way oriented toward meeting the original commitment.

(b) If management decisions are made which make meeting the original commitment impossible, the commitment owner is responsible for renegotiating it, and/or recommending a realistic change in course of action to the Management Team.

(c) If the commitment owner is not responsible for all the activities necessary to fulfill the commitment, he/she has another responsibility to keep adequately informed as to the status of those activities not directly controlled by them and to take appropriate action to rectify any problems which develop with those indirectly-controlled activities. This is particularly true for those commitments that involve more than one Center.

5.5.4 Responsible Director

(a) Analyze the initial situation discussed by the Management Team,

(b) Assign a Commitment Owner, and

(c) Decide if formalization of a Level 1 commitment is necessary.

5.5.5 Management Team

(a) The Management Team should initially decide if existing commitments should be renegotiated as deferrals in performance,

and/or exemptions from directives, based on the information they used in their Work Decision Process and the related information available to them.

(b) For those situations where the authorized work has only changed to a small degree, the team should decide if renegotiation of any existing commitment which might be tied to the modified work package is necessary.

(c) A final decision the team should make is whether a new formal commitment should be made to interested parties based on increased work in various areas. If so, they will delegate follow-up responsibility to an appropriate Director.

5.6.0 Interfaces

5.6.1 Interface of Commitment Management Process with the ISMS Task/Activity Planning Process.

(a) This interface is primarily via the Work Decision Process, because the Task/Activity Planning Process is used to develop much of the basic activity data on which the decisions are made in the Work Decision Process.

(b) A more direct interaction with the ADS-minor-revision part of the Task/Activity Planning Process is present in the Level 2 commitment development sub-process, but that interface is merely to ensure that minor changes to ADSs required to reflect those commitment negotiations are properly captured in the ISMS database.

5.6.2 Interface of Commitment Management Process with the ISMS Work Decision Process.

(a) This interface is the primary entry point of information into the Commitment Management Process from the rest of ISMS. Although the primary pieces of information identified at this interface are the "lists of approved and unapproved activities", considerably more information concerning those activities which was developed in the Task/Activity Planning Process is also passed through the interface, as alluded to in Section 5.6.1.

5.6.3 Interface of Commitment Management Process with the ISMS Program Level Process/Project Management Process.

(a) This interface is the primary exit from the Commitment Management Process to the rest of ISMS. The commitments which are tied to the various activities described in ISMS are very important to the follow-up management of those projects/ processes. For example, the detailed project/process plans might be expected to include considerably more detail on how the activities are actually managed to "get back on track" if it appeared that commitment tracking evidence existed which indicated that related commitments would not be met without such corrective action.

5.6.4 Interfaces of Commitment Management Process with organizations and processes outside of the Division.

(a) Deferral and Exemption negotiations, and other existing commitment negotiations and/or renegotiations, usually involve customers or stakeholders outside the Division; often these individuals are outside Sandia. Examples of such interfaces might include negotiation of commitments for the DOE/SNL Appraisal Agreement and formulation and negotiation of Requests For Approval (RFAs) to DOE as part of the Order Compliance Self Assessment process.

(b) New commitment negotiations also frequently involve customers and/or stakeholders outside of the Division.

(c) Many types of low-level commitments made by Division personnel to Sandia organizations outside of the Division will not be captured within ISMS, so are not of concern.

5.7.0 Forms and Templates

5.7.1 Samples of the Commitment Data Sheet and its related instructions are attached at the end of this section.

5.8.0 Implementation

This process can be implemented on a time scale consistent with customer requirements.

5.9.0 Performance Assessment

After the Commitment Management Process has actually been used for one complete budgeting cycle, one metric to investigate is the number of times an

external customer/stakeholder makes a query to a member of the Division concerning some "commitment" in which they were interested that was not formally captured in ISMS.

Also see Section 7.0, Performance Assessment.

Appendix A: Commitment Capture/Exclusion Criteria

Appendix B: Commitment Management Process Flow Diagram

Appendix C: Commitment Data Sheet

Appendix D: Directions for Completing Commitment Data Sheet

APPENDIX A

COMMITMENT CAPTURE/EXCLUSION CRITERIA

A.1.0 Possible ISMS Commitment Capture Criteria

A.1.1 Case Manager - Nothing required in ISMS, only in Case Data Sheet and/or Project/Process Plan.

A.1.2 Department Manager - Required for capture in ISMS if it is a primary "justification" for the activities described in an ADS.

A.1.3 Director - Required for capture in ISMS if:

(a) the commitment is made to external customers and/or stakeholders, or
(b) the resources (Labor + Direct Charges + Direct Support) to resolve the commitment are more than 100K, or
(c) required to meet a Vice Presidential commitment.

A.1.4 Vice President - Required for capture in ISMS if:

(a) the commitment is made to external customers and/or stakeholders, or
(b) the resources (Labor + Direct Charges + Direct Support) to resolve the commitment are more than 500K, or
(c) required to meet a larger Corporate commitment.

A.2.0 Possible ISMS Commitment Exclusion Criteria

A.2.1 Case Manager - activities to satisfy commitments can be met within existing Case limits using personnel normally working on the Case and without significant impact to previously scheduled Case activities.

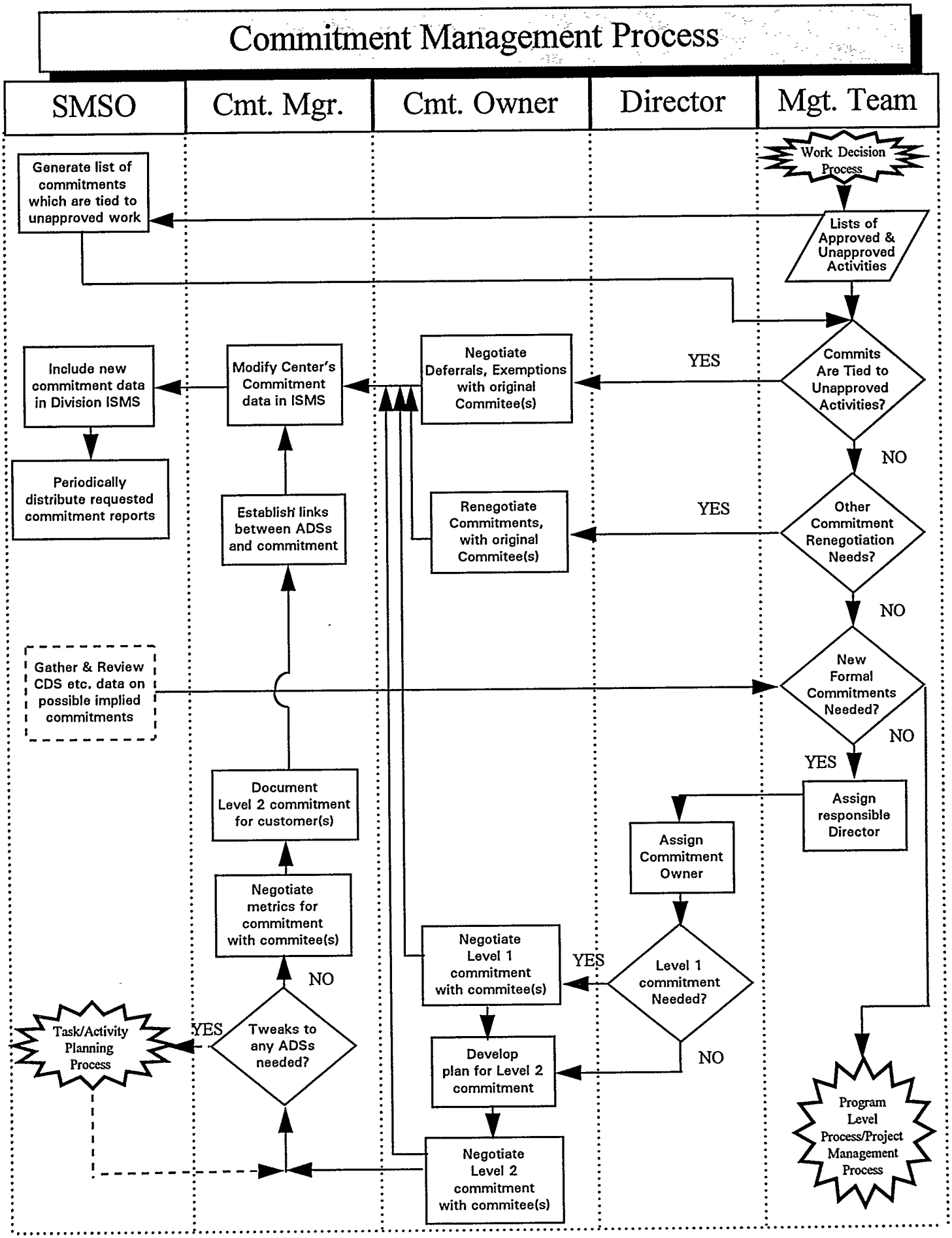
A.2.2 Department Manager - activities to satisfy commitments can be met with existing Department personnel without significant impact to previously scheduled and approved Departmental activities.

