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Pacific Northwest National Laboratory

**FY96 Evaluation of
Integrated Assessment Program**

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October 1996

Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830

Pacific Northwest National Laboratory
Operated for the U.S. Department of Energy
by Battelle

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FY96 EVALUATION OF INTEGRATED ASSESSMENT PROGRAM

for

THE PACIFIC NORTHWEST NATIONAL LABORATORY

This document directly supports the Pacific Northwest National Laboratory Contract
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EXECUTIVE SUMMARY

The Pacific Northwest National Laboratory uses the Integrated Assessment Program (IAP) as the primary system for planning, monitoring, evaluating, and implementing actions for performance improvement. Designed around contemporary performance management concepts and other key principles of management accountability, the program moves the Laboratory away from reliance on auditing methods to provide a more effective self-assessment approach as crucial to sustaining and improving overall performance.

We believe that our overall performance rating for the Integrated Assessment Program is Excellent. The Laboratory's approach is comprehensive, fully responsive to DOE's contract reform principles of performance-based management, integrated with the Laboratory's business planning process, and fully supportive of the needs of the business. The deployment of the Integrated Assessment Program has several strengths, but also some weaknesses. Evidence of senior management involvement is strong within the all six pilot organizations but has not been deployed uniformly throughout all of these organizations. While there are no significant gaps in deployment of the basic requirements, the level of understanding of how to effectively use more contemporary methods of assessment to drive improvement is still immature. There is considerable demonstration of the immediate use of assessment information to correct near-term problems. However, few organizations are demonstrating the use of assessment information in a more cross-cutting, or holistic manner to identify higher level issues associated with the effectiveness of systems. In addition, the lab-level information generated as part of the annual performance evaluation process is still somewhat out of synch with the annual business planning process.

During FY96, the Integrated Assessment Program was piloted by six organizations across the Laboratory. FY97 marks the beginning of full Laboratory-wide implementation across all organizations. This report describes the IAP approach (i.e., the methods and processes) and deployment, and it summarizes how the pilot organizations used the results to plan and implement improvements. The final section of the report provides the Laboratory's self-evaluation of the IAP.

Approach

The Laboratory has solid strengths in its approach to self-assessment. The approach is holistic and incorporates information from various internal and external sources, including oversight, auditing, line management self-assessments, benchmarking, peer review, and customer feedback. A key aspect of the approach is the development of performance objectives and indicators that are linked from top to bottom, starting from the Laboratory's critical outcomes and ending with individual employees. A set of performance framework categories that are based on recognized industry standards are used to assure that assessment activities are broad yet monitor important aspects of performance. These performance categories are:

- Business Results
- Compliance to Laws, Regulations and Laboratory Requirements
- Resource Development and Management
- Effectiveness of Business and Operational Processes
- Customer Satisfaction and Value

However, the use of customized assessment plans assures that each organization tailors assessments to its missions and customers. In addition, the Laboratory's Independent Oversight function is chartered to review the Division/Directorate's self-assessment processes in order to enhance their effectiveness and efficiency. Formal semi-annual performance evaluations are completed in order to review progress towards accomplishment of objectives and to identify opportunities for improvement.

The IAP approach is a fact-based improvement process that provides for systematic and responsive assessment plans, incorporating critical performance elements. We believe that our overall performance rating for this element is Outstanding.

Deployment

Significant progress has been made in planning and transferring responsibility for assessments to line management. Though still heavily focused on compliance, assessments in other performance categories were also planned and executed. Evaluation of internal/external customer satisfaction with products and services is increasing as is attention to the achievement of business and operational results. Partnering with customers in assessment planning varied across the organizations and is improving. While deployment proceeded well in many areas of the pilot organizations, some work units are still in the early stages of understanding and implementing the transition from oversight to self-assessment and connecting assessment activities to Laboratory critical outcomes and business results. We believe that our overall performance rating for deployment is Good.

Use of Results

Because the timing of the FY96 self-assessment pilot spanned a portion of the fiscal year, the Laboratory had a limited time frame over which to evaluate the use of results from self-assessment activities. However, all organizational self-evaluations showed evidence of performance improvement trends through use of the results gathered from the assessment activities. There are some excellent success stories such as in the area of ES&H performance and use of internal peer reviews. The organizational self-evaluations indicated many examples of results being used to impact performance in quality of products and services, cost, safety, productivity, and employee relations. Because the performance trends are showing areas of strength and improvement, we believe the overall rating for this element is Good.

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INTRODUCTION

The Pacific Northwest National Laboratory's Integrated Assessment Program (IAP) is the primary system to assess and monitor overall performance and to drive continuous improvement in the Laboratory. The approach used is a significant departure from the Laboratory's traditional reliance on auditing methods. It is a move toward the contemporary concepts of measuring organizational performance by encouraging scientific, operational, and business excellence, through self-assessment and strengthening line management accountability for results in product and service quality, safety, and cost.

The program was designed using the following principles:

- **Line management ownership of performance** where senior management is accountable for the achievement of the Laboratory's business, scientific, and operational objectives.
- **Assessments focus on relevant and important areas** affecting the Laboratory's objectives. Assessment activities are identified and conducted to support achievement of the Laboratory and organizational specific objectives.
- **The use of contemporary concepts of performance measurement** that drive continuous improvement and incorporate the US Department of Energy's (DOE) expectations regarding contract reform and oversight.
- **Partnering with customers and stakeholders** in the development of performance objectives and indicators and monitoring progress to assure that concurrence is realized in important areas of performance.

The Management System Description document, which provides an overview of IAP and associated implementing standards, procedures and guidelines, has been completed and approved for use. Because the Management System Description is available to staff only through the Laboratory's internal Homepage, a copy is attached as Appendix A. The standards, implementing procedures, and guidelines are available on the Laboratory's external Homepage.

In FY96 the self-assessment processes of IAP were piloted in six organizations: Environmental Technology Division; Energy Division; Facilities and Operations; Finance; Environment, Safety & Health; and Environmental Molecular Sciences Laboratory. In addition, the Laboratory established the Independent Oversight function and moved toward formalizing the peer review process. These functions along with the Laboratory's Internal Audit function, assure that the processes, management systems and the quality of our science are independently evaluated for compliance, efficiency and effectiveness.

This report describes the *approach* used (methods and processes), the *deployment* of that approach in the six Laboratory organizations selected to pilot the approach, and a summary of how the pilot organizations *used the results* they obtained. Section 3.0 of this report summarizes the top strengths and weaknesses in performance as identified by Division/Directorate self-assessments, Independent Oversight, Internal Audit and peer reviews, and includes the actions that have been, or will be taken, to improve performance in areas that are weak.

1.0 APPROACH

This section describes the Laboratory-level processes that will be fully operational in FY97. The Laboratory undertook major information gathering efforts in FY96 in order to develop an integrated assessment program. The Laboratory benchmarked industry best practices and successful programs developed in other laboratories. Training to the Malcolm Baldrige Award Criteria was obtained and used as part of this effort to provide a more comprehensive approach to performance improvement. Extensive customer and stakeholder interviews (both internal and external) provided key input into this development process. In addition, independent consultants, McKinsey & Company, Inc. and Dr. Robert D. Pritchard, Texas A&M University, provided direction and access to other organizations with advanced performance measurement programs. Finally, workshops were held with the Laboratory's internal customers/management and DOE to achieve consensus on the basic program design.

The formal Laboratory standards that define the process of the Integrated Assessment Program were not available early in FY96, and therefore interim guidance documents were used to pilot the program. To allow for a learning curve, flexibility in implementing program guidance was encouraged. The differences in content between the finalized Laboratory standards and those of the FY96 pilot are provided in Section 1.3, FY96 & FY97 Differences.

The Integrated Assessment Program is an integrated performance measurement system consisting of *four functional organizational elements* and *four key processes*. The functional elements and their relationship and interfaces to are illustrated in Figure 1. The key processes and their deployment mechanisms are illustrated in Figure 2.

1.1 Functional Elements of the Integrated Assessment Program

The four functional elements that form the Integrated Assessment Program and that integrate the Laboratory's internally generated performance information are depicted in Figure 1. These elements collect data and transform it into information that can be used by the individual organizations and customers,

stakeholders and regulators to make decisions on areas requiring improvement. The roles and responsibilities of the four functional elements of the Integrated Assessment Program are described in the Management System Description (Appendix A).

Figure 1. Functional Elements and Interfaces of the Performance Measurement System

Together these elements (internal and external to the organization) provide comprehensive and objective information that can be used to set strategic direction and improve performance.

The key responsibilities of these functional elements are as follows:

- **Self-Assessment** - Line managers and staff conduct self-assessments to provide information that is used to improve the division/directorate business and operational performance.
- **Independent Oversight** - Independent Oversight staff conduct assessments to verify that organizations are effectively meeting Integrated Assessment requirements.
- **Internal Auditing** - Internal Auditing staff conduct audits to examine and evaluate the adequacy and effectiveness of the Laboratory's system of internal management controls and the various reporting mechanisms.
- **Peer Review** - Technical experts, internal and external, conduct peer reviews to measure the quality of research activities.

1.2 System and Key Processes

Key processes used by the Integrated Assessment Program are illustrated in Figure 2 and include:

- determining performance objectives and indicators
- monitoring performance against those objectives and indicators
- evaluating overall performance and identifying areas for improvement
- implementing actions for improvements.

Together the IAP functional elements and key processes make up the Laboratory's performance measurement system.

Figure 2. Performance Measurement System

1.2.1 Key Process: Determining Performance Objectives and Indicators (POIs)

Significant Requirements:

- involvement of customers and stakeholders to determine objectives and indicators
 - senior management involvement assures that the POIs are in alignment with the Laboratory's critical outcomes and their organization's desired business results.
-

The first process of the Performance Measurement System is the determination of the Laboratory critical outcomes, performance objectives and indicators. The Laboratory critical outcomes and associated performance objectives and indicators are established by the Leadership Team in cooperation with the customer on an annual basis during the business planning cycle.

Using the Laboratory's critical outcomes, the Divisions/Directorates develop supporting objectives and indicators in cooperation with their customers (both internal and external). Objectives and indicators of performance are then developed for each staff member.

The end result is a hierarchical set of objectives and indicators that are linked from the Laboratory's critical outcomes to each staff member's Staff Development Review. The key performance objectives and indicators resulting from this process drive the development of annual self assessment plans.

1.2.2 Key Process: Monitoring Performance

Significant Requirements:

- each organization's performance objectives and indicators (POIs) align with the Laboratory critical outcomes and their mission areas
 - the Laboratory-level performance criteria framework guides assessment planning
 - PNNL or industry recognized methods are used to gather the data necessary to conduct the selected assessments
 - management is involved in the development and execution of the plan, both at the organizational and Laboratory level.
-

The second process of the Performance Measurement System is developing and implementing an assessment plan. Each organization develops an annual assessment plan as part of the Integrated Business Planning Process. The assessment plan describes the assessment activities that the organization performs to ensure that plans and controls are in place to achieve its objectives. The assessment plans address all aspects of the Level 1 manager's responsibility, including Market Sectors, Product Lines, Core Technical Capabilities, Management Systems, and operations. These plans form the basis of the Laboratory-level plan.

To ensure that important aspects of performance are monitored and to guide the development of holistic assessment plans, the Laboratory uses an assessment planning and evaluation framework based on the Malcolm Baldrige National Quality Award Criteria. These criteria, or performance categories, encompass the safety management principles and performance criteria of DOE's independent oversight, OSHA Voluntary Protection Program, Chemical Manufacturers Association, Responsible CARE Program, and Quality Assurance ISO 9004.

Planned assessment activities are reviewed with appropriate customers and stakeholders, both internal and external. The Quality Director ensures that the overall Laboratory assessment plan is reviewed with the DOE-RL AMT Director.

1.2.3 Evaluating Performance

Significant Requirement:

- management routinely evaluates and semi-annually reports organizational performance to the Laboratory Director and DOE.
-

The third process of the Performance Measurement System is the overall evaluation of the Laboratory's performance. The evaluation process: 1) analyzes data gathered during assessment activities and uses it to drive day-to-day corrective actions and improvement, and 2) analyzes and rolls this data up to a management level presentation (qualitative and quantitative) on a quarterly basis with mid-year and annual reports. The evaluation process generates a summary document that is utilized by the Laboratory's management to monitor performance and to drive Laboratory improvement and by DOE-RL as a key input to judge overall performance.