A.2.3 Director - activities to satisfy commitments can be met with existing Center personnel without significant impact to previously scheduled and approved Center activities.

A.2.4 Vice President - activities to satisfy commitment can be met with existing Division personnel without significant impact to previously scheduled and approved Division activities.

APPENDIX B

•9/25/95



APPENDIX C

COMMITMENT DATA SHEET

SANDIA NATIONAL LABORATORIES

(Attach additional pages as necessary)

(For Data Entry Reference Use Only) ⇨ [ ]

COMMITMENT Number

Date: _____

1. **Commitment Title:** _____
2. **Commitment Owner** _____ **3. Owner Org.** _____
4. **Commitment Manager** _____ **5. Manager Org.** _____
6. **Commitment is:** **On-going** _____ **One-Time Effort** _____ *(Select one only)*
7. **Commitment Status Level is:** **1**_____ **2**_____ *(Select one only)*
8. **Person to whom the commitment was made:** _____
9. **Organization for person to whom the commitment is made:** _____
10. **Date Commitment was initially made** _____
11. **Original Commitment Completion Date** _____ **12. Scheduled Completion Date** _____
13. **Identify Document reference where commitment was made** _____
14. **Related ISMS Commitments:** _____
15. **Commitment Description:** _____
16. **Performance Metrics and Evaluation Basis:** _____

(For Data Entry Reference Use Only) ⇨ [ ]

COMMITMENT Number

17. **Current Status: Open** _____ **On hold** _____ **On-going** _____ *(Select one only)*

18. **Status Comments:** _____

19. **Related ADSs in ISMS:** _____

20. **Reporting Requirements:**

Report Type	Report Addressee	Report Frequency

APPENDIX D

DIRECTIONS FOR COMPLETING COMMITMENT DATA SHEET

Commitment: An agreement or pledge made by one person to another person or group of people, to do an activity or a group of activities. A well structured commitment should have the following characteristics:

(a) be based upon a program, project or process having a detailed plan specifying what will be done, the sources of resources needed to perform the work, the metrics of performance (e.g., milestones, on-call response, frequency), and the basis on which those metrics will be evaluated (e.g., by surveying customers, counting rocks, etc.);

(b) come from management influencing those resources needed to perform the work; and

(c) identify the "commitor", the "commitee", the commitment owner, and the commitment manager, if any.

Item #	Data Required	Directions
	Commitment Number	The official Commitment Data Sheet number will be computer generated at the time the data is input into the ISMS computer system. (You may choose to establish a preliminary numbering system to help track your Center's commitments before that point.)
	Date	Enter the numerical date (as Month/Day/Year) that the Commitment Data Sheet is being prepared.
1.	**Commitment Title**	Enter a short descriptive title to be used for quick reference and report generation. It should be distinct from other similar titles and begin with a verb. Succinctly, include the product or service pledged.
2.	**Commitment Owner**	Enter the name of the individual who owns (i.e. makes) this commitment. This individual is responsible for ensuring its completion.
3.	**Owner Org.**	Enter the organization number of the Commitment Owner.
4.	**Commitment Manager**	Enter the name of the individual who will help the Commitment Owner manage the action to be taken to fulfill this commitment (optional).
5.	**Manager Org.**	Enter the organization number of the individual who will help the Commitment Owner manage the action to be taken to fulfill this commitment (optional).
6.	**Commitment is:**	Select one of the following only:
	On-going	**On-going** refers to a commitment to a process that has been or is to be established. The development of the process will have an associated milestone, but the process will be on-going.
	One-Time Effort	**One-Time Effort** refers to a commitment which will result in a product. The supporting work will be managed as a project with all the appropriate time constraints identified.

Item #	Data Required	Directions
7.	**Status Level is:**	Select one of the following only:
	Level 1	This commitment is a general commitment to address properly an issue or finding, but without as-yet specifying all the particular details of those activities or the metrics for them.
	Level 2	This commitment is to perform specific activities or produce specific results, such as those needed to add a new logistical process, including definition of all performance metrics and their basis for evaluation which will be used to signify completion of the achieved objective(s).
8.	**Person to whom the commitment was made**	Give the name of the individual to whom the commitment was made, last name first. Example: Crowe, Richard
9.	**Commitee's Organization**	Indicate the organization for the individual to whom the commitment was made. Use standard abbreviations. Example: DOE/HQ/DP-13
10.	**Date Commitment was initially made**	Identify the **Date** (as Month/Day/Year) the commitment was made to the individual previously identified as the **Person to whom the commitment was made.**
11.	**Original Commitment Completion Date**	Identify the **Completion Date** (as Month/Day/Year) first given for this commitment. For a process commitment, this would be the date when development of the process is completed. This date should not change even if the completion date is re-negotiated. It is kept for historical and tracking purposes.
12.	**Scheduled Completion Date**	This is the current negotiated or agreed upon **Completion Date** for the commitment. It may or may not agree with the **Original Commitment Completion Date.**
13.	**Identify Document reference where commitment is made**	Commitments usually should be documented by the individual making the commitment. The document might be as informal as a memo with a specific associated date, or it could be a specific section of a formal document generated by Sandia which would have a specific alpha-numeric identifier. If the commitment was verbal, identify it as 'verbal'. If the document is a related action plan being individually tracked elsewhere, identify that here.
14.	**Related ISMS Commitments**	Identify, by commitment number, any and all other commitments in ISMS which are considered to be directly-tied to this commitment.
15.	**Commitment Description:**	This is a short description of the actual commitment. It should contain enough detail to identify its uniqueness as a commitment and indicate specifically what was promised.
16.	**Performance Metrics and Evaluation Basis**	Identify the metrics of performance for this commitment (e.g., milestones, on-call response, frequency) by which an external observer could tell when the commitment has been satisfied. Also identify the basis on which those metrics will be evaluated (e.g., by surveying customers, counting rocks, etc.).