1.2.4 Implementing Improvements

Significant Requirements:

- each organization establishes an effective improvement process
 - a Laboratory-level system is used to effectively prioritize improvement projects.
-

The last process in the Performance Measurement System is to implement the key improvement opportunities that the evaluation processes identified. Improvement areas requiring action at the Division/Directorate level are implemented as appropriate by the Divisions/Directorates. Laboratory-level improvement areas are considered for inclusion into the overall *Laboratory Improvement Agenda*. The *Laboratory Improvement Agenda* focuses improvement initiatives on strategic issues.

1.3 FY96 & FY97 Differences

The assessment framework used in FY96 (i.e., for planning, conducting and evaluating assessments) contained 5 performance categories. This framework was subsequently modified for the FY97 planning activities based on lessons learned from the six pilot organizations and is captured in the approved Management System Description (Appendix A). The FY96 framework used by the pilot organizations was:

Performance Area 1 - Business and Organizational Results

- accomplishment of key performance objectives (e.g., the critical outcomes)
- product and service quality results
- financial and operational results

Performance Area 2 - Compliance to Laws, Regulations, and Laboratory Requirements

- compliance to ES&H requirements
- compliance to requirements applicable to business/operational functions

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Performance Area 3 - Resource Development and Management

- technical capability
- facilities and equipment
- staff development and creating a supportive work environment
- management leadership and technical leadership

Performance Area 4 - Effectiveness of Business Operational Processes

- product/service delivery
- support processes

Performance Area 5 - Customer Satisfaction and Value

- understanding customer needs
- managing customer relationships
- evaluating customer's perception of value

The guidance for developing the organizations' assessment plans in FY96 was not promulgated until after the FY96 business planning process had initiated and therefore efforts to broadly identify quantitative measures of performance were only partially successful. The organizations did, however, identify organizational business and operational objectives and associated assessment activities.

2.0 DEPLOYMENT

2.1 Phase 1 Deployment - FY96

Deployment of the Integrated Assessment Program (IAP) will be completed in two phases. Phase 1 was completed in FY96 and focused on piloting the proposed self-assessment processes in six Laboratory organizations.

FY96 was also the developmental year for the new Independent Oversight function. Independent Oversight activities were focused on performing a number of special studies this year rather than conducting assessments of division and directorate self-assessment programs which will be the long-term focus. However, criteria for evaluating the Division/Directorate's self-assessment activities were developed and approved for use in FY97.

The Internal Audit function was already fully deployed and is mature and well-defined. Internal Audit actively tracks findings to closure.

Peer review has been used historically by many areas of the Laboratory to validate the quality of its scientific research and development. Several peer reviews, both external and internal, were conducted in FY96. A formal description of the peer review process will be incorporated into the Standards-Based Management System as an integral functional element of the Integrated Assessment Program in FY97.

The self-assessment pilot was initiated after the start of the business planning process. Therefore, the process for determining performance objectives and indicators is not reflected in FY96 assessment plans. This process was, however, implemented during the FY97 business planning process and is reflected in FY97 assessment plans. The remaining processes (assessment planning, evaluation and reporting and implementing improvements) were tested in the pilot. Requirements were provided in the form of guidance documents and included the assessment framework, the evaluation format requirements, and required schedules.

Awareness training was performed including conducting a workshop involving both Laboratory and DOE-RL staff, and one-on-one discussions with responsible DOE-RL and Laboratory management. Laboratory management and staff were closely involved in developing and reviewing the implementing procedures. Significant to the deployment of the program in some organizations was the use of lead quality engineers to facilitate the process.

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The organizations selected for the pilot were chosen for their strategic importance and for their diversity in missions. A brief description of the six pilot organizations follows.

Environmental Technology Division (ETD)

ETD consists of approximately 830 technical, management and support staff. The division has stewardship for six product lines: Strategic Environmental Management, Process Technology, Pollution Prevention, Water & Land Resources Management, Environmental Marine Sciences & Technology, and Characterization. ETD also has stewardship for three core technical capabilities: Ecological Sciences, Marine Sciences, and Process Science & Engineering.

Energy Division

The Energy Division consists of approximately 725 technical, management and support staff. The division has stewardship for four product lines: Energy Technology, Medical Technology, Transportation Technology, and Information Technology. The division also has stewardship for eight core technical capabilities: Electronics & Sensors, Statistics & Applied Mathematics, Human Systems Performance, Computer & Information Services, Integrated Technology Policy & Regulatory Analysis, Nuclear Science & Engineering, Thermal & Energy Systems, and Design & Manufacturing Engineering.

Facilities and Operations Directorate (F&O)

F&O consists of approximately 550 technical, management and support staff. This directorate is responsible for seven Management Systems: Life Cycle Asset Management, Facility Operations Management, Maintenance Management, Security Program Management, Safeguards Program Management, Emergency Preparedness & Off-Normal Event Reporting System, and Waste Management. F&O is the Laboratory's provider of facilities and operating services.

Environmental, Safety, and Health Directorate (ES&H)

ES&H consists of approximately 110 technical, management and support staff. This directorate is responsible for five Management Systems: Environmental Management, Facility Safety, Radiological Control, Training & Qualification, and Worker Safety & Health. ES&H is also responsible for the development and implementation of the Laboratory's Integrated ES&H Management System, and provides major support to the Integrated Assessment Program Management System through ownership of the Independent Oversight function.

Finance Directorate

The Finance Directorate consists of approximately 110 management and support staff who perform accounting/reporting financial functions, and appropriate analysis to internal and external customers. This directorate is responsible for the Financial Management System and for five core services: Project Support, Business Management Support, Acquisition Support, Human Resources Support, Centralized Tagging and Loan Equipment Pool.

Environmental Molecular Sciences Laboratory (EMSL)

EMSL is a department within the Environmental & Energy Sciences Division and consists of approximately 300 technical, management and support staff. EMSL staff will pursue theoretical and experimental research in the areas of Advanced Processing, Computing & Information Sciences, Chemical Structure & Dynamics, Environmental Dynamics & Simulation, Macromolecular Structure & Dynamics, Materials & Interfaces, and Theory, Modeling & Simulation.

Table 1 shows the five performance areas evaluated by the six pilot organizations that participated in the FY96 deployment of the Integrated Assessment Program (IAP). These five performance areas and the pilot organizations are the basis/focus for DOE-RL's review of the Laboratory's FY96 performance with respect to the assessment program. The numbers in Table 1 represent the number of FY96 assessment activities planned. Although the number of assessment activities does not directly correlate with level of effort (i.e. depth, breadth of assessment), it does indicate the beginning of a trend to monitor areas of performance in addition to compliance.

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TABLE 1. FY96 Assessment and Performance Area Focus of Six Pilot Organizations

Organization	ETD	Energy	F&O	ES&H	Finance	EMSL	TOTALS
Performance Area							
Business Results	39	Pls *	17	2	47	11	116
Compliance	92	16	305	106	5	9	533
Resource Dev/Mgmt	27	Pls	6	0	1	0	34
Effectiveness of Processes	13	Pls	3	14	8	2	40
Customer Value	15	Pls	3	6	5	2	31

Note: * As part of their Balanced Scorecard approach to developing their organization's assessment plan, the Energy division has identified performance objectives and indicators (Pls) in the areas of Business Results, Resource Development & Management, Effectiveness of Processes, and Customer Value, for data to be collected during FY97.

Using results from their individual assessment activities and any external and internal input from customers and stakeholders, the pilot organizations, Independent Oversight and Internal Audit evaluated FY96 performance. These evaluations identified strengths and weaknesses in performance and key improvement actions in the selected framework areas shown in Appendix B.

2.2 Phase 2 Deployment - FY97

Phase 2, scheduled for completion in FY97, consists of institutionalizing the Integrated Assessment Program processes and fully implementing the infrastructure needed for Laboratory-wide deployment of the program. Deployment will be accomplished by:

- issuing the Laboratory management system and standards. The primary standards were issued October 1, 1996. Additional standards are being developed in FY97.
- institutionalizing the functional elements of the program. All of the functional elements of the Integrated Assessment Program (Self-Assessment, Independent Oversight, Internal Audit, and Peer Review) have been institutionalized but are in various stages of maturity. Additional information is provided in Section 4.2, Deployment: Strengths and Weaknesses.
- one-on-one training of management and staff on assessment methods and requirements of the program.
- formalizing and institutionalizing additional assessment methods and tools to assist management and staff in gathering relevant information; e.g., conducting benchmarking, use of continuous improvement tools such as root cause, process mapping, and trending.

3.0 USE OF ASSESSMENT RESULTS

3.1 Self-Assessments (Pilot Organizations)

Appendix B summarizes the information from the pilot organizations' performance self-evaluations. The information was obtained by identifying strengths and weaknesses in performance using the FY96 performance areas listed in Table 1.

The following are some examples of how assessment results are being used that have significant impact on performance in quality of products and services, cost, safety, productivity, and employee relations, either at the organizational level or at the Laboratory level.

Performance Area 1: Business Results. The primary focus in this area was the accomplishment of business and operational objectives of the organization.

All pilot organizations monitored and evaluated their performance on their business and operational goals as indicated in Section 2.0, Deployment, Table 1. Some of the more significant information that demonstrates use of results in this performance area follows.

Business growth, a primary focus for the research divisions, used self assessments, marketing analyses and peer reviews to obtain business information that assisted them in making strategic decisions and improving business performance. Examples include:

- Strong business performance in ETD is being sustained through continued emphasis on diversification of markets and developing, demonstrating and deploying high impact solutions to their customers.
- ETD will expand the use of the "sector" approach to increase cooperative efforts in the international markets and improve marketing capabilities across the Laboratory.
- Energy is developing marketing strategies for their medical products line based on recommendations from a peer review panel.
- As a result of monitoring fully burdened chargeout rates and overhead costs, management actions taken at mid-year and during the 3rd quarter to adjust spending patterns, enabled the Laboratory to meet its FY96 cost objectives.
- Finance proactively negotiated with the recently selected Fluor Daniel team to quickly establish an effective Memorandum of Agreement for the performance of work and payment of services. This agreement, resulted in an effective and efficient process for transferring Budget Authority, performance of work for each other, billing practices and electronic payment.

Effective operations was a key focus for the support organizations as well as the research divisions. Assessments in this area provided the following results:

- Performance indicators are being used by several organizations to monitor their operational performance. Other organizations (ES&H and Energy) are modifying their objectives and indicators to optimize their relevance and reliability.
- Facility Management improved practices used to conduct operations, thereby minimizing impact to R&D staff productivity.
- A self-assessment related to the OIP Master Schedule objectives resulted in the reassignment of

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Operations Improvement Program (OIP) resources allowing the completion of Facility Use Agreements and Standards Based Management System milestones on schedule.

- Finance assisted F&O with implementation and tracking of OIP-related finance and realized a net savings of the program's incremental cost of \$1M. Savings are projected to reach \$3.7M after full implementation of the program.

Performance Area 2: Compliance to Laws, Regulations, and Laboratory Requirements. The primary focus of this area is to identify systemic non-compliances that have significant business and operational impact.

As indicated in Table 1, all organizations in the pilot conducted assessments in the compliance category. Results from these assessments were used by organizations to improve compliance to the requirements of ES&H, QA, and business management practices. Specific examples are:

- *General ES&H Compliance* - The Energy Division has improved its consistency in identifying and handling ES&H issues across all laboratories and office space occupied by the division.
- *Trending and Root Cause* - The Energy Division is developing the ability to identify trends and apply the appropriate performance recognition or long-term corrective actions. The division has also broadened its focus on corrective action from simply addressing findings to making efforts to correct the root cause of findings.
- *Use of Teams* - The Energy Division is using a team approach to perform assessments. This allows the Division to take advantage of the wide variety of technical expertise in their organization in the areas of facilities, operations, and infrastructures including ES&H, quality, property management, etc. One result of this approach is streamlined medical surveillances that focus on areas essential to staff welfare and associated training.
- *Change Control* - F&O has taken a proactive approach to assessment of environmental areas due to the frequent changes of requirements applicable to environmental issues.
- *Safety Equipment Improvement* - ES&H - RadCon identified two significant findings in the area of nuclear accident dosimetry. One led to the modification of personnel dosimeters, enabling them to detect photons, while the second led to more rigorous analysis of the 12 radiation boundaries around the 325 and 327 Buildings.
- *Programmatic Improvements* - F&O staff from BMI Corporate performed an inspection of the RadCon program in response to a violation of 10CFR 835. Corrective action plans are being developed. Finance worked with DOE-RL finance to resolve a major Laboratory charging issue resulting from a DCAA audit and implemented agreed upon changes.
- *Reporting Deficiencies* - ES&H - RadCon's RPR program has proven to be an effective mechanism for identifying, documenting and correcting minor radiological problems that do not meet the criteria for reporting under DOE Order 232.1-1.
- *Chemical Inventory Reductions* - In ETD, excess chemicals are shared to avoid extra inventory. This has resulted in major chemical inventory reductions.
- *Waste Labeling & Designation* - F&O identified problems with labeling/designation of waste. This led to the development of a uniform labeling standard, a detailed procedure for the designation of waste materials, and a proactive waste-generator assistance program.

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- *NEPA Compliance* - ES&H - Environmental Management has identified the potential for incomplete information regarding ES&H concerns, including NEPA compliance, on the Electronic Prep and Risk form. Specific corrective actions are being developed for implementation during early FY97. NEPA streamlining at PNNL has resulted in a savings of \$265K in FY96 and reduction of 2.6 FTEs.
- *Legacy Waste* - The Energy Division has eliminated all legacy waste from the division's controlled laboratory space, including tritium contained within the wall-tubes of Laboratory 9A in the 326 Building. This is projected to result in long-term cost savings to the division and improved safety to staff and the environment.
- *Pollution Prevention* - ES&H - Environmental Management. Pollution prevention activities saved over \$700K in waste disposal, staff time, and materials in FY96. Further cost savings are projected for FY97.
- *Training* - F&O identified weaknesses in training. This led to the assignment of an individual to the F&O Support Staff dedicated to training improvements.
- *Property Management* - The Energy Division assessed property assignments and status. This resulted in an "Excellent" rating and the potential for decreased costs for future audits in the area of property management.

Performance Area 3: Resource Development and Management. This area focuses on technical and staff capability as well as on the effective utilization of staff. Also included is the adequacy of facilities and equipment.

Four of the 6 pilot organizations reported assessment information in this performance area: Energy, F&O, Finance, and ES&H (see Table 1). These assessments focused on effective utilization of staff and facilities as well as on staff training/qualification. Significant improvements resulting from the assessments in this area include the following.

- F&O - RCHN has saved approximately 245 staff hours and \$6K in training costs by ensuring that training requirements match current staff responsibilities.
- F&O's Maintenance Services Department has realigned staff to enhance the department's flexibility and efficiency through process mapping, alignment with organizational objectives, and reorganization.
- ETD has consolidated space, thereby improving space utilization in the division and saving approximately \$1M.
- EH&H has increased the use of Field Service Representatives which has aided line management in effectively executing their ES&H responsibilities.
- Finance determined that the ACE process improvements reduced Property Management communication and coordination with the Research Divisions. Customer feedback, formal and informal, indicates the need for building back education and communication for property representatives and custodians.

Performance Area 4: Effectiveness of Business and Operational Processes. The primary focus of this area is the assessment of product and service delivery and product support processes. Improvements in Laboratory and organizational processes were made or are being planned, using results from assessments conducted in this area.

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Examples are:

- ES&H produced a project plan that details the system enhancements and associated training required to eliminate the identified weaknesses in the integrated ES&H management systems of the Laboratory, and includes finalizing the deployment of key OIP deliverables such as Prep and Risk, and Facility Use Agreements in an integrated fashion.
- Results from the needs analysis conducted by the ES&H's Training Department were used to develop the Training and Qualification Management System and associated Laboratory-level manual MA-4.
- The Energy Division's Information Technology Department modified their FY97 process indicator targets to be more aggressive, based on an evaluation of actual FY96 performance.
- F&O's Facilities Services Department used the technique of process mapping to gain a better understanding of its work processes. This resulted in defining appropriate process indicators which will be used in FY97 to monitor and improve their processes.
- The use of the SBMS process, which utilizes a modified process mapping approach in developing the Laboratory's requirements, procedures and guidelines, has closed some of the gaps between actual practice and documented practice. Approximately 23 ES&H subject areas such as Lock and Tag, Confined Space Entry, Compressed Gases, etc. have been completed.
- In ES&H several program improvements will be initiated in FY97 to improve areas of weakness identified in the Voluntary Protection Program self-assessment. These include a Case Management Program, a pilot Job Hazard Analysis Process, and a Safety Suggestion Program.
- To improve the internal budget process, Finance has implemented new templates and modified the approach to higher-level portfolio management.
- Finance has implemented major enhancements to the Employee Time Reporting system, and realized cost savings of approximately \$200K by developing and implementing the Web reporting system.
- In Finance, due to efficiencies gained through the P-Card program, the average cost per accounts payable transaction decreased from \$4.61 to \$2.98.
- Finance implemented a corrective action plan in the latter part of FY96 contributing to a virtually flawless fiscal year-end processing.

Performance Area 5: Customer Satisfaction and Value. The primary focus of this area is to assess the customers' needs, satisfaction, and perceived value of the desired product.

Customer surveys and interviews were used by many organizations as assessment tools to obtain feedback on performance. Customer feedback information was effectively used by these organizations to improve performance and make decisions on the quality of the products and services they provide. Examples are:

- ES&H has established plans to accomplish the following:
 - Improved the Field Representative Programs (occupational safety and health and environmental management) through increased communications, teaming, and training.
 - Streamlined regulatory requirements through eliminating unnecessary internal requirements or overly conservative approaches while ensuring procedures remain current and relevant to the work.

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- Finance established focus groups to obtain internal customer feedback which was used to improve travel practices and resolve issues with the Laboratory's travel agency.
- F&O used a customer feedback survey to collect information regarding the effectiveness of their support.

Although not part of the formal assessment program pilot, the Contracts Department used a comprehensive survey to assess changes made through their reorganization and process improvements.

3.2 Internal Oversight Functions

Internal oversight functions at the Laboratory are provided by different organizations: Independent Oversight and Internal Audit.

3.2.1 Independent Oversight

FY96 was the developmental year for the new Independent Oversight function under the IAP. Therefore, Independent Oversight activities were focused on performing a number of special studies rather than conducting assessments of division and directorate self assessment programs. An FY96 Independent Oversight Assessment Plan was prepared, reviewed and approved by Laboratory management. The following special studies were performed:

- Investigation of Building 325 Vacuum System Occurrence, IO-95-01, December 8, 1996.
- Independent Oversight Assessment of Implementation of 10 CFR 834, IO-96-01, August 9, 1996.
- No Gap Status of 10 CFR 830.120 for 327 Building (QUA-LPM-96-04) Follow-Up Assessment, IO-96-02, August 29, 1996.
- Investigation of the Unauthorized Introduction of Potentially Hazardous Materials into Laboratory Research and Operations, IO-96-03, August 5, 1996.
- Employee Health and Safety Concerns, Memo HF Kerschner to KC Brog and WJ Apley, August 19, 1996.

The information resulting from these activities is being formally captured in the Laboratory's corrective action tracking system and acted upon accordingly. Copies of the complete reports which include detailed descriptions and recommendations are available from the Independent Oversight Department Program Administrator.

3.2.2 Independent Oversight Themes

There are a number of recurring themes in the results of the special studies conducted by Independent Oversight in FY96. These results are being used to shape/modify the Laboratory's improvement initiatives. Information such as this is also being used to influence the Laboratory's overall improvement agenda. These themes, some of which have been identified in previous external assessments, are:

- *Corrective action closure.* Laboratory staff have historically identified significant weaknesses in the Laboratory but have not been consistent in taking the necessary corrective actions to achieve closure. This problem has also been noted by EH-2, DOE/RL and other external oversight organizations. A number of the reasons that staff give for their failure to act include: lack of funding, lack of management support, lack of discipline in project management and commitment tracking, changing priorities, and lack of accountability.

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- *Adherence to Laboratory procedures.* This issue has been reported by Independent Oversight and other oversight organizations (e.g., Technical Safety Appraisal Team, Tiger Team, Progress Assessment Team, and most recently the EH-22 Safety Management Evaluation Team). Recently this issue resulted in the reporting of a potential Price Anderson Amendments Act violation and a resulting set of corrective actions to address the issue.
- *Integration of Laboratory systems.* The Laboratory has historically been operated and managed in an organizational autonomy model which has led to sub-optimization of certain processes that have supported research efforts. This issue has been identified by senior management. Several initiatives to define and manage the Laboratory using a systems approach have been established to address this weakness. These include: the Operations Improvement Program, the Integrated ES&H Management System, and the conversion of the old Laboratory Management Guides into new Management Systems Descriptions.
- *Fidelity in the flow down of requirements from the governing standards to the bench procedures.* Actions taken such as implementation of the Standards Based Management System (SBMS) and reassignment of certain requirements management responsibilities have resulted in short-term improvements, but additional actions are necessary to improve progress.
- *Alignment among staff qualifications, training provided and job responsibilities.* Staff training and qualifications are not always tailored to the hazards and risks of the work. The establishment last year of a new consolidated Training and Qualifications Department in ES&H has resulted in some improvements in the overall program structure and in some specific job categories. Recent emphasis placed on the nuclear facilities has resulted in performance improvements.
- *Work planning processes in research work.* Work in the Laboratory nuclear facilities is well planned and executed. In the general research environment, however, the rigor with which work is planned, hazards are identified, risks are mitigated, controls are implemented and work is documented is not adequate to meet current OSHA and DOE requirement or Laboratory needs. This issue has been recognized by senior management and several initiatives were created under the OIP such as an enhanced Prep and Risk Process and Facility Use Agreements. Recently these processes have fallen under the umbrella of the Integrated ES&H Management System and have received additional refocus and attention. The application of more rigorous project management principles and a clearer focus on the integration of these functions has resulted in renewed progress.

3.2.3 Internal Audit

Internal Audit is a mature, fully deployed function that actively tracks all findings to closure. Several business or financial related audits were completed in FY96. Copies of the complete reports are available from the Director of Auditing. Summaries of the audits are available in the Director of Auditing's annual report, Battelle-Pacific Northwest National Laboratory Annual Report of Internal Audit Activities Fiscal Year 1996.

3.2.4 Weaknesses Identified During Internal Audits

Overall, Laboratory business processes which were the focus of internal audits conducted in FY96 are sound, have adequate controls, and are generally effective with no significant problems. However, several areas of weakness were identified and the appropriate organizations have been assigned action to address these issues. The weaknesses identified include:

- Workshop Agreement process being used for purchasing items other than "workshops"

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- minor questionable activities noted in administration of Workshop Agreement
- insufficient guidance for honorarium amounts
- reconciliation difficulties between the Drafts Payable Account and the general ledger balance causing the Drafts Payable Account to be misstated
- questionable and unallowable costs noted for activities and travel
- minor overrun of the nonexempt salary increase fund
- excessive number of errors and noncompliances with travel policies noted in Travel Expense Reports
- economy and efficiency of operations and data integrity controls in HR
- purchasing software and computer add-ons not on preapproved list for P-Card transactions
- lack of clarity regarding P-Card split purchase transactions
- weakness noted in deficiency follow-up and feedback in the P-Card process
- no process to identify significant accounting errors in regard to ICRIP fee claim preparation
- no process to mitigate inactive/historical records from Travel/Treasury Services System (TSS) production databases
- incomplete/out of date Travel/TSS documentation
- need for benchmarking to develop improvement metrics applicable to software development.

3.3 Peer Reviews

Peer Reviews in the Laboratory consist of two types: External Peer Reviews, performed by outside reviewers, and Internal Peer Reviews, performed by Laboratory staff on proposals, project deliverables and publications.

3.3.1 External Peer Reviews

Several external Peer Reviews were performed of Laboratory research programs during FY96. Reviewers included members of academia, industry, other national laboratories, and technical organizations who are recognized for their technical expertise in the review subject areas. The purpose of these reviews is to provide constructive suggestion/criticism regarding the research and research agendas, and to make suggestions for necessary modifications in program directions. Summaries of these Peer Reviews are addressed in a Laboratory formal report, PNNL-11379, *Pacific Northwest National Laboratory FY96 Annual Self-Evaluation Report*, dated October 21, 1996.

3.3.2 Use of Results

Peer Reviews provide key inputs to improve the quality of research, technical capabilities and its relevance to DOE's needs. Examples of some actions being taken in response to the most recent set of reviews include the following:

Tank Focus Area (TFA)

- LA/MS technology will be supported through FY98
- Staff will continue to resolve deployment issues on the RPD&E project

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- Studies are in place or being planned for the sludge washing project.
- Increased communication via teleconferences are scheduled for the crossflow filtration project
- Work is being done on technetium removal and new work is being sponsored.
- Large-scale flow tests on cesium removal, have been deferred while the possibility of a LLW vitrification facility is being evaluated.