Item #	Data Required	Directions
17.	**Current Status:**	Indicate the current status of the commitment. Select only one:
	Open	**Open** status would be used for a new commitment currently to be addressed. If selected, the Status Comments field should indicate who the Responsible Director is.
	On hold	**On hold** status indicates the commitment is not currently being addressed. (If selected, the Status Comments field should be used to explain why this commitment is currently **not** being worked).
	On-going	**On-going** status indicates a commitment for a process or group of activities which are currently in place and will continue indefinitely.
18.	**Status Comments**	This field should be used to further explain the current status of the commitment. If the status is 'Open' the Responsible Director must be shown here. If the status is 'On-hold' a detailed explanation of why that is true is required here. For 'On-going' status, this is an optional field.
19.	**Related ADSs in ISMS**	Identify, by Activity Data Sheet (ADS) number, any and all activities in ISMS which are considered to be directly-tied to this commitment, i.e. identify by ADS number all ADSs which must be either fully or partially completed to satisfy this commitment. Identify all such APPROVED and/or UNAPPROVED ADSs.
20.	**Reporting Requirements**	For each report requested by the commitment owner, identify the report type, the addressee of the report, and the frequency or periodicity with which the report is to be produced. Do this by filling out the table provided. Note that it is expected that the same report might have different addressees with different reporting frequencies, etc. The allowed Report Types are the standard reports available in the ISMS software used by the Centers and/or the SMSO. The allowable values for Report Addressee are: Related ADS managers, Commitment Owner (CO), Commitment Manager, Vice President, Responsible Center Director, Whole Management Team, CO for DOE/KAO, CO for DOE/AL, and CO for DOE/HQ. The allowable Report Frequencies are: When Created, When Changed, Monthly, Quarterly, Annually, Scheduled Completion Date (SCD), SCD-90, SCD-60, SCD-30, Monthly when past SCD.

6.0 PROJECT AND PROCESS MANAGEMENT

6.1.0 Purpose, Scope, Benefit, and Ownership

6.1.1 Purpose

Project and Process Management is an integral part of the Integrated Services Management System (ISMS). This section provides the requirements for developing project and process plans within the Laboratories Services Division and guidance on methods of creating those plans.

6.1.2 Scope

The Project and Process Management is part of the ISMS and applies to all organizations within the Laboratories Services Division. All work being accomplished by the Laboratories Services Division will be in accordance with a project or process plan.

6.1.3 Benefit

a) The primary benefit of the Project and Process Management is to ensure all work in the Laboratories Services Division is planned.

b) This section specifies the minimum sections that constitute a plan and allows a graded approach applied to simple and complex projects and processes.

c) This section ensues that the minimum planning activities have been accomplished.

d) Managers can use the plan to assess accomplishment of the work.

6.1.4 Ownership

The Project and Process Management is owned by the Vice President of the Laboratories Services Division. The Services Management System Office is responsible to the Vice President for developing and maintaining the Project and Process Management section.

6.2.0 Definitions

6.2.1 Project
An organized set of activities committed to deliver a product or service to a customer within defined performance, cost and schedule boundaries. It has a beginning, milestones to measure progress, and an ending date. The project can be described by linking the sequence of activities into a coherent order.

6.2.2 Process
An organized set of activities committed to deliver a product or service to a customer. It differs from a project in that there is no start or ending date. Thus an active process is always on-going. A process is managed by cost, efficiency, and performance. One measure of efficiency and performance is by using metrics. The process can be described using a flow diagram that links the activities into a coherent order.

6.2.3 Work Breakdown Structure (WBS)
A hierarchical diagram that describes the program in terms of levels of work. It is similar to a "family tree" and must include all activities that are required to execute the program. A WBS displays and defines the work to be accomplished and relates the elements of work to each other and to the end product or service.

6.2.5 Metric
Measures that calibrate the effectiveness and efficiency in meeting the project or process objectives. A milestone is one type of metric that is often used in projects to indicate conformance to schedule.

6.3.0 Requirements

6.3.1 Work will only be accomplished on activities approved by the Center directors.

6.3.2 A project or process plan shall be written for each approved activity in the Laboratories Services Division.

6.3.3 Resources spent on the execution of each activity must be tracked.

6.3.4 The written work plan shall describe how the work will be accomplished. Although this plan should not be a lengthy document, it should describe the specific responsibilities, method of execution, interrelated activities, and matrix support. As a minimum, the project or process plan shall contain:

a) The objectives and deliverables of the work *
b) The customer(s)
c) How the work will be executed
d) The work breakdown structure within the project or process
e) A schedule (for project plans) or process flow diagram (for process plans)
f) Resources allocated for the project or process*
g) The metrics for control during the execution of the work*

*Available on the ADS

Each Center shall determine other specific information and specify the format required in the work plans. The Center shall determine how the written project and process plans are reviewed and retained.

6.4.0 Roles & Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Project and Process Management:

6.4.1 Services Management System Office:

Develop and maintain the Project and Process Management Section.

6.4.2 Center Directors:

Develop the content and format for project and process plans within the requirements of this section. Specific responsibilities include:

a) Review and agree with the objectives of the project or process.

b) Provide the content and format for project and process plans within the requirements of this section. Specify when the plans need to be developed, reviewed and retained.

c) Review the plans to ensure the project and processes can achieve the objectives. Ensure project or process metrics can be used to control the work.

6.4.3 Project and Process Managers or Leaders:

a) Develop and obtain agreement with the objectives of the project or process.

b) Coordinate with all other organizations and people connected with the project or process to ensure that each know their responsibilities and have the ability to execute the plan.

c) Write a project or process plan in accordance with this section and the Center's specifications.

d) Develop metrics that measure the progress of the project or process.

e) Execute the work in accordance with the plan.

f) Modify the work plan when significant changes occur to the project or process.

6.5.0 Interfaces

6.5.1 Interface of Project and Process Management with the ISMS Work Decision Process.

a) The output from the Work Decision Process (see section 4) is a set of approved activities for each Center.

b) Work plans should not be completed until the Management Team has determined the approved activities.

c) Work plans may be written for activities that may receive future approval (such as when additional resources are available).

6.5.2 Interface of Project and Process Management with the ISMS Performance Assessment Process.

a) A well written plan with good metrics is essential for assessing the performance of any project or process. Project and Process Managers or Leaders must develop measures that indicate that the work is proceeding toward accomplishment of the objectives.

b) Directors and Managers will use the project or process plan and the associated metrics to assess the execution of the work.

6.5.3 Interfaces with organizations and processes outside the Laboratories Services Division are described below:

a) Work being conducted directly for organizations outside of the Division will be conducted under the plans written by that outside organization.

b) If the Division direct support to an outside organization is substantial, then a support work plan should be written.

6.6.0 Forms and Templates- none

6.7.0 Implementation

6.7.1 This process can be implemented on a time scale consistent with customer requirements.

6.7.2 Project and Process Plans will be written for all approved activities before commencement of work in any fiscal year.

6.8.0 Performance Assessment

2.9.1 Each Center will establish a system of assessing the adequacy of the content and format of project and process plans.

2.9.2 This section will be continuously improved based on comments and suggestions received. At least each year the Services Management System Office will conduct a formal review of this section. Major changes will be approved by the Vice President, Laboratories Services Division.

6.9.0 References

6.9.1 "The Preferred Processes - Project Planning and Management", Sandia National Laboratories, SAND90-2227/3 UC-900 Issue A, September 1991.

6.9.2 The Implementation of Project Management: The Professional's Handbook. Edited by Linn C. Stuckenbruck, Project Management Institute. Addison-Wesley Publishing Company, November 1994.

6.9.3 A Framework for Project and Program Management Integration, R. Max Wideman, Project Management Institute. 1991.

6.9.4 Management in Action-Guidelines for New Managers, William D. Hitt, Battelle Press, Columbus, 1985.

7.0 PERFORMANCE ASSESSMENT PROCESS

7.1.0 Purpose, Scope, Benefit, and Ownership

7.1.1 Purpose

The Performance Assessment Process provides a consistent, systematic approach to evaluating the performance of work being done by each Center in the Division. The primary purpose of this process is to provide the information needed to enable management to make knowledgeable decisions about changes needed to alter the progress and quality of work being performed, and to provide early warning of possible systemic problems within Centers. The output of this process is information to be used by Center management and the Management Team to help answer the following types of questions:

Management Team's Questions

a) Is work satisfying main process metrics, and completing current major milestones as reflected in the ADS, & does it satisfy commitments as reflected in ISMS?
b) Do project and process plans accurately portray the authorized work specified in ADSs?
c) Is each Center working within its budget and manpower constraints?
d) How many funded activities are and are not covered by project or process plans?
e) How many projects are over cost(i.e. cost over the phased spend plan) or not meeting schedule?
f) Can specific systematic problems be identified as frequently occurring in similar types of work (i.e. root cause identified, resulting in a division level change of work management practice)?
g) Are customers satisfied?
h) Does each Center track the work status of all Projects & Processes?
i) Is the list of issues and commitments for the Division complete?