Chemical Physics Program

- Principal scientists will sharpen the focus of their work.
- Access to quantitative systems information will be increased.
- Additional technical/scientific publications will be pursued.
- Relationships with outside collaborators will be strengthened.
- Substantial efforts have begun to develop a more integrated and collaborative research environment through outreach efforts to other research programs.

3.3.3 Internal Peer Reviews

The Laboratory conducted extensive internal peer reviews to ensure that new proposals submitted were of the highest scientific quality, were relevant to the Laboratory's mission, and that the proposed research was targeting key technology problems. Over 150 proposed ideas for the EMSP initiative were submitted which were screened and resulted in 21 full proposals being developed and formally submitted. Of these 21 proposals, 10 were funded. The rigorous peer review process is considered to be a primary factor in this high success rate; this was the highest success rate in terms of proposals funded and dollar volume (\$15M+ over 3 years) among all of the National Laboratories.

4.0 Laboratory's Self-Evaluation of the Integrated Assessment Program

The Laboratory's Integrated Assessment Program was evaluated at two levels: 1) the Laboratory-level, i.e. the program overall, and 2) at the organizational level.

4.1 Approach: Laboratory-Level Strengths and Weaknesses

Strengths in Approach

The holistic approach to assessments which incorporates information from various sources: oversight functions such as independent oversight, internal auditing, state and local agencies and peer reviews, self assessments performed by line management and staff benchmarks, and feedback from customers and stakeholders.

Use of a recognized industry standard as the framework to ensure assessments cover all important areas of performance.

The alignment with the critical outcomes of the Laboratory and division/directorate missions.

Customized assessment plans tailored to organization missions and encourage ownership by management.

Reliance on partnering with customers/ stakeholders.

Weaknesses in Approach

Methods for analyzing data and trending indicators are not directly described nor emphasized.

Methods that can be used to determine improvement actions, such as root cause, analysis, process mapping, brainstorming, etc. are not directly described or emphasized in the program.

Capability of readily obtaining assessment status information at the Laboratory level is limited due to the decentralization of the information systems.

4.2 Deployment: Laboratory-Level Strengths and Weaknesses

Strengths in Deployment

Significant progress has been made in transferring responsibility for assessment activities to management.

The bulk of assessments were being planned in the compliance area but other performance categories were also included.

There is increased emphasis on evaluating customer satisfaction with products and services.

There is increased teaming with the customer in the planning of assessment activity.

A growing awareness of the costs associated with assessment activity.

A growing appreciation by line management of the value of self-assessment and use of the results to improve performance.

Internal Auditing is well established and fully operational.

The Peer Review process has been developed and reviewed by senior Laboratory management and the Laboratory Advisory Committee. Recommendations from the reviews are being incorporated into the process

Weaknesses in Deployment

The connection of assessment activities to critical outcomes and objectives had not yet been made by all organizations. Many organizations regard the Laboratory level process as separate from their organizational process.

Compliance assessments were generally not performance-based and not linked to organizational objectives and business results.

Lab-level analysis of external assessment results could not be performed due to inconsistent use of the Corrective Action Tracking System (CATS).

A process is lacking for identifying redundancies and gaps in ES&H compliance assessments.

Balance is needed among self-assessments, oversight assessments, and program reviews to make more efficient use of limited resources.

The cycle of assessment planning must be better aligned with business planning.

Partnering with customers needs to be encouraged.

Lack of understanding by some management and staff concerning the use of the evaluation framework (i.e. performance categories).

4.3 Strengths and Weaknesses in Specific Organizations

By design the infrastructures necessary to deploy the program within the different organizations were left up to the senior management of individual organizations. The following section describes the strengths, weaknesses, and specific improvement actions as identified by some pilot organizations.

FACILITIES AND OPERATIONS		
Strengths	Weaknesses	Program Improvements
<p>Deployed the SA process throughout their departments</p> <p>Encouraged ownership by management and staff</p>	<p>SA is not recognized by all department staff as a way of "making things better"</p> <p>POIs which aligned with directorate objectives were not developed</p> <p>The majority of assessment activities centered around compliance issues</p>	<p>Expanded program to be proactive, incorporated lessons learned to identify areas for improvement</p> <p>FY97 assessment plans will incorporate the use of POIs</p> <p>Enhance staff and management buy-in through senior level management review of results</p>

ENVIRONMENTAL TECHNOLOGY DIVISION		
Strengths	Weaknesses	Program Improvements
<p>Division leadership is committed to using SA as a management tool to improve performance</p> <p>Managers set POIs and are accountable for results</p> <p>Deployment of the program throughout the Division is progressing</p>	<p>Documentation requirements for the program are not clear</p> <p>Compliance assessments need to be fully coordinated to reduce redundancy and increase effectiveness (especially with F&O)</p> <p>Status of planned assessments are not routinely evaluated</p> <p>Increased emphasis on using assessments to predict future goals is needed</p>	<p>POIs were adjusted and method revised as learning increased</p> <p>Program is deployed by use of business model</p> <p>Coordination of facility assessment with F&O to increase efficiency</p> <p>Use of SA results to minimize external oversight needs to be encouraged</p>

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ENERGY DIVISION		
Strengths	Weaknesses	Program Improvements
<p>Division leadership is committed to developing a holistic approach to assessment</p> <p>Use of a team approach to identify improvements and ensure ownership</p> <p>POIs developed around Lab outcomes and Division objectives</p> <p>Recognized process used in developing POIs (ProMES and balanced score card)</p> <p>DOE customer involvement in developing assessment plans</p>	<p>Data collection on identified POIs not begun in FY96 as planned</p> <p>Business cycle and assessment planning not in sync for FY96</p> <p>DOE and PNNL commitment to partner requires improvement</p>	<p>Cycle alignment with FY97 business planning</p> <p>Maintain routine communication with RL representative</p> <p>Begin FY97 data collection on established POIs</p>

EMSL		
Strengths	Weaknesses	Program Improvements
<p>The FY96 assessment plan was EMSL Project specific. This plan listed many of the day to day activities which are conducted in order to keep the Project on track and primarily supported on the Incentive Fee based Critical Outcome and Performance Indicators.</p>	<p>From an overall Lab level (staff, system, process) perspective, there is a perception of two completely different processes instead of one lower/detailed level process feeding into a Laboratory level process. There did not seem to be much interaction or linking between the administration of the self assessment process and the Critical Outcome process</p>	<p>EMSL FY97 plan will be more encompassing to reflect both EMSL Project and Organizational activities which are tied more closely to the Laboratory Level Critical Outcomes and Performance Indicators.</p>

4.4 Improvement Actions for the Integrated Assessment Program

To address the weakness in the Laboratory level approach to IAP the following improvements are planned:

- Peer Review process will be completed and included in the SBMS.
- additional procedures and/or guidance are being considered for inclusion in the IAP. These are: lessons learned, root cause methodology, benchmarking, continuous improvement tools, internal/external customer feedback.
- a customer feedback survey is being conducted to determine other tools that are considered important by internal and external customers and which of the current tools require revision to be more effective.
- feedback by a recognized authority on assessment methodology will be obtained and recommendations incorporated in the program.

To address the weakness in the Laboratory level **deployment** of IAP the following actions are planned:

- one-on-one training in techniques will be given to key staff responsible for assessment coordination
- facilitation services in developing indicators and analyzing data will be made available
- the IAP management system owners and Independent Oversight will provide direct feedback on individual plans and evaluation reports
- effectiveness of the program will be monitored through the use of the IAP performance objectives and indicators, and assessment plan.

4.5 Laboratory's Performance Rating of the Integrated Assessment Program

4.5.1 Overview of the Performance Rating Process

The framework for the performance evaluation of the Laboratory consists of two components. The first component, weighted at 75%, reflects progress toward accomplishment of the Laboratory's critical outcomes. The second component, weighted at 25%, reflects the effectiveness of the Integrated Assessment Program to continuously improve performance.

The IAP's performance rating is based on three evaluation dimensions: 1) Approach; 2) Deployment; and 3) Use of Results.

- **Approach** refers to how effective the processes and methods of IAP are in achieving its stated objectives. It addresses whether they are systematic, responsive to requirements and integrated with the Laboratory's other systems.
- **Deployment** refers to the extent to which the approach is applied across all of the organizations' work groups, and covers all requirements.
- **Use of results** refers to how the outcomes of the assessment activities are used. It addresses results to sustain or improve performance, make fact-based decisions and identify future goals and objectives.

4.5.2 Performance Rating

A performance rating for the overall quality of the Integrated Assessment Program was developed using the three evaluation dimensions described above. A brief summary of the evaluation for each dimension is provided below and summarized in Table 2.

Approach

The Laboratory has solid strengths in its approach to self-assessment. The approach is holistic and incorporates information from various internal and external sources, including oversight, auditing, line management self-assessments, benchmarking, peer review, and customer feedback. A key aspect of the approach is the development of performance objectives and indicators that linked from top to bottom, starting from the Laboratory's critical outcomes and ending with individual employees. A set of performance framework categories that are based on recognized industry standards are used to assure that assessment activities are broad yet monitor important aspects of performance. The use of customized

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assessment plans assures that each organization tailors its assessments to its missions and customers. In addition, the Laboratory's Independent Oversight function is chartered to review the Division/Directorate's self-assessment processes in order to enhance their effectiveness and efficiency. Formal semi-annual performance evaluations are completed in order to review progress toward accomplishment of objectives and to identify opportunities for improvement.

The IAP approach is a fact-based improvement process that provides for systematic and responsive assessment plans, incorporating critical performance elements. We believe that our overall performance rating for this element is Outstanding.

Deployment

Significant progress has been made in planning and transferring responsibility for assessments to line management. Though still heavily focused on compliance, assessments in other performance categories were also planned and executed. Evaluation of internal/external customer satisfaction with products and services is also increasing as is attention to the achievement of business and operational results. Partnering with customers in assessment planning varied across the organizations and is improving. While deployment proceeded well in many areas of the pilot organizations, some work units are still in the early stages of understanding and implementing the transition from oversight to self-assessment and connecting assessment activities to Laboratory critical outcomes and business results. We believe that our overall performance rating for deployment is Good.

Use of Results

Because the timing of the FY96 self-assessment pilot spanned a portion of the fiscal year, the Laboratory had a limited time frame over which to evaluate the use of results from self-assessment activities. However, all organizational self-evaluations showed evidence of performance improvement trends through use of the results gathered from the assessment activities. There are some excellent success stories such as in the area of ES&H performance and use of peer reviews. The organizational self-evaluations indicated many examples of results being used to impact performance in quality of products and services, cost, safety, productivity, and employee relations. Because the performance trends are showing areas of strength and improvement, we believe the overall rating for this element is Good.

Table 2. Criteria Used to Determine Performance Rating for Integrated Assessment Program

Rating	Approach	Deployment	Use of Results
Unsatisfactory	No approach evident; anecdotal information	Nothing deployed; no management involvement	No results available
Marginal	Beginning of a systematic approach	Significant gaps between deployment of planned assessment activities and requirements Minimal management involvement	Some results being used to improve performance Assessment results not used by management to drive improvement
Good	Systematic approach that is based on requirements	No significant gaps in deployment of requirements and documentation Evidence of management involvement in a few Division/Directorate departments	Assessment results used to improve performance Analysis of results (depth and breadth) just beginning
Excellent	Comprehensive approach, responsive to requirements and integrated with business and operational objectives	Evidence of deployment in all departments Deployment of requirements varies, consistent with importance Evidence of management involvement in all departments	Results routinely reviewed to monitor performance and make needed improvements Analysis of results (depth and breadth) well established
Outstanding	Comprehensive approach, fully responsive to requirements, well integrated, and fully supportive of business and operational objectives	Assessment a key tool used by Division/Directorate management for improvement	Results important to managing performance Results drive improvement decisions and resource allocations

Note: Items that are in bold indicate results of evaluation. Shaded boxes indicate overall conclusion for each evaluation dimension.

The composite rating for the Program was determined by evaluating each section (Approach, Deployment and Use of Results) and assigning a numerical value based on the adjectival rating used by DOE (Outstanding = 5, Excellent = 4, etc.). Weightings were predetermined and agreed to by DOE. Score is based on overall total possible score of 500 points.