Center Project and Process Manager's Questions

a) Is all work covered by a Project or Process Plan?
b) Are Project Plan milestones, FTEs, costs, schedules, and acceptance requirements being met?

c) Are Process Plan performance objectives and metrics being met?
d) Is the product what was agreed upon with the customer?
e) Is the customer satisfied with the quality and performance?
f) Is work completing current milestones & does it satisfy commitments?
g) Are detailed project and process plans accurately summarized in ADSs?
h) Do project and process plans accurately portray the work being done?
i) Can specific problems be identified as frequently occurring within similar types of work (i.e. root cause identified)?
j) Are metrics and criteria for evaluation being tracked for processes?
j) Are detailed plans sufficient to indicate alternate approaches and/or contingencies?

7.1.2 Scope

This process provides the information required by management to evaluate how well work is being managed and accomplished. With this information, decisions can be made by the Management Team and by the Centers to improve the ways in which work is managed and the quality of the product or service, and to identify generic problems the Division or Centers have in either process or project management. The tracking of metrics for evaluating work and management of work element progress will be done by each Center, with summarized data to be delivered to Services Management System Office for Division level analysis of the performance data. Periodic review of projects and processes using the performance data will provide the opportunity to the Centers to find and correct problems at an early stage in the work. The Services Management System Office will use the summarized data to provide analysis and status reports for the Management Team. Specific periodic reports are produced (possibly monthly) such as Status Reports, and special reports are produced as requested.

The majority of the effort for this process resides with the Centers because that is where the work is. Well written project and process plans are required to provide a good baseline for tracking and evaluating metrics. The metrics need to be carefully tracked continually to give an accurate analysis of the status of work, and work performance. Any analysis done for the Management Team will be constrained by the quality and accuracy of data rolled up from the Centers. The quality of decisions made by the Management Team and Centers is also affected by the quality of the performance data collected by the Centers. This process describes some of

the common elements necessary for performance assessment by each of the Centers to ensure a platform of similar data and similar analysis methods are used by all the Centers. This will help in identifying root causes of problems existing across the Division. The exact tools and methodology for each Center will be their choice to ensure their unique needs are met. Any training in the Malcolm Baldridge Quality Award assessment of work processes would enhance what any Center establishes for improving performance and efficiency. Any work process requires determination of who their primary customers are as a first step. This may seem like an easy step, but it is often skipped because each individual assumes they already know who the customer is. What groups frequently find when they try to define their customers in order of importance, is that they don't initially agree with each other.

7.1.3 Benefit

Consistency in the methods for assessing work and types of metrics used across the Centers will enable the SMSO to analyze the performance data to help the Management Team to understand work status and more easily make decisions affecting that work. Analysis of work performance indicators could point out areas of the Work Management process to modify, and could address concerns which exist at the Division level. The Center level Assessment Process will also determine if customers' requirements and expectations are being met via performance data inputs from the customer.

7.1.4 Ownership

The Vice President of the Division and the Management Team owns the Performance Assessment Process. The Services Management System Office is responsible for developing and implementing the process, and for providing guidelines to help the Centers implement the process. The Center Directors own the bulk of the subprocesses comprising this process.

7.2.0 Definitions

7.2.1 Performance Assessment

A performance assessment is a series of subprocesses and measurements used to determine work progress, as detailed in a process or project plan, and quality of work managed and accomplished. Performance assessments for processes require tracking of functions and performance indicators on a year-to-year basis to show trends in performance.

For projects, work performance metrics will be indicated by comparing current work status with the resource (budget and FTE) plans, milestones, and objectives, and customer requirements detailed in the project plan.

7.2.2 Criteria for Evaluation

The criteria specify how the metrics will be measured, by whom, how the quality of the input will be controlled, and how the use of metrics will affect the process. (Example: The metric is timeliness of delivery services for equipment needed. The criteria are: an individual is assigned the job of checking the delivery schedule against actual deliveries every other week, a range of acceptable delivery times is defined for each delivery, and the data is recorded in a delivery tracking notebook. If it is found that equipment is being delivered by XYZ Company later than the time shown in the project schedule thus causing delays in work, the project team could respond by ordering the equipment from that company earlier than originally scheduled).

7.2.3 Project Plan

A Project Plan describes the technical performance requirements, design constraints and specifications, and work activities required to deliver the product. Alternatives and contingencies, if any, should be indicated. It integrates budget requirements and FTEs, purchase, and schedule requirements with the work activities. The metrics and criteria for evaluation reflecting quality of product and customer satisfaction are accurately described in the acceptance specifications which are negotiated with the customer.

7.2.4 Process Plan

A Process Plan describes the functions performed in the work, as well as the schedule, cost, FTEs, and metrics for quality of performance and customer satisfaction for any one occurrence of a function. Performance of a function in any one occurrence can be measured by some of the same metrics used in a project, such as time to completion, cost of activity, etc.. However, to evaluate the overall process, it is necessary to collect data on each occurrence of a function to build a historical basis for comparison. Metrics, criteria for evaluation, and specific goals are described in the plan. The performance data for the functions within the process will provide a history to be used to indicate where processes can be modified to reduce costs and improve efficiency and customer satisfaction. A history of performance data on each function provides some degree of management and control over the process.

7.3.0 Overview of Process

The Performance Assessment Process uses data collected from the Project/Process Management Process as input and resides primarily at the Center level where the work is managed. All activities are managed using project or process plans written to the appropriate level of detail. When projects and processes are established, 'who the customers are' needs to be kept in mind. (As an example, a 7XXX individual has a responsibility to the Sites Manager to ensure Sandia is meeting specific corporate(contractual) or legal requirements, such as complying with a specific DOE Order or complying with an EPA regulation. That responsibility extends to establishing and managing the process or project in the most effective and cost saving manner by not adding unneeded requirements for the line organizations or building a system which does not significantly increase benefits or reduce risk, or which is not absolutely necessary to meet the letter of the law. The individual also has a responsibility to the line organizations (another customer) being guided and advised by this individual, to help them meet DOE requirements in the most efficient and economical fashion possible. A project or process designed with a lot of "overkill" in it wastes resources desperately needed by Sandia elsewhere. Metrics for assessing the performance of an activity are contained in the plan, as well as the criteria by which the metrics are evaluated. As an example, the Electronic Security Systems Department, may need to upgrade the security system in a building that stores nuclear weapons components. The system they put together should meet standards for reliability, while satisfying the customer's needs and expectations. Reliability is a metric for measuring technical performance of system design, and the criteria for evaluating the reliability could be:

Industry standards for security systems used to protect similar products
Corporate standards for like products
NRC requirements for reliability of the product
Regulations governing reliability as dictated by other regulatory agencies

When all work is tracked via Project/Process Plans, and a Center 'performance data tracking/analysis' process is in place, the data from each of the Centers will be analyzed to determine if that is the appropriate data to be tracked, and to share good and bad aspects of each Center's work analysis approach. From the study of the data, and discussions with the Centers, the process can be refined, and a list of useful analyses can be written for each of the Centers to apply as they find a need. The cumulative data from all Centers can be analyzed to identify problems existing within all the Centers. Each analysis should add clearly defined value to the Centers and/or the Management Team. In 7.10.0, Appendix A, B, and C give examples of potential metrics and criteria for evaluation.

7.3.1 Inputs -

Before Performance Assessments at any level can occur, the Center has to have the following work management tools in place and being used consistently.

- All work has to be managed using project and process plans (managed and tracked by the Center).
- Work performance data such as metrics, evaluation criteria, milestones, customer inputs, schedule, budget, and FTE usage have to be collected and tracked continually.
- Periodic reviews of all the plans to determine status of work, concerns and "good news" are needed

7.3.1.1 Project / Process Plans (See Section 6)

The following data are clearly defined in plans:

Project Plans
Customer Specifications and Requirements
Metrics and Criteria for Evaluation negotiated with customer
Plan for managing resources(budget, FTE's, etc.) provided for this project
A Critical Path Chart (if appropriate to the scope of project)
Performance Objectives
An Event Schedule
Customer Negotiated Acceptance Criteria

Process Plans
Function Descriptions
Metrics and Criteria for Evaluation negotiated with customer
Plan (by function & by year) for managing resources (budget and FTE's usage, etc.)

7.3.1.2 Proposed Center Level Performance Assessment Data
List of Project Plans and the ADS's they cover
Percent completion of projects
Total number of milestones that should be completed
Percent of milestones missed
Number of milestones exceeding completion date by 5%
Number of milestones exceeding completion date by 20%
Percent of customer acceptance requirements met
Number and amounts of budget overruns and underruns
Number of FTE's allocated and number actually used

Trends from tracking performance metrics for processes as compared to the Process Plans
Cost improvements/deficits
Resource (people, equipment, etc.) usage improvements/deficits
Customer satisfaction ratings

7.3.1.3 Proposed Division Level Performance Assessment Data by Center

List of Project Plans and the ADS's they cover
Percent completion of projects
Total number of milestones that should be completed
Percent of milestones missed
Number of milestones exceeding completion date by 5%
Number of milestones exceeding completion date by 20%
Percent of customer acceptance requirements met
Number and amounts of budget overruns and underruns
Number of FTE's allocated and number actually used
Trends from tracking performance metrics for processes as compared to the Process Plans
Cost improvements/deficits
Resource (people, equipment, etc.) usage improvements/deficits
Customer satisfaction ratings

7.3.2 Outputs - Standard Reports, Special Reports

Periodic reports are given to the Vice President and the Management Team. Summarized information indicating the progress of each Center's projects and processes are provided. Some statistical analysis of the data may indicate specific problem areas, and both positive and negative trends in work management performance.

On request, special reports are issued to examine specific areas of performance assessment. Summarized reports discussing each Center's response to identified problem areas can be prepared as the need occurs.

7.3.3 Division Assessments

7.3.3.1 Metrics for Center Work Management

Total number of projects
Total number of processes
Percent of projects over cost
Percent of projects behind schedule
Percent of Projects without Plans
Percent of Processes without Plans

Percent of projects without cost, schedule, or technical performance congruence

7.3.4 Center Assessments

7.3.4.1 Metrics for Projects

Examples of metrics and criteria for evaluation are given in Appendix A. Appendix C is a list of categories of metrics for projects, and is to be used as a guide.

Schedule milestones met or missed
Actual cost versus budget for work packages
Unscheduled overtime worked
Number and type of customer and worker complaints
Drawing release rate and chronology-actual versus schedules
Number or rate of a) change orders, b) nonconformances (or variances), c) unsatisfactory reports, and d) scrap

7.3.4.2 Metrics for Processes

Processes are assessed to determine performance in three major areas: time/efficiency, resource/efficiency, and customer satisfaction. The metrics, and criteria for evaluating the metrics should provide data on the process in the three areas mentioned. Examples of metrics and criteria for evaluation can be found in Appendix B.

7.4.0 Flow Diagram

Appendix D is a flowchart for the Performance Assessment Process.

7.5.0 Roles & Responsibilities

The following are the roles and responsibilities for the major organizations and players in the Performance Assessment Process:

7.5.1 Services Management System Office (SMSO)

Manages the processes comprising ISMS.
Integrates and analyzes data.
Provides information to the Management Team & others as requested.
Provides Performance Assessment guidelines.

7.5.2 The Management Team

Determine expectations and requirements.
Approve Project/Process Plan Guidelines
Review information and take appropriate actions to resolve problems and recognize successes.

7.5.3 Center Project and Process Managers

Provide plans according to the approved guidelines.
Determine how to track work status & performance metrics.
Report metrics as required.

7.6.0 Interfaces

The Performance Assessment Process is dependent on specific items in the Project/ Process Management Process.
Collection of valid performance data requires that Project and Process plans (as described in section 7.3.1.1) be used, and that work status be tracked by the Center. Several types of performance data require the providers to negotiate with customers to measure customer satisfaction, and to know the acceptance criteria.

7.7.0 Forms and Templates

7.7.1 Format for Quarterly Report for 7000 Vice President and Directors

7.7.2 Center Assessment Response Form

7.8.0 Implementation

This process can be implemented on a time scale consistent with customer requirements.

7.9.0 Performance Assessment

The value of this process will be determined by tracking the Division assessments for improvements in the number of projects completing on time and on budget, and for improvements in efficiency of processes.

7.10.0 References

Appendix A **Table of Metrics and Evaluation Criteria for Projects**

Appendix B **Table of Metrics and Evaluation Criteria for Processes**

APPENDIX A

Table of
Examples of Metrics for Projects

Project Metrics	Criteria for Evaluation
1. Establishing requirements: Number of changes made to requirements for each project after the set of requirements has been approved in a Project Plan, and accepted by the customer	Examine these values for previous similar projects. Track the # of changes, and indicate a measure of resource/time/cost impact.
2. Managing Design Changes : Number of changes after Completion of design. This could be design of hardware, software, or a process which is developed	A process for control and tracking of design changes is used. Data from this process is compared to similar projects. For long projects , trends within the project time can be examined. For short projects, the total number of changes can be compared to other similar projects.
3. Percent of changes for improvement	This data may already be captured by a control & tracking process. The reason for change would be "improvement". The individual responsible for making the change is identified, along with required resources for the change, and estimated completion time.
4. Percent of changes for remediation	This data may already be captured by a control & tracking process. The reason for change would be "remediation". The individual responsible for making the change is identified, along with required resources for the change, and estimated completion time.
5. Dollar cost of making changes	This data may already be captured by a control & tracking process. The cost could be reflected as a request for more money for the project, or a transfer of funds within the project. When where, and why are important details for cost changes.

6. Number of errors made in incorporating change	This data would show up in a control and tracking system as changes to change orders. If several errors start showing up, an analysis should be done to determine the root cause.
7. Time delay from requested incorporation date to actual for customer related change requests	The individual managing change requests logs the date of the request, sends a notification of receival of the request to requester, and indicates an estimated response time, which is then tracked.
8. Number of products passing/failing the requirements driven Functional tests defined in the acceptance criteria	Types of tests need to be specified as well as what constitutes PASS/FAIL, or an acceptable range, or accuracy. An expected percent yield is tracked and compared to actual yield.
9. Milestones reached on-time, ahead of time , or late	Milestones should not be changed unless customer is changing requirements. The milestone should clearly and concisely mark an intermediate completion of part of the project.
10. Reliability: Average life expectancy of product, Percent of products failing in specific areas over the life of the product, Number of times customer fails to use the product successfully(i.e. Function doesn't map well to customer's expectations of use of product)	Life expectancy can be defined by the customer, designed into the product, and tested. X number of products from each lot are tested to failure to determine average life expectancy and for percentages for specific types of failures. Once the customer is using the product, customer feedback can be used to determine number of times customer had trouble using the product. This last metric applies to one of a kind products as well.
11. Maintainability: Frequency and types of failures, Ease of and frequency of cleaning or replacement of components	These metrics can be tracked for one of a kind products as well as mass production type products
12. Appropriateness of lead times (Cont.)	The project manager should be able to compare actual vs. estimated lead times throughout the project as a tool for improving

(Cont.)	estimations used in similar projects
13. Customer satisfaction for product performance	Acceptance criteria are negotiated with the customer, before the project starts work. Data detailing actual vs. required limits for the product should be tracked, not just pass/fail. If you are producing a better product than required, you and the customer should know it. This is also required in order to show trends for improvement.
14. Document Development: Development time (actual vs. planned)	Benchmark: Comparison is made to similar projects in which document development was done. Development time is tracked to first release. Then time spent releasing corrections is tracked.
15. Cost of distribution	This metric can apply to software, hardware or documentation. Actual cost should be compared to similar successful distributions (i.e. don't compare to distribution processes that have failed. Compare to successful processes of similar scope.)
16. Customer satisfaction for the project/customer relationship: Ease of access to the project team and to information about the project - determined by customer surveys, Number of complaints/complements about specifics such as time to completion, cost, performance level, Number of customer concerns/requests received, Response time for concerns/requests, Customer satisfaction with action taken for each concern/request	Processes should be used to actively ensure customer satisfaction. Specific indicators should be measured and tracked to evaluate customer satisfaction throughout the project. How formal the process is would be determined by the size and complexity of the project.