OVERALL PROGRAM SELF-EVALUATION SUMMARY

Evaluation Dimension	Rating	Value	Weight	Score
1. Approach	Outstanding	5	50%	250
2. Deployment	Good	3	30%	90
3. Results	Good	3	20%	60
Total Score				400

Total Score	500 - 450	449 - 350	349 - 250	249 - 150	<149
Final Rating	Outstanding	Excellent	Good	Marginal	Unsatisfactory

APPENDIX A

Integrated Assessment Program: Management System Description

[| SBMS Home Page](#) | [| All Management Systems](#) | [| Instructions](#) | [| About](#) |

Integrated Assessment Program - A Performance Measurement System

Effective Date: 10/21/96

Point of Contact: BC King

1.0 PURPOSE

The Integrated Assessment Program (IAP) is the Pacific Northwest National Laboratory (Laboratory) performance measurement system. As such, the Integrated Assessment Program

- ☐ determines and predicts future customer requirements to improve existing products/ services and enhance customer satisfaction.
- ☐ provides the Laboratory and Department of Energy (DOE) staff and line management accurate technical, business and operational performance information that promotes early identification and resolution of problems that may impact achievement of the Laboratory critical outcomes and division/directorate objectives.
- ☐ verifies conformance to established requirements.
- ☐ verifies effective conduct of activities (expected by DOE and the Laboratory senior management) to protect the environment and the health and safety of workers and the public.
- ☐ contributes to ongoing improvement in performance.

2.0 OWNER

The Integrated Assessment Program consists of four primary elements: Peer Review; Self Assessment; Independent Oversight; and Internal Auditing.

- ☐ The **Director of Quality** has overall responsibility for the integration of the four elements and administers the Self Assessment Program for the Laboratory.
- ☐ **Director of Environmental and Energy Sciences** is responsible to ensure that a Peer Review process that can provide feedback to the Laboratory's scientific, technical, and programmatic objectives is in place at the Laboratory.
- ☐ **Director of Environment, Safety and Health** is responsible for administering Independent Oversight for the Laboratory.
- ☐ **Director of Auditing** is responsible for administering the Internal Audit function for the Laboratory.

3.0 SYSTEM OPERATION

3.1 Overview

The Laboratory Integrated Assessment Program (IAP) consists of four primary elements: Self

Assessment (SA); Peer Review (PR); Independent Oversight (IO); and Internal Audit (IA). Together these elements generate information on scientific, business, and operational performance for the Laboratory management, staff, customers, stakeholders, and regulators. The key elements and processes are illustrated in Figures 1 and 2 and described below.

The Integrated Assessment Program encourages scientific, operational, and business excellence, through self assessment, strengthening of the line management and their accountability for scientific excellence, safety, fiscal responsibility and cost effectiveness.

3.2 Key Elements and Processes

The Integrated Assessment Program is an integrated performance measurement system consisting of four functional organizational elements and four key processes. The functional elements and their relationship and interfaces to external oversight organizations are illustrated in Figure 1. The key processes and their deployment mechanisms are illustrated in Figure 2.

3.2.1 Functional Elements

The four functional elements that integrate the Laboratory's internally generated performance information are depicted by bold type in Figure 1. These elements collect data and transform it to information that can be used by the individual organizations as well as customers, stakeholders and regulators to make decisions on areas requiring improvement.

The customers, stakeholders, regulators (depicted by italics in Figure 1) provide objective input and validate performance. Together these elements (internal and external to the organization) provide comprehensive and objective information that can be used by the Laboratory in establishing its strategic direction and improving performance. The roles and responsibilities of the four functional elements of the Integrated Assessment Program are described in Section 4.3.

3.2.2 Key Processes

The key processes that are used by the Integrated Assessment Program to obtain, evaluate, and use information are illustrated in Figure 2. These include:

- ☐ determining performance objectives and indicators,
- ☐ monitoring performance against those objectives and indicators,
- ☐ evaluating overall performance and identifying areas for improvement, and
- ☐ implementing actions for improvements.

3.2.3 Determining Performance Objectives and Indicators (POIs)

The first process of the Performance Measurement System is determining the Laboratory critical outcomes and performance objectives and indicators. The Laboratory critical outcomes and associated performance objectives and indicators are established by the Strategy Council in cooperation with the customer on an annual basis during the business planning cycle. Using the Laboratory's critical outcomes, the divisions/directorates develop supporting objectives and indicators in cooperation with their customers (both internal and external). Objectives and indicators of performance are then developed for each staff member. The end result is a hierarchical set of objectives and indicators that are linked from the Laboratory's critical outcomes to each staff member's Staff Development Review (SDR).

The key performance objectives and indicators resulting from this process drive the development of annual self assessment plans.

3.2.4 Monitoring Performance Against POIs

The second process of the Performance Measurement System is developing and implementing an assessment plan. The assessment plan describes the assessment activities that the organization performs to ensure that plans and controls are in place to achieve its objectives.

Each organization develops an Annual Assessment Plan as part of the Integrated Business Planning Process. These plans form the basis of the Laboratory-level Plan.

To ensure that important aspects of performance are monitored and to guide the development of holistic assessment plans, the Laboratory uses an assessment planning and evaluation framework based on the Malcolm Baldrige National Quality Award criteria. This is shown in Section 10.0. These criteria encompass the safety management principles and performance criteria of DOE's independent oversight, OSHA Voluntary Protection Program, Chemical Manufacturers Association, Responsible CARE Program, and the Quality Assurance ISO 9004.

Planned assessment activities are reviewed with appropriate customers and stakeholders, both internal and external. The Quality Director will ensure that the overall Laboratory assessment plan is reviewed with the DOE-RL AMT Director.

3.2.5 Evaluating Performance

The third component of the Performance Measurement System is the overall evaluation of the Laboratory's performance. The evaluation process analyzes data gathered during Assessment activities and rolls it up to a management level presentation (qualitative and quantitative) on a quarterly basis with mid-year and annual provided to DOE. The evaluation process generates a summary document that is utilized by the Laboratory management and DOE-RL to judge overall performance. This document also describes the Laboratory's key improvement opportunities as summarized from the Division/Directorate Assessment, Peer Reviews, Independent Oversight, Internal Audit and external assessment results.

3.2.6 Implementing Improvements

The final step in the Performance Measurement System is to implement the key improvement opportunities that the evaluation processes identified. Improvement areas requiring action at the division/directorate level are implemented as appropriate by the division/directorates. Laboratory-level improvement areas are considered for inclusion into the overall Laboratory Improvement Agenda.

3.3 Critical Support Mechanisms

1. The following critical support mechanisms need to be in place for the Integrated Assessment Program to function in an efficient and effective way:
2. The Laboratory Director and Associate Laboratory Directors (ALD's) support the Integrated Assessment Program and assure that the Laboratory is responsive to the issues raised.
3. Effective Peer Review Committees at the Laboratory and Divisional level are formed and operating to provide assessments of organizational missions, plans and strategies as well as specific reviews

- of product lines, programs/projects and technologies.
4. Division-specific internal Peer Review mechanisms are established that provide review of products intended for external distribution (e.g., proposals, presentations, and publications).
 5. A fully functional and disciplined Integrated Business Planning Process must be available to support the development of integrated business plans.
 6. A comprehensive Standards Development and Regulatory Analysis Process must be available to support the identification of the standards that define how the work will be performed.
 7. A comprehensive, assessment planning and evaluation framework must be available to provide uniform planning and a comprehensive evaluation of processes and programs.
 8. A comprehensive Training and Qualifications process must be available and implemented that ensures that the overall Laboratory goals and objectives are flowed down to every individual in the organization and that they are held accountable for that performance.
 9. A robust, distributive, information management system that facilitates collection of assessment data, analysis of the results, and communications of the results.
 10. Appropriate self assessment tools, e.g., benchmarking, customer surveys, performance indicators must be maintained and be readily accessible to assist staff.
 11. Expert technical support; i.e., subject matter experts (SME) in safety, environment, and quality are available to assist divisions/directorates in meeting their performance measurement responsibilities.

4.0 OUTPUTS

Output	Customer	Primary Links to Other Management Systems	Links to Business Model
Assessment Plans (Lab Level Assessment Plan I/O & I/A Assessment Plan, All MSDs: Div/Dir Assessment Plans)	Laboratory Director, Dir Quality, Line Managers, Core Tech Cap. Managers, IO/IA, DOE-RL (AMT), BMI	All	Integrated Planning & Assessment
Assessment results (Quarterly Div/Dir Business Performance Summary, Mid-yr & Annual Lab Bus Performance Reports, Special & Routine Reports I/O & IA, Annual I/O & I/A Oversight Reports)	Laboratory Director, Staff, Prod, Line Managers, Core Tech. Cap. Manager, Leadership Team, Dir Strategic. Plan, Dir Quality, IO/IA, DOE (HQ/RL), DOE-RL (AMT), External Regulators, BMI, DOE ER	All	Integrated Planning & Assessment
Peer Review Reports	Laboratory Director, Staff, Prod, Line Managers, Core Tech. Cap. Manager, ALDs, Dir Strategic. Plan, Dir Quality, DOE-ER	Project Management	Integrated Planning & Assessment

5.0 REQUIRMENTS AND DRIVERS

5.1 Requirements

Document	Title
DOE O 413.1	Management Control Program
10 CFR 830.120	Energy/ Nuclear Safety Management/ Quality Assurance Requirements
DOE 5480.19Chg. 1	Conduct of Operations Requirements for Doe Facilities
DEAR 970.5204-9(h)	Federal Acquisition Regulations System/ Department of Energy/ Agency Supplementary Regulations/ DOE Management and Operating Contracts/ Contract Clauses for Management and Operating Contracts/ Accounts. Records, and Inspection/ Internal Audit.
DE-AC06-76RLO-1830	Battelle Contract with DOE
DOE 5700.6cChg. 1	Quality Assurance

5.2 Drivers

6.0 KEY RESPONSIBILITIES

Laboratory Director

The Laboratory Director is responsible to DOE for developing the Laboratory Self Assessment Plan, and as a critical piece of the plan, a peer review system that is effective in assessing the Laboratory's scientific and technical outputs. The Laboratory Director is responsible for responding to the Laboratory Advisory Committee on actions and resolution of issues identified in the peer reviews.

Laboratory Advisory Committee (LAC)

The role of the Laboratory Advisory Committee is to ensure that the Laboratory is directing its efforts appropriately. To fulfill this role, the Committee conducts objective, independent assessments of the Laboratory (e.g., Technology Transfer, Human Resources, and other areas identified by the CEO of Battelle Memorial Institute (BMI)) and provides advice on improving the Laboratory's performance in the areas of its principal functions, future directions, and management. Specifically, the committee shall:

- ☐ Advise the Laboratory on activities to ensure that they are appropriate and balanced in terms of national goals and regional interests.
- ☐ Advise the Leadership Team of trends in scientific, technical, economic, environmental, social, and political affairs which could impinge on the Laboratory and which, accordingly, should be considered in setting the Laboratory's priorities.

Laboratory Review Committee (LRC)

The Laboratory Review Committee (LRC) is comprised of the Chairs for each of the Division Review Committees. As a group, the LRC is responsible for advising the Laboratory Director and the Laboratory Advisory Committee on technical and scientific matters of divisional and programmatic importance. They

oversee and ensure uniform practice of the peer review process at the divisional level.

Division Review Committee (DRC)

The Division Review Committee (DRC) will lead and participate in the process of peer review within a division, and ensure proper peer review of major programs/projects, product lines, core technical capabilities, and technologies on a three-year, rotating basis. Each DRC should prepare a charter that addresses unique aspects of their activities and responsibilities, and includes division-specific performance-based standards.

Strategy Council

The Strategy Council, the primary policy making body of the Laboratory, consists of the Associate Laboratory Directors, the Director of Strategic Planning, and is chaired by the Laboratory Director. The Strategy Council identifies the critical outcomes and key business objectives of the Laboratory; flows these down throughout the organization; and ensures that the necessary resources are allocated to support the division/directorate accomplishment of the critical outcomes. The Strategy Council manages the Overall Laboratory Improvement Agenda by providing review, analysis, evaluation, and prioritization of improvement initiatives that are identified by the line management Self Assessment program, Independent Oversight, Internal Audit and other customer input such as the DOE-RL Annual Appraisal of the Laboratory.