APPENDIX B

Table of
Examples of Metrics for Processes

Process Metrics	Criteria for Evaluation
1. Time to respond to customer requests Initial response should be within 4 hours maximum, with average response times of 1 hour or less.(This does not include time to resolve issue in request, just the time from receival of the request to the time taken to let the customer know you have received the request and will be working on it.)	1. Benchmark: Other professionals in industry who respond to this type of request, do so within x hours as an average and within y hours as a maximum. The XYZ Professional Society has indicated the following standards for response time should be ... A study by ZZZ shows response times of ... are necessary to get customer satisfaction in the initial response time. Data: The time the initial response is received for every request will be recorded in a request log, by the individual receiving the request, and the individual responding to the initial request will log the time of their response to the customer as well as the means of response. i.e. (e-mail, phone, sneakernet mail system, or by going to the customer).
2. The cost of performing this function is divided into the following areas: cost of purchasing and maintaining equipment and technical resources (books, software, etc.), training costs, cost of time to do research, cost of producing reports, inspections, etc..	2. Benchmark: The following companies who provide this function to their employees or other customers have indicated their costs to be ...Other National Labs providing this function have indicated they do so at a cost of ... Data: The costs associated with this function will be tracked by the process manager. The information is maintained in a MS Access database on the file server. This data is reviewed every six months to examine trends in cost and to see if costs can be reduced. The Process Manager and staff performing the function do the review to determine if changes can be made to reduce the costs.
3. The number of people required to cover	3. Companies providing this function to

this function and to be able to do the function within XXX time period is YY for an average of ZZ requests per month. 4. Completion time for occurrences of functions making up the process.	cover AA number of requests per month, and resolving the request within BB time period, have a staff of CC people to do this.

APPENDIX C

Categories of Metrics for Projects

Cost

- Variance between the estimated and the actual cost
- Amount of Waste

Schedule

- Timeliness of delivery of services
- Variance between the estimated and the final schedule
- Appropriateness of lead times

Technical Performance

- Reliability
- Maintainability
- Accuracy
- Documentation
- Re-work and repeat of services
- Environmental Safety & Health improvements
- Degree of clarity in defining goals, objectives, and requirements

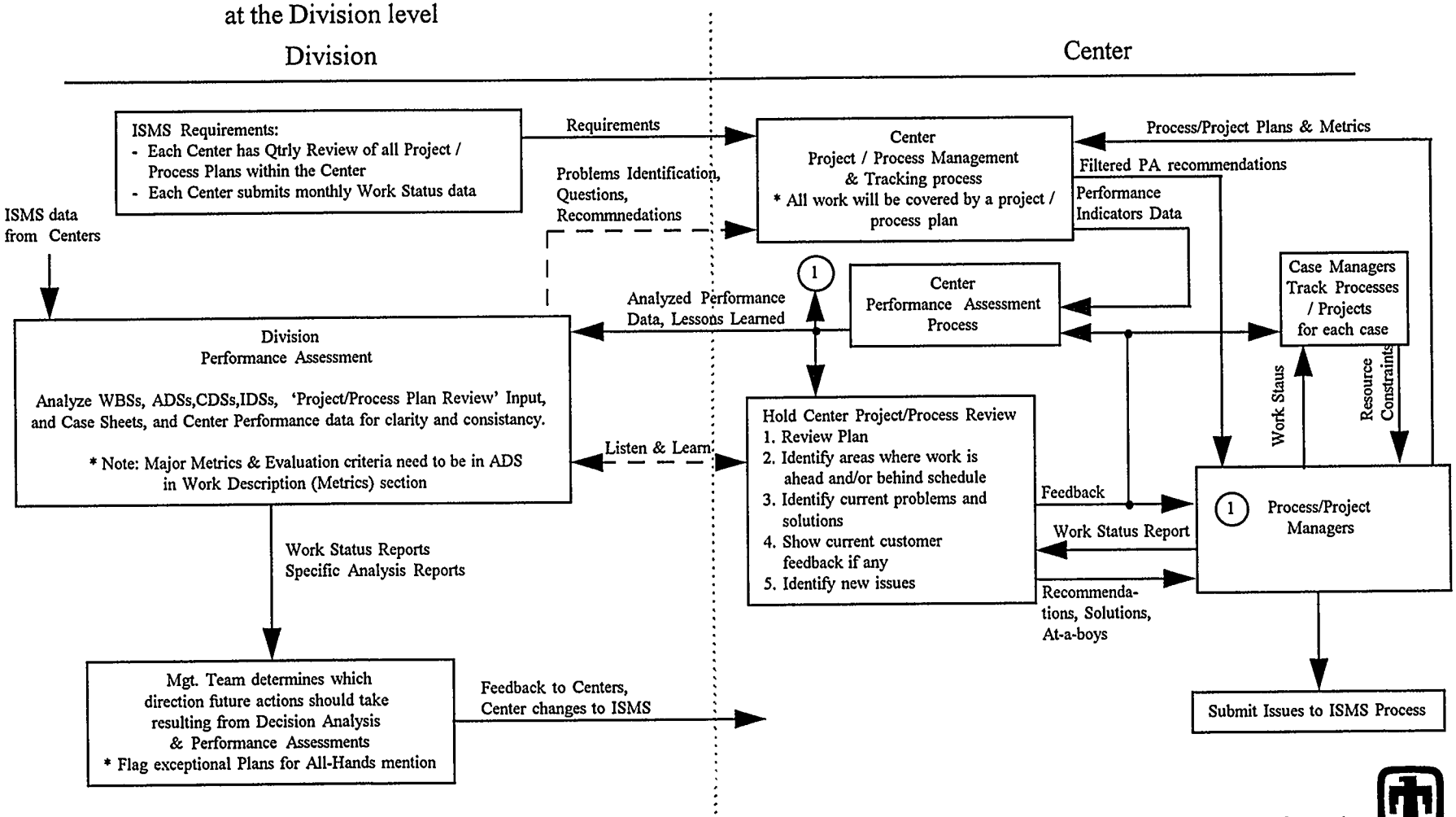
Utilization of Human Resources

- Personnel turnover rate
- Extent of empowerment
- Opportunity for career enhancement or development
- Support of corporate values
- Performance level of team interactions
- Interfaces between personnel
- Degree of personal satisfaction

Appendix D

Performance Assessment Process

Objective: - To ensure approved activites are meeting the defined objectives specified in ADSs
- To provide early warning of activities not meeting their objectives or requiring significant changes to resources to accomplish their objectives
- To provide information to the Mgt. Team in a form which will permit "knowledgeable" decision-making at the Division level



8.0 IDENTIFICATION OF INFORMATION REQUIREMENTS FOR ISMS PROCESSES

8.1.0 Purpose, Scope, Benefit, and Ownership

8.1.1 Purpose

The items discussed in this section do not comprise a process, but need to be addressed to establish a complete ISMS System. The following nine items have been selected: (1) identify information links between ISMS System and external information systems, (2) identify interface requirements between ADSs and AMCO reporting requirements, (3) identify & implement interfaces among ISMS subprocesses, (4) identify desired reporting capabilities and implement changes in ISMS software, (5) introduce performance metrics, (6) incorporate lessons learned from early applications into the processes and make software modifications, (7) Develop documentation for ISMS, including software, process description, and user's manuals and develop control configuration schema for ISMS software, (8) identify needs which could be best addressed by electronic networking between Centers and implement them where appropriate, and (9) identify needs for interfaces to ES&H Management Plan from ISMS.