Level 1 Managers

The Level 1 Managers are the leadership of the Laboratory's functional and research organizations. They are responsible and accountable for executing the Laboratory's business, scientific, and operational objectives through determining performance objectives and indicators that support the Laboratory's critical outcomes and their own organization's business results and objectives. Self assessment plans are developed and implemented to ensure that these business results and objectives are monitored and successfully accomplished.

The Director of Quality administers the Self Assessment Program for the Laboratory. The Director is accountable for coordinating the preparation of the Laboratory's Mid-year and Annual Business Performance Reports that are provided to DOE-RL as a summary of the Laboratory's performance. The Director also ensures that systems, processes, guidance, tools, and expert support, is provided, as needed, by the divisions and directorates to fulfill their Self Assessment responsibilities.

The Director of Environment, Safety and Health is responsible for administering the Independent Oversight Program for the Laboratory and overseeing the efficiency, effectiveness and adequacy of self-assessment activities.

The Director of Auditing is responsible for administering the Internal Audit Program for the Laboratory and provides first line interface with DOE-RL organizations who perform assessments of the Laboratory financial and business activities.

The Director of Environmental and Energy Sciences is responsible to ensure that Peer Review process is in place to provide objective feedback on the technical integrity and quality of the scientific, technical, and programmatic work of the Laboratory.

The Associate Laboratory Directors are responsible to work with the Laboratory Advisory Committee

and the Division Review Committees to ensure that the Peer Review Process is working effectively within their Division.

Division/Directorate Line Management

Line Managers at all levels of the Laboratory are responsible for conducting an aggressive Self Assessment Program and are accountable for improvements to the performance of programs, activities, facilities, and operations under their purview. They have ultimate accountability for ensuring that appropriate corrective action is taken, commensurate with hazard, risk, vulnerability, and overall business objectives, on identified weaknesses.

Line Managers at all levels within the technical Divisions are responsible for ensuring support for external Peer Reviews (including establishing dialogue with and supplying pertinent technical and programmatic information to the Division Review Committees), and for establishing and implementing Division-specific mechanisms for performance of internal Peer Reviews on products destined for external distribution.

Product Line Managers

Product Line Managers are responsible for administering the formal elements of the customer feedback process.

Assessment Coordinators

Assessment Coordinators are those staff appointed by the division/directorate to coordinate assessment activities for the organization and interface with the Integrated Assessment Program. Acts as the point of contact for communication information to and from Quality, Independent Oversight and Internal Audit on division/directorate assessment plans and evaluation information. Also, reviews results from assessment activities for potential non-compliance to Price Anderson Amendment Act (PAAA).

Staff

Staff are responsible to organize their work and work processes and make improvements to achieve higher levels of performance. They work, individually, through their management or through quality improvement teams to affect changes that improve cost, quality and safety in their work processes.

7.0 INPUTS

Inputs	Primary Originator	Primary Links to Other Management Systems	Links to Business Model
Assessment Plans & Results	Div/Dir, Line I Management	All	Integrated Planning and Assessment
External Assessments Results	External Oversight Agencies, DOE		
Information Resources Systems Support	IAP	IS	Integrated Planning and Assessment
Line Organization Business Plan Objectives and Indicators	ALD/Director	Integrated Planning	Integrated Planning and Assessment
Performance Evaluation Reports	Div/Dir Line I Management	All	Integrated Planning and Assessment
Performance Standards		SBMS	
Program/Project Technical Results	Laboratory Advisory Committee, Lab Review Committee, Division Review Committee	Project Management	Integrated Planning and Assessment

5.5 Core Services/Purchased Services

The Integrated Assessment Program is a core service that provides Laboratory management and staff with tools and support in assessing and improving their performance. Key outputs are:

- ☐ a summary and analysis of the Laboratory's assessment plan and areas of focus. Input for this report comes from the individual division/directorates, independent oversight, internal auditing, and peer review assessment plans.
- ☐ mid-year and annual summaries of Laboratory performance link to the critical outcomes of the Laboratory. Input for these reports come from individual division/directorates, independent oversight, internal auditing, and peer review evaluation reports.
- ☐ when needed Internal Auditing and Independent Oversight special investigations are conducted and reports issued to Laboratory management.

9.0 STANDARDS

10.0 OTHER INFORMATION

References

References that are applicable to the Integrated Assessment Program and which were utilized in the preparation of this program description are as follows:

- ☐ Implementation Guide For Use With 10 CFR Part 830.120, Quality Assurance, U.S. Department of Energy, G-830.120-REV.0, April 15, 1994.
- ☐ ISO-99\001-1994 (ANSI/ISO/ASQC Q9001-1994), Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation, and Servicing, Section 4.17, "Internal Quality Audits".
- ☐ DOE/RQ/0333P, dated December 18, 1992, Quality Assurance Requirements and Description, Section 18.0, "Audits".
- ☐ ASME NQA-1-1989, Quality Assurance Program Requirements for Nuclear Facilities, Section 18, "Audits", Supplement 18S-1, "Supplementary Requirements for Audits", and Appendix 18A-1, "Non-mandatory Guidance on Audits".
- ☐ ASQC Energy Division, Quality Surveillance Guidelines and Quality Surveillance Handbook, ASQC Quality Press, 1992.
- ☐ NUREG/CR-5151, dated February 1989, Performance-Based Inspections:
- ☐ DOE/EH-0135, dated June 1990, Performance Objectives and Criteria for Technical - A Safety Guide.
- ☐ ANSI/ASQC E4-1994, Quality Systems Requirements for Environmental Programs, Part A, Section 2.9, "Quality Assessment and Response".
- ☐ ISO-9000-1-1994 (ANSI/ISO/ASQC Q9000-1-1994), Quality Management and Quality Assurance Standards - Guidelines for Selection and Use.
- ☐ ISO-9002-1994 (ANSI/ISO/ASQC Q9002-1994), Quality Systems - Model for Quality Assurance in Production, Installation, and Servicing.
- ☐ ISO-9003-1994 (ANSI/ISO/ASQC Q9003-1994), Quality Systems - Model for Quality Assurance in Final Inspection and Test.
- ☐ ISO-9004-1994 (ANSI/ISO/ASQC Q9004-1994), Quality Management and Quality System Elements - Guidelines.
- ☐ DOE-STD-1082-94, DOE Standard, Preparation, Review, and Approval of Implementation Plans for Nuclear Safety Requirements, October 1994.
- ☐ Successful Health & Safety Management, Health and Safety Series Booklet HS(G) 65, HSE Books, London, England, 1991.
- ☐ Malcolm Baldrige Quality Award
- ☐ DOE Standard "Implementation Guide for Quality Assurance Programs for Basic and Applied Research.
- ☐ Peer Review Process (Ref. Industry) Best Practice.

Assessment Planning and Evaluation Criteria Framework

1. Leadership Commitment and Involvement

1.1 Setting Direction and Mentoring Effective Leadership System

1.2 Integrating Customer and Performance Expectations in the Management Systems

1.3 Integrating Risks, Regulatory, and Contractual Requirements in Setting Operational Objectives

2.0 Human Resource Development and Management

2.1 Planning and Evaluating Performance for Staff Development

2.2 Promoting Effective Work, Compensation and Reward Systems

2.3 Promoting Education, Training, and Development

2.4 Maintaining Quality of Work Life (Employee Satisfaction and Well Being)

3.0 Customer Focus and Satisfaction (Customer Value)

3.1 Understanding of Customer and Market Needs

3.2 Managing Customer Relations

3.3 Determining Customer Satisfaction

3.4 Using Customer Feedback Results

4.0 Process Management

4.1 Designing and Introduction of Products and Services

4.2 Managing of Product/Services, Delivery Mechanisms (Facilities/ Equipment)

4.3 Designing and Managing Support Services

4.4 Managing Supplier Performance

5.0 Business and Operational Results

5.1 Performance Against Key Objectives and Indicators (Financial, Operational, Programmatic)

6.0 Compliance to Laws, Regulations, and Contractual Requirements

6.1 Compliance Areas

6.1.1 Conduct of Operations

6.1.2 Configuration Management

6.1.3 Documents & Records

6.1.4 Emergency Management

6.1.5 Environmental Protection

6.1.6 Finance/Contracts

6.1.7 Maintenance/Work Control

6.1.8 Operational Safety & Health/Fire Protection

6.1.9 Personnel/Diversity

6.1.10 Procurement/Subcontracts

6.1.11 Radiation Protection

6.1.12 Safeguards & Security/Property

6.1.13 Training/Qualifications

6.1.14 Waste Management

6.1.15 Other (specify)

6.2 Risks and Regulatory and Other Legal Requirements Addressed in Planning and Setting Operational Requirements and Target

6.3 Assessment of Possible Regulatory Impacts/Price Anderson Issues

6.4 Compliance to the Applicable Requirements

6.5 Response to Significant Occurrences/ Incidents and Handling of Off-Normal Occurrences or Notices of Violation

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APPENDIX B

Pilot Organizations:

Summary of Strengths, Weaknesses and Improvement Actions

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Business and Operational Results		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
<ul style="list-style-type: none"> The FSD has developed four measures and associated implementation plans for office space utilization, Laboratory vacancy, ER carryover projects, and FY97 ER small projects. An assessment performed by RCHN Management identified practices that negatively impacted R&D productivity 	<ul style="list-style-type: none"> Business results did not receive sufficient attention during FY96. The FSD has not become proficient in defining and documenting work scope and schedules. This leaves their staff on their own which returns incomplete results. 	<ul style="list-style-type: none"> The RCHN Operations Department facility management operates to minimize impact to the occupant R&D organizations. F&O is working to add business/strategy areas of assessment into its annual program.
Energy		
<ul style="list-style-type: none"> The Medical Technology product Line conducted an external peer review to gain a perspective on the current medical technology program and plans, and advice on key strategic issues and opportunities. 	None reported	<ul style="list-style-type: none"> The peer review of the Medical Technology Product line provided insights and recommendations which helped the product line to build the business. A report documenting the results of the review is available upon request.
ES&H		
<p>(IMP)</p> <ul style="list-style-type: none"> Execution of the integrated ES&H management program was performed with minimal expenditure, and funded under existing enhancement activities. <p>(Radcon)</p> <ul style="list-style-type: none"> Overall performance on the seven radiological control elements of the worker health and safety composite is in the "excellent" band <p>(ENV)</p> <ul style="list-style-type: none"> Resolved 24 of 31 items on the "silver list". Only 25 of 31 items had been identified as "doable/stretch" goals in FY96. The 324 REC Closure Plan was submitted to Ecology successfully meeting the TPA milestone two months ahead of schedule. <p>(OS)</p> <ul style="list-style-type: none"> There has been a reduction in the Lost Workday Case Incidence Rate indicator. <p>(TQP)</p> <ul style="list-style-type: none"> All of the Training and Qualification OIP milestones for FY96 were completed on schedule. 	<p>(IMP)</p> <ul style="list-style-type: none"> An assessment of the ES&H management system demonstrated the need for integration. <p>(Radcon)</p> <ul style="list-style-type: none"> Two indicators (loss of control of radioactive material and administrative controls on personnel exposure) were unsatisfactory. <p>(ENV)</p> <ul style="list-style-type: none"> Delays associated with external constraints disallowed performance within schedule for two components of Environmental Compliance Special Projects. <p>(OS)</p> <ul style="list-style-type: none"> The indicators on motor vehicle accidents were impacted negatively by a single accident that caused significant damage to both the vehicle and a structure (steam line) 	<p>(Radcon)</p> <ul style="list-style-type: none"> Corrective actions consisting of enhanced access control and identification and control of fugitive sources have been implemented. <p>(IMP)</p> <ul style="list-style-type: none"> A FY97 project plan has been produced and funded which details the system enhancements and associated training required to eliminate the identified weaknesses in the integrated ES&H management system. <p>(OS)</p> <ul style="list-style-type: none"> ES&H budgets were reevaluated during the year and excess funding was identified to support the Lab's effort to reduce and control overhead expenditures. The Cost Index indicator was reevaluated and determined not be indicative of our performance and be inappropriately influenced by a single trivial event. We will discontinue use of the measure in 1997. Modifications to the motor vehicle accident indicator for 1997 was made to improve the impact resulting from a single accident.
ETD		
<ul style="list-style-type: none"> Business volume and sales were on target or exceeded in most areas. Relationships were developed with the PHMC. Good service linkages with the Environmental Management Program have been made. Interlaboratory linkages between product lines have been made to encourage effective use of resources for customers. 	<ul style="list-style-type: none"> Product lines work independently in international markets; and some performance indicators are not appropriate for the product line. Some product lines did not achieve volume goals expected but this was determined insignificant in light of the overall performance of the Division. 	<ul style="list-style-type: none"> Continue strong performance in the area of business results by diversifying our markets and developing, demonstrating and deploying high impact solutions for our customers. The sector approach to marketing will be implemented to increase cooperative efforts in the international markets and improve marketing capabilities across the Laboratory. Performance indicators will be reviewed and assessed by managers that are accountable for performance.
Finance		
<ul style="list-style-type: none"> Overhead costs were reduced by almost \$15M which allowed PNNL to attain overhead and burdened labor cost goals. Finance assisted F&O with implementation and tracking of OIP related finance and realized a net savings of the program's incremental cost or \$1M. Savings are projected to reach \$3.7M after full implementation of the program. 	None Identified.	None Identified.
EMSL		
<ul style="list-style-type: none"> The EMSL cost performance index and schedule performance index have been closely tracked and maintained 	<ul style="list-style-type: none"> The single weakest link of the EMSL operations approach is the necessary tie to PNNL policy generated via SBMS. Inadequate funding to the SBMS project is a significant threat to the long term effectiveness of EMSL operations 	<ul style="list-style-type: none"> The EMSL cost performance index and schedule performance index are trended. Any negative trends are mitigated as appropriate. Improvement in long term senior and line management commitment to SBMS must occur. Funding must remain sufficient to complete the tasks.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Resource Deployment & Management		
Key Strengths (+)	Key Weaknesses (-)	Use of Results
F&O		
None Reported.	<ul style="list-style-type: none"> A training assessment led to improved correlation between job assignments and training requirements for department staff. Targeted assessment addressing Work Control Initiation and Planning pointed out several areas in which work control could be improved. 	<ul style="list-style-type: none"> As a result of ensuring assigned training requirements match current responsibilities, RCHN operations has saved approximately 245 staff hours and \$6K in training costs, not including costs for staff time spent in training. The Maintenance Services Dept engaged in internal evaluation team (including an external consultant) to make recommendations for improvement. As a result, major realignment of MSD staff are being made to execute assigned work more efficiently with more flexible workforce.
Energy		
<ul style="list-style-type: none"> A draft Leadership Action Plan was established which emphasized leadership development. Division Leadership performance expectations were written as part of the revamped SDR process which provides provisions for 360-degree assessment of managers. 	<ul style="list-style-type: none"> Implementation of the Leadership Action plan was limited due to funding availability in FY96. A summary of the results of the quality of work life surveys was not completed in time for the Division year-end report of self assessment activities. Automatic scheduling of retraining is part of this statistic which may not reflect current staff needs. Training needs of staff are continually changing. 	<ul style="list-style-type: none"> Tracking by the TAOT in FY96 has improved the accuracy of recorded training requirements and notification of staff when training is due. Data will be collected and reported on a monthly basis in FY97.
ES&H		
<p>(Radcon)</p> <ul style="list-style-type: none"> A review of the technical capabilities and qualifications of existing Radiological Control Dept staff found that the level of technical qualifications is equivalent to that in an average nuclear power station and is better than that in most DOE multiprogram laboratories. 	<p>(Radcon)</p> <ul style="list-style-type: none"> An Assessment of the radiological engineering function was conducted by the assessment team. Long term viability of radiological engineering maybe jeopardized by the transition of the 324 and 327 Bldgs and associated radiological engineering staff to the PHMC. <p>(ENV)</p> <ul style="list-style-type: none"> Environmental Compliance Project resources were not routinely cultivated for stretch assignments in accordance with career aspirations. <p>(RTP)</p> <ul style="list-style-type: none"> Additional improvements for PeopleSoft were identified for FY97. 	<p>(OS)</p> <ul style="list-style-type: none"> It was determined that an additional hire was not needed to fill that management position. Additional technical support in the systems area was acquired to fulfill demands in that area. <p>(ENV)</p> <ul style="list-style-type: none"> A training matrix was developed for ECRs and all required training was received. Evaluated management and staff positions to determine staff resource requirements. <p>(I/O)</p> <ul style="list-style-type: none"> Staff members were formally qualified using the internal operating procedure for training and qualification. <p>(QTP)</p> <ul style="list-style-type: none"> An analysis of the training records requirements and needs was performed by the Laboratory Training Coordinators. A PeopleSoft Training System was developed, tested, and implemented on 10/1/96.
Finance		
None reported.	None reported.	<ul style="list-style-type: none"> Objectives to reduce the expense report backlog to zero were not met due to increased report volume and the amount of backlog.
ETD		
<ul style="list-style-type: none"> Reduce the space overhead charge by ~\$1 million in FY96. 	None reported.	<ul style="list-style-type: none"> ETD management has consolidated space.
EMSL		
<ul style="list-style-type: none"> Shared strong project management systems/project integration and team work that allowed the EMSL project to continue with positive results. The computer delivery system of EMSL operations has allowed for a much cleaner "forcing" conduct of operations without loss in operational integrity. 	None reported.	<ul style="list-style-type: none"> Resource management is improved by minimizing the activities that take time away from research being conducted in the laboratories.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Customer		
Key Strengths (+)	Key Weaknesses (-)	Use of Results
F&O		
<ul style="list-style-type: none"> During FY96, major cleanout efforts were performed at PNNL. Record amounts of material and waste were processed and customer feedback in all areas was outstanding. An assessment of the Facility Status File (FSF) provided customer feedback on implementation of an administrative means of providing facility management the status of their buildings. The reviews were mixed, but a majority were positive. As a result the FSF has already been revised in response to the internal customers. 	<ul style="list-style-type: none"> A survey was distributed to internal Lab customers. The results of this survey indicated: a 65% overall approval rating; detectable improvement over the previous year (i.e., FY95); work cycle time and customer focus were areas where improvement is desired; technical quality of F&O staff was a strength; there is some concern related about the potential value added by the Facility Use Agreements. Responses were received from only 38% of the people requested to fill out the survey, indicating a need to find a way to improve the response rate in FY96. 	None identified.
Energy		
None identified.	<ul style="list-style-type: none"> A summary of the results of the customer feedback surveys for the product lines was not completed in time for the Division year-end report of self assessment activities. 	None identified.
ES&H		
<p>(IMP)</p> <ul style="list-style-type: none"> Customers have perceived this work as a positive step toward improving the efficiency and effectiveness of the Laboratory's ES&H program. Other DOE customers (DOE-HQ) are tending to view this work as a possible benchmark for other multiprogram laboratories. <p>ES&H (Radcon)</p> <ul style="list-style-type: none"> Two customer surveys were conducted. <p>(ENV)</p> <ul style="list-style-type: none"> Customers believed all of the services provided were important. Mean ratings for all services rated from 3.5 to 4.5 on 5 point scale. Customers were most satisfied with responsiveness to needs, technical capability/knowledge, quality of work. <p>(OS)</p> <ul style="list-style-type: none"> Internal customer surveys were conducted to gain feedback on staff performance and solicit feedback not the quality of service. External reviews conducted by EH-22 and BMI Corporate have confirmed the satisfaction of the internal customers and RL-AMT and RL-ESH. <p>(Training)</p> <ul style="list-style-type: none"> Customer feedback is favorable on the training and qualification changes that have been and are scheduled for implementation. 	<p>(IMP)</p> <ul style="list-style-type: none"> Given the newness of the IESHM program, current Laboratory wide understanding is highly variable. <p>(ENV)</p> <ul style="list-style-type: none"> The service customers felt was most important (streamlining/ reducing requirements) ranked lowest in satisfaction. Customers were least satisfied with value added of services, accurate identification of needs, and change control. Customers wanted EC to be more proactive, to become more familiar with laboratory work, and to take on a stronger role. <p>(Training)</p> <ul style="list-style-type: none"> Customers are very negative concerning the resources available to participate in non-mandatory training. 	<p>(IMP)</p> <ul style="list-style-type: none"> Key internal customers have utilized the products of the project to enhance and management systems for which they are responsible. The program, and its support systems must now be driven down to the worker level to achieve a common understanding throughout PNNL. <p>(Radcon)</p> <ul style="list-style-type: none"> Several opportunities for improvement in the delivery of radiological control services were identified and have been implemented. <p>(OS)</p> <ul style="list-style-type: none"> Feedback from customers and, in general, steady to increasing desired amount of service for FY97. Identification of areas for improvement has not yet been completed. <p>(ENV)</p> <ul style="list-style-type: none"> Improve services in general (via better communication and teaming with researchers, training, obtaining feedback). Improve regulatory integration (work to get rid of unnecessary internal requirements or overly conservative approaches, update lab procedures, improve the system for handling new/changing requirements, devote more resources to this area. Increase emphasis on pollution prevention and prevention in general.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Customer (Cont'd)		
Key Strengths (+)	Key Weaknesses (-)	Use of Results
ETD		
<ul style="list-style-type: none"> Products and services are of high strategic value; responsiveness, timeliness, quality; technical capabilities are unique and of high quality; several clients valued PNNL for the low cost (e.g., The Hanford Groundwater Project was consolidated at PNNL based on cost effectiveness and technical capability; and ability to form inter-contractor, inter-Laboratory teams to meet clients needs. 	<ul style="list-style-type: none"> High cost continues to be a concern for main ETD clients; ability to bring together industrial partners; Clients located in areas remote to Hanford need more communication. The relationship between DOE, PNNL, and other customers is unclear with respect to roles, responsibilities, accountabilities, and authorities; Business model is not set up to make corrective action across product lines. 	<ul style="list-style-type: none"> Improvements; some weaknesses were learned. These will be evaluated and any improvement actions implemented during FY97 through the self assessment plan. High cost: strong performance in the areas of responsiveness, timeliness, and quality is critical in a time of cost sensitivity in the marketplace. ETB will continue to emphasize strong performance in these areas. To improve cost effectiveness contributions to rate control in terms of efficient use of staff and staff time will be made. Control of rates limited, with only some control on space use and management oversight available to ETD managers. Roles and responsibilities: discussions on expectations will be pursued by PNNL, DOE, and other customers in areas of concern such as Tanks Focus Area and PHMC. Contracting issues: specific to MSL - improvement to obtain on-site contracts staff underway.
Finance		
<ul style="list-style-type: none"> Finance established focus groups to obtain customer feedback which was used to improve travel practices and issue resolution with PNNL's travel agency. 	<ul style="list-style-type: none"> ACE process improvements implemented in Property Management suboptimized communication/coordination with the research divisions. 	None identified.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
General		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
Energy		
<ul style="list-style-type: none"> A review of FY96 ES&H findings and corrective actions indicated that 77% of all actions were closed. The remaining 23% were in progress. Technical Assistance & Operations Team (TAOT) that possess a wide variety of technical expertise, and self assessment capabilities are used by the Division to assess areas of facilities, operations, and infrastructure (including ES&H, quality, and property management, etc.). 	<ul style="list-style-type: none"> Based on a review of training and staff medical surveillance it was determined that PNNL requirements are not always defined in a manner which accommodates offsite staff. During the FY96 annual self assessment of staff radiological bioassay and dosimetry needs it was also determined that several other medical surveillance indicators were not as rigorously reviewed on an annual basis. 	<ul style="list-style-type: none"> Began the FY96 self assessment process by identified 16 ES&H compliance reviews to be specifically monitored in FY96. Used results of the ES&H and property assessments to identify and baseline indicators for FY97 performance. Also have developed the capability to identify trends and apply the appropriate kudos or long-term corrective actions. Corrective action focus has broadened from simply addressing findings to making efforts to correct the root cause of findings. Improved assessment of staff radiological bioassay and dosimetry and other medical surveillance indicators and training. Through a joint effort of the TAOT, staff, and line management, medical surveillance is being streamlined to those essential to staff welfare and includes checks for associated training. Initial results in FY96 indicated that a long term cost savings and improved compliance will be achieved as a result of this activity.
ES&H		
<p>(IMP)</p> <ul style="list-style-type: none"> A PNNL requirements baseline is now established with clear ownership, responsibilities, accountabilities, and definitive change control. <p>(OS)</p> <ul style="list-style-type: none"> 5 program areas were assessed (confined space, firearms safety, lock and tag, chemical hygiene, and respiratory protection). 4 of the 5 assessments were completed with no significant deficiencies identified. 	<p>(TQP)</p> <ul style="list-style-type: none"> A self assessment of the Laboratory Instructor Qualification System found that the Laboratory had no requirements, policies, or procedures for instructor qualification that covered all instructors in the Laboratory. 	<p>(IMP)</p> <ul style="list-style-type: none"> The requirements baseline effort resulted in an overall improvement to the Laboratory compliance posture. Action was established to fix the system by December 1996. <p>(TQP)</p> <ul style="list-style-type: none"> Actions for determining policies and requirements for training instructions will be developed in FY97.
Finance		
<ul style="list-style-type: none"> Finance worked with DOE RL finance to resolve a major labor charging issue resulting from a DCAA audit, and implemented agreed upon changes. 	None Identified.	None Identified.
EMSL		
<ul style="list-style-type: none"> The EMSL project and organization have put in place appropriate documentation systems to ensure compliance. The distillation process of EMSL operations creates a subset of requirements and practices that allows an understanding of "how to do things right". 	None Identified.	<ul style="list-style-type: none"> Benchmarks from other DOE Labs and industry have been utilized to develop the EMSL operations system through use of Best Practices.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
Waste		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
None Reported.	<ul style="list-style-type: none"> In several instances, materials and wastes were found to be improperly labeled or misdesignated. During the latter portion of FY96 it was discovered that a significant number of LLW drums and boxes were not being accepted by Westinghouse Hanford Company due to inappropriate materials (light-bulbs, batteries, lead, etc.) in the drums. 	<ul style="list-style-type: none"> Improvements have been initiated in three areas: 1. a uniform labeling standard was developed and issued to all waste generators; 2. a detailed procedure for the designation of waste materials was developed; and 3. a proactive waste-generator-assistance walkthrough program was initiated. Specific corrective actions are being developed for implementation during early FY97. Due to stricter waste acceptance criteria imposed by Hanford's disposal program, multiple drums and boxes of low level waste (LLW) were unable to be shipped for disposal during FY96. Efforts are underway (including weekly meetings with Acceptance Services to reach agreement on appropriate handling and acceptance of PNNL's waste.
Energy		
<ul style="list-style-type: none"> Set an internal goal to identify and eliminate all legacy waste within Division controlled laboratory space. 	None reported.	<ul style="list-style-type: none"> All the legacy waste was removed and processed for reuse, recycle or disposal as appropriate. This includes tritium which was contained within the wall-tubes of Lab 9A in 326 which PNNL inherited when we became the principle occupant of 325. Elimination of legacy waste from the Division's controlled laboratory space is projected to result in long term cost savings to the Division and improved safety to staff and the environment.

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
Fire Safety		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
<ul style="list-style-type: none"> Positive assessment results in the waste management and fire safety areas including successful teaming between multiple organizations to implement programs meeting applicable laws, regulations, and requirements. Positive inspection results from the external Factory Mutual inspections for fire safety, boiler and machinery, and elevator inspections indicate continuing appropriate facility. 	None reported	None reported.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
Property		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
Energy		
<ul style="list-style-type: none"> A Laboratory audit conducted as part of the FY96 Statistical Sample Inventory of property management system resulted in an "Excellent" rating. This validation is the direct result of Energy's self assessment of property assignments and status. 	None Identified.	<ul style="list-style-type: none"> The rating should result in the minimization of future audit costs for the Division in the area of property management.

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
Environmental Compliance		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
<ul style="list-style-type: none"> Environmental areas were frequently evaluated. The number of environmental issues was kept to a minimum. 	None Identified.	<ul style="list-style-type: none"> Given that the requirements on the topic of environmental issues are frequently changing, this assessment area will continue to receive significant attention.
ES&H		
(ENV) <ul style="list-style-type: none"> The NEPA technical support service evaluation found that projects are reviewed in a timely manner and concurrence has been streamlined. Responsiveness, technical excellence, guidance, document preparation, and recordkeeping are all strong. Pollution prevention program was evaluated. PNNL has a documented pollution prevention policy, with waste reduction goals and performance indicators. Environmental assessments at 9 facilities were conducted. Inspections by Dept of Ecology and the Dept of Health did not discover any significant violations of environmental requirements. An RL RCRA/P2 assessment of the 331 Bldg resulted in no findings. 	(ENV) <ul style="list-style-type: none"> Electronic Prep and Risk requires fewer signatures which could lead to problems if appropriate ES&H technical staff are not consulted. Employee participation and awareness of the program is poor. Senior management commitment could not be demonstrated. The program strategy does not facilitate accomplishment of the DOE P2 Program Plan Implementation Priorities of the Lab's pollution prevention policy. Increase emphasis on pollution prevention is needed. Funding levels are inadequate. Management of waste accumulation areas is inconsistent. The field Service Representative program is not being consistently implemented throughout the Lab. A policy concerning when a material becomes a waste is needed. 	(ENV) <ul style="list-style-type: none"> Discussions are under way to ensure that concerns on electronic Prep and Risk are addressed. PNNL has taken advantage of the DOE NEPA streamlining movement to request Categorical Exclusion (CX) coverage for actions which once required extensive Environmental Assessments. NEPA streamlining at PNNL resulted in a savings of \$265K in FY96 and a reduction of 2.6 FTEs. Site-wide CX documents provided pre-approved coverage for a great number of specific actions, which would have formerly required preparation of a specific CX document. Pollution prevention activities saved over \$700K in waste disposal, staff time, and material in FY96 alone (e.g., the Chemical Redistribution Center is expected to save \$75K/year, the new vacuum pumps installed in 325 Bldg will save \$65K/year and reduce rad waste water by 8.9 million liters/year, and opportunities from 5 Pollution Prevention Opportunity Assessments conducted will save \$140K/year). ECRs were actively involved in line and facility self assessments of compliance.
ETD		
<ul style="list-style-type: none"> Major chemical inventory reductions took place. 	None Identified.	<ul style="list-style-type: none"> Excess chemicals are shared to avoid extra inventory.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
Rad Con		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
Energy		
<ul style="list-style-type: none"> In FY96, completed all corrective actions assigned as part of the Laboratory implementation of 10CFR835 and the Hanford Radiological Control Manual in a timely manner. 	None Identified.	<ul style="list-style-type: none"> The Division developed a more thorough understanding of the different environments where staff perform work in radiologically controlled areas at Hanford and other non-Hanford, commercial, and foreign sites.
ES&H		
<ul style="list-style-type: none"> 1996 Radiological Problem Reports (RPRs) were generated and acted upon in FY96. 	<ul style="list-style-type: none"> Two significant findings were identified in the area of nuclear accident dosimetry. Facilities & Operations staff and staff from BMI Corporate performed an inspection of the RadCon program in response to a significant violation of 10CFR835. The self assessment determined that overall performance on radiological control is marginal, and that additional management oversight of radiological work is needed. 	<ul style="list-style-type: none"> Corrective actions included modification of personnel nuclear accident dosimeters to add the capability to detect photons and more rigorous analysis of the 12 rad boundaries around the 325 and 327 Buildings The RPR program is an effective mechanism for identifying, documenting, and correcting minor radiological problems that do not meet the criteria for reporting under DOE Order 232.1-1. Corrective action for each RPR are traced to completion in the Corrective Action Tracking System (CATS) and are in varying stages of completion. Corrective action plans to the BMI RadCon assessment are being developed.

Framework -- Compliance to Laws, Regulations & PNNL Requirements		
ConOps		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
<ul style="list-style-type: none"> Operational conduct demonstrated areas of real progress based upon assessment results. 	<ul style="list-style-type: none"> Training showed weaknesses demonstrating that some training efforts were not adequately implemented. 	<ul style="list-style-type: none"> The assignment of an individual on the F&O Support Staff dedicated to training is paying off.
ETD		
None Identified.	<ul style="list-style-type: none"> First aid training is lacking. Lack of consistency for general housekeeping in some labs. 	<ul style="list-style-type: none"> Emergency First Aid training may be addressed at the Lab level. If not, ETD will evaluate and determine actions.

Appendix B. Summary of Strengths, Weaknesses and Improvement Actions

Framework -- Process Systems		
Key Strengths (+)	Key Weaknesses (-)	Improvement Actions
F&O		
<ul style="list-style-type: none"> Established the Redistribution Center which provides an alternative to disposing of unused chemicals and materials that result from Laboratory cleanup. The Facility Services Dept. has developed process flow diagrams for most of their work processes. A real-time tracking database for radioactive and mixed waste was developed by the Waste Management Services Dept. (WMS). WMS initiated efforts to implement a pilot "charge-back" system for efficiently transferring the responsibilities for payment for service from DOE-direct charge to the individual waste generator. 	None Identified.	<ul style="list-style-type: none"> Facilities Services Dept staff exercised considerable effort individually, and in group sessions, defining the work process flows for their critical functional areas and the staff's roles, responsibilities, accountabilities, and authorities. As the department gained a better understanding of its work processes, measures and indicators were developed. This effort will be carried over into FY97 to make improvements in the services that they provide to their customers. The tracking system will be implemented in FY97 and will be a vital portion of PNNL's proposed charge-back pilot.
Energy		
<ul style="list-style-type: none"> Improved consistency in identifying and handling training across the Division. Conducted a performance assessment of the IT Help Desk staff assistance service provided at PNNL. 	<ul style="list-style-type: none"> The implementation of computer based requirements, procedures, and guidelines has accelerated the need to ensure that staff both on and off site have access to appropriate computer tools. 	<ul style="list-style-type: none"> Data collected from the Help Desk staff assistance service assessment resulted in re-examination of FY97 indicators.
ES&H		
<p>(IMP)</p> <ul style="list-style-type: none"> Release of the IESHM system description has provided the critical integration necessary between related management systems to achieve environment, safety and health goals. <p>(Radcon)</p> <ul style="list-style-type: none"> Results from customer surveys were used to prioritize efforts to improve the effectiveness of business processes. <p>(ENV)</p> <ul style="list-style-type: none"> The deployment of ECR staff to the field has increased the environmental compliance status of the Lab. A gap analysis of PNNL's EMS vs Industry Standard showed PNNL's EMS has many elements of Responsible Care, CEMP, and ISO 14001. <p>(OS)</p> <ul style="list-style-type: none"> Deployed safety and health staff to the field, resulting in very positive and better integration of safety and health into the work. A total of 23 RPGs were developed through the SBMS process this fiscal year. Approximately 50% of PNL-MA-43 procedures have been replaced with SBMS. <p>(TQP)</p> <ul style="list-style-type: none"> The Training and Qualification Manual, PNL-MA-4 was developed and is on the SBMS. The Training and Qualification Management System Description was also completed in August 1996 and includes the prioritized SBMS documents for 1997. Implemented a training cost recovery system to direct charge training costs to those actually using the training and to reduce an unacceptable no-show rate. 	<p>(ENV)</p> <ul style="list-style-type: none"> Not all Laboratory points of contacts are convinced that ECRs are having a measurable impact on facility compliance. ECR's are spending the majority of their time reacting to existing problems as opposed to proactively preventing problems. <p>(QTP)</p> <ul style="list-style-type: none"> Additional policy and streamlined processes are necessary to establish a training and qualification system that meets the Laboratory business needs. Senior management involvement and funding for upgrades to the EMS are lacking. 	<p>(IMP)</p> <ul style="list-style-type: none"> IESHM system has provided the basis to optimize the ES&H business systems in the upcoming fiscal year. <p>(Radcon)</p> <ul style="list-style-type: none"> Over 20 implementing procedures were revised in response to customer requests and/or suggestions.
Finance		
<ul style="list-style-type: none"> Due to efficiencies gained through the P-Card program, the average cost per accounts payable transaction decreased from \$4.61 to \$2.98. Finance implemented a new Electronic Cost Correction System that increases the efficiency and accuracy of cost corrections. 	<ul style="list-style-type: none"> There were several system feeder problems and FPS reprocessing problems related to changes in production streams and the analysts' level of experience. 	<ul style="list-style-type: none"> A corrective action plan was implemented in the latter part of FY96 contributing to a virtually flawless fiscal year-end processing. Cost corrections and retroactive rate adjustments are done faster, with reduced administrative effort/cost and improved accuracy.
ETD		
None identified.	<ul style="list-style-type: none"> Project planning and quality assessments showed that ~one-half of projects surveyed did not have good documentation of how they were handling administrative controls and meeting PNNL requirements. 	<ul style="list-style-type: none"> Improvement actions being developed for implementation in FY97.
EMSL		
<ul style="list-style-type: none"> The work practice development process of EMSL Operations, implements the PNNL policy utilizing a process that combines consensus and effective work. 	None identified.	<ul style="list-style-type: none"> The EMSL process for developing work practices results in workers using the work practices and agree on their importance.