8.1.2 Scope

The items addressed in this section will be evaluated to determine what changes to information interfaces might be made to improve the efficiency and/or capability of the ISMS System. All changes will be made keeping in mind the imperative "not to do work which does not add value". This is especially true for establishing interfaces with other existing databases, when we haven't yet totally determined what detailed information needs to be available within ISMS for the various levels of management to do their work.

8.1.3 Benefits

In cases where a sizable amount of information exists in one database and needs to be accessible to or added to another, automating an electronic transfer of data between databases could save time for employees and help ensure the data is the same in both databases. The process of defining what information needs to be transferred, if any, helps to solidify the roles of each database, and it eliminates duplication of data management efforts. It also provides a more clear understanding of what information is needed to manage our work. Where small amounts of data need to be exchanged, manual transfer of data may be acceptable. Definition of what information needs to flow will ensure proper interaction among the various groups. Such interfaces already exist within the ISMS and with other groups using their own information management systems.

8.1.4 Ownership

The Services Management System Office is primarily responsible for the items listed in this section, however interfacing with other groups will be a major part of identifying the changes to be made, which may make them partially responsible as well.The owners for all parts of ISMS are the Vice President, Laboratories Services Division and the Management Team.

8.2.0 Definitions

8.2.1 SIMS

The name of the database server owned and managed by the Appraisal Management Organization, for assessments tracking, Tiger Team Action Plan tracking, all internal audits, and EOC's occurrence tracking.

8.3.0 Overview of Process

8.3.1 The first requirement is:

Identify information links needed between ISMS and external information management systems where appropriate (e.g. SIMS link to ISMS Activity Data Sheets(ADSs), Issue Data Sheets, or Commitment Data Sheets via fields with lookup identifiers in ISMS for the SIMS system), and implement needed interfacing.

The first step is to interview people with potential needs for interfacing their existing information systems with ISMS. The type of information system they are managing, if any, and the type of information which could be beneficial to have linked are identified. Links initially are made only by establishing pointers to the other system containing pertinent information. These pointers will most likely be simple data fields within ISMS indicating where to find specific information within another system.

8.3.2 The second requirement is:

Identify interface requirements between ADSs and the AMCO Case Data Sheet and Summary Report and other corporate Case-level information.

Potential and existing relationships among the information contained in ADSs, Work Breakdown Structures (WBSs), and AMCO Case Data Sheets are identified.These relationships, to be documented in Section 8.3, provide an understanding of what should exist in the ADSs, WBSs, and AMCO Case Data Sheets. Some areas of shared information are identified among ADSs, WBSs, and Case data. As a result, this shared information is

entered in one place in the ISMS database, but used for addressing multiple requirements. For example, if a new "Case Sheet" entry form is added to the ISMS System, a means of electronically generating and rolling up some or all of the required data for the AMCO Case Data Sheets and the AMCO Summary Report could be easily provided. Documentation explaining WBSs, management of Case Numbers, and how to define and scope activities will be generated as a guideline for users of the ISMS system. This also provides a source for resolving differences in the understanding of relationships among these three functional elements.

8.3.3 The third requirement is:

Identify and implement interfaces among processes within the ISMS System.

As the interfaces among ISMS processes are identified, they are documented. In some cases needs for minor ISMS software modifications will be made if appropriate. Training classes discuss these interfaces to ensure that all people involved in the various processes understand why things are done in a specific way. As the users of the processes discover problems or concerns about the processes, these are addressed by the ISMS Project Team.

8.3.4 The fourth requirement is:

Identify desired reporting capability and modify ISMS software to accomodate the users.

Lessons learned from the previous year are examined to determine possible new or improved reports which would be useful to the various levels management. As ISMS processes are defined, it may become evident that another type of standard report would be useful, such as one reporting priority sequences and one showing funded and unfunded ADSs. As users of ISMS work within the various processes, they may be able to identify report formats which would make their work easier.

8.3.5 The fifth requirement is:

Introduce Performance Metrics

Any known standard metrics currently associated with activities, such as milestones, customer satisfaction, and cost within specified budget are identified. This provides a starting point for discussion of metrics to be used and reports to be generated from those metrics. A part of the Commitment Process involves negotiation of performance metrics between

the managers of commitments and the customers/stake holders of the work being performed.

8.3.6 The sixth requirement is:

Incorporate lessons learned from early applications.

Lessons Learned documentation is examined, with respect to the ISMS database reporting, etc., and the appropriate changes are integrated into the software and processes.

8.3.7 The seventh requirement is:

Provide documentation for ISMS including process descriptions, software documentation, and user's manuals. Provide software control configuration schema (for adding and distributing software upgrades and for access control to the ISMS database).

Software documentation and possibly some of the writing of the User's Manual are done by contractor support personnel. Existing documentation is modified to reflect changes discussed in the other requirements. Configuration Control is applied to software change control and to access control. The software change control covers (1) version control, (2) Rollup and rolldown control, and (3) backup control. Access control includes access to the source code for ISMS software, and establishing various access levels for users of the ISMS database. Procedures are written for access control. The system administrator managing the ISMS software for each Center is ultimately responsible for proper access control of their data.

8.3.8 The eighth requirement is:

Consider the needs addressed by electronic networking of the Centers and decide whether to implement changes.

Identify where ISMS processes can be easily automated by networking modifications or by peer-to-peer communication processes. For example, Rollup of ISMS data could occur across the Restricted Network, instead of by disk.

8.3.9 The ninth requirement is:

Identify the interface to the DOE ES&H Management Plan from the ISMS system, and automate data transfers into the ES&H Management Plan.

8.4.0 Flow Diagram

8.4.1 None required.

8.5.0 Roles and Responsibilities

After the requirements are identified, individuals responsible for meeting those requirements are identified.

8.6.0 Interfaces

8.6.1 Interfaces to external databases are initially by reference only until the value of an automated information exchange becomes evident. Many future potential interfaces will be to databases not currently in existence, or to databases which are still under development.

8.6.2 Internal interfaces for the ISMS System may require modifications in the ISMS software, or may require new procedural instructions for interfaces between processes in the ISMS System.

8.6.3 An explanation of basic relationships between WBSs, ADSs, and Case data is provided to aid the users of ISMS.

8.7.0 Forms and Templates

None required

8.8.0 Implementation

This process can be implemented on a time scale consistent with customer requirements.

8.9.0 Performance Assessment

8.9.1 See Section 7.

9.0 CHRONOLOGICAL DEVELOPMENT OF ISMS

During the fall of 1993, the then new Vice President of Laboratory Services Division initiated the development of an integrated management system for the Laboratories Services Division. CYCLA Corporation was contracted to develop the concepts, the computer software necessary for organizing the data, and assist in the development of the complete system. In January 1994, the Services Management System Office was given the mission to develop and implement the complete integrated management system.

A decision was made to use the planning for FY95 as a pilot for the system. This pilot would include only the Task/Activity Planning and the Work Decision Processes. The pilot would also be limited to the activities to be funded by the indirect budget. The prioritization would be used only for those activities indicated as compliance and improvement/enhancement. The core activities (as defined by each Center) would not be scored.

Three subteams were formed to identify and select the activity packaging, prioritization methodology, and information database. These subteams were formed from employees from the different Centers within Laboratory Services Division. The Activity Subteam adopted the criteria for defining the work package or activity, defined the three types of Activity Data Sheets (ADS) (core, compliance, and improvement/enhancement), and recommended fields for the ADS. The Prioritization Subteam selected the Laboratory Integration Prioritization System (LIPS) from the four methods evaluated and recommended that each Center have their own scoring board. A complete description of LIPS is available in a Los Alamos National Laboratory publication LA UR 94-1696, dtd 6/15/95, "Laboratory Integration Prioritization System." The Information Database Subteam chose the DOE ES&H Management Plan system with some modifications.

By completion of the approvals of the Subteams, only two months remained to complete the development of the applicable processes and software in the ISMS, train all ADS preparers and scoring team members, have the Centers prepare and score the ADSs, and have the Review Board validate the scoring of each Center's ADSs. It was decided that at least a month was required by the Centers for them to develop their work breakdown structures, write their ADSs, score the ADSs, and have initial prioritization reviewed by the Center Director. By backwards planning from the Laboratory Services Division Management Team meetings that were scheduled in early May, there was only one month to develop the system and train the preparers and scoring team members. This was accomplished on time.

The Review Board met to resolve the differences among the Centers' scoring. This proved to be a daunting task, however, since each Center had adopted very different interpretations of the scoring instructions. One of the most frequently misunderstood scoring attributes was in the activity's contribution toward the Laboratories' Mission. The Review Board made recommendations to each Center, but was not empowered to ensure compliance with those recommendations. Consequently, the report to the Laboratory

Services Division Management Team could not state that the scoring instructions were consistently applied across all the Centers. The prioritization list of activities was then suspect.

The Laboratory Services Division Management Team met on three occasions to decide what activities to approve. The Vice President decided to accept all the core activities as written by the Centers, but challenged them to reduce the funding for those by 10%. By using a normalization technique, the Management Team was able to decide activities across Centers that would and would not be funded. The Management Team decided from the pilot that ISMS added value and needed continued further development.

It was apparent that improvements were necessary. To assemble a lessons learned list, each Director was interviewed, members of the Review Board were solicited for comments and suggestions, Center project offices were also asked for their opinions and specific improvements. The result was a consensus that the scoring instructions and training required improvement, core activities needed to be scored since many had contained new activities, training should be improved for ADS preparers, the software required improvement, and sufficient time was needed by the Centers to develop their ADSs and score them. Other more detailed improvements were also suggested.

After the pilot, two additional ISMS processes were developed. These were the Issues Management Process and the Commitments Management Process. Both newly developed processes were briefed to the Management Team. Additionally, it was decided that this system required formal documentation to ensure that the requirements and processes were clear to everyone concerned. A draft was submitted in September of 1994 and comments received from the Directors and the Vice President. The final version of the ISMS processes that had been developed by that date were approved by the Vice President on December 5, 1994. This left two processes, the Project/Process Management and Performance Assessment processes, remaining to be developed

Initiation of the development of activities for FY96, began at the end of October of 1994 with training of the Center scoring teams and the Validation Board (formerly Review Board). The scoring instructions had been revised incorporating the lessons learned. Suggestions from the first two sessions of scoring training led to some further revisions in the instructions. Training was held for the ADS preparers in December 1994. These training sessions allowed the Centers to have sufficient time to prepare for FY96 work.

First submission of ADSs for FY96 occurred in February 1995. This was done to coincide with the submission of the DOE ES&H Management Plan. Rather than have another set of data developed, the information contained in the ADSs was used to support the submission of the ES&H Management Plan as well as the indirect budget submissions. Since indirect budget submissions were not required until the end of May, the Centers had more time to review and improve their data.

The Validation Board met in February to review the scoring of each Center. The Board analyzed each scoring attribute and looked for unusually high or anomalous scores. The reason for that score was discussed. If the Board did not agree with the Center's reasoning, then a recommendation was sent to that Center's scoring board. Those scores that still had a different interpretation between the Validation Board and the Center's scoring board were listed in a report to the Management Team. Overall, the Board found that "there is more consistency across the Centers and the benefit scores are more realistic." Quantitative analysis of the scoring found the scores were fairly consistent across the Centers.

The final two process, Project/Process Management and Performance Assessment, were completed in April 1995. This completed the development of the system itself. As with all systems though, ISMS requires continuous improvement.

10.0 LESSONS LEARNED and SUGGESTED IMPROVEMENTS

10.1 Conversion to Centralized Management

The conversion from a decentralized, manage by budget approach to a centralized management method is not easy, nor universally accepted. Many managers and staff had never seen any management system other than verbally arguing budget for an organization. Once the budget was allocated, the manager could commit those funds with little constraint. In the centralized system, the activities are approved and funded by a central group. The manager must execute the approved activities. Some power is then shifted from a lower level to a high level for efficiency and economy

The only solution is for top management to be an advocate and completely supportive of the concept, otherwise the system will not be successful.

10.2 Activity Packaging

Since few employees have project management experience, the concept of a work breakdown structure (WBS) down to the work package (activity) level is difficult to put into practice. Funding had previously been by department, so there was little experience in defining the actual activities. Additionally, activities that involve more than one department were separately budgeted so the total cost of the activity was unknown. Within some broad guidelines, the ISMS activity packaging was left to the Centers. Unfortunately, this resulted in some large ADSs, some extremely small ADSs, department type ADSs, and packaging that the Directors felt they could not make decisions.

The WBS must be better controlled. A division level office should work with the Center's project managers to develop a usable WBS which should be approved before the ADSs are written.

10.3 Quality Training

One of the major differences between the pilot and the FY96 application is in training. Training preparation for the pilot was rushed and those teaching had no experience in the system. This was to be expected for the pilot, but the next year's instruction was improved. For the pilot, it was *requested* that ADS preparers and scoring team members attend training. For the FY96 implementation, training was mandatory. Even without this requirement, managers and staff wanted to attend the training based on the previous year's implementation. During the training, the use of real world examples and experiences was extremely important.

Training must be mandatory for those participating. It is essential to schedule training with sufficient sessions that everyone can attend. This means that there must be time for everyone on vacation or on travel to be able to attend. Instructors must be experts and have experience in the system.

10.4 Facilitated Scoring

During the pilot, the scoring team was given initial training, then released to score independently. The results were very different interpretations of the scoring instructions and inconsistent scores across the Centers. When the scoring was accomplished with an expert facilitating the session, the scores for the Centers were much more consistent.

All scoring should be accomplished with experts in the scoring system acting as the facilitators.

10.5 Validation Board

The pilot's Review Board (pre-Validation Board) consisted of a member from each Center's scoring board. This led to members still wearing a "Center hat." In the second year's implementation, the Validation Board was appointed by name. Members were not necessarily members of Center scoring boards. They were tasked to review on the Division level, rather than at the Center level. This worked extremely well.

It is essential that members appointed to the Validation Board review from the Division perspective.

10.6 Application Time

There must be sufficient time to implement this system. Centers require at least two months to develop the ADS packages, prepare ADSs, score, and ensure a review by the managers and Center Director. Additionally, there must be time for review at the Division level including returns for corrections. Time is also necessary to analyze the data and prepare the reports to assist decision making.

Backward time planning is required to ensure sufficient time is available for all activities.

10.7 Suggested Future Implementation

The ISMS is fully developed, but still requires full implementation and continuous improvement. During the second year's implementation, it became very clear that this system will not work without an office empowered to manage this system.

To make informed decisions at the Division level, there must be accurate and complete information. This requires details of every activity which translates to a tremendous amount of data. An office is needed to understand, analyze, interpret, and summarize the data into useful information for decision making. This office must be empowered to able to require accurate and complete data. It must have the authority to accept only work breakdown structures that make programmatic sense and work packages that reflect that WBS. That office could review the data and suggest changes that would make activities more cost effective.

An analogy can be made to the Office of Management and Budget in the President's Cabinet. OMB controls the details of the programs and budget under the President's guidance and with the President's authority. The President submits this budget to Congress. The ISMS will not be totally successful or implemented without an office of this type.

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