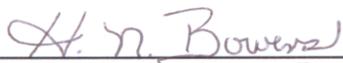


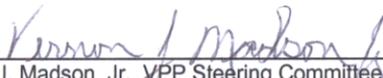
Pacific Northwest
National Laboratory
Operated by Battelle for the
U.S. Department of Energy

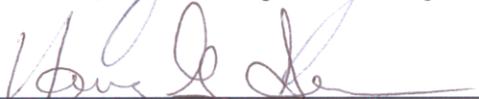
Voluntary Protection Program

PNNL DOE-VPP Program Evaluation

FY-2002
January 2002

Submitted by: 
H. N. Bowers, Program Evaluation Team Leader

Approved by: 
V. J. Madson, Jr., VPP Steering Committee Bargaining Unit Co-Chair


N. G. Isern, VPP Steering Committee R&D (acting) Co-Chair

PNNL FY 2002 DOE-VPP Program Evaluation Table of Contents

Team Signatures	ii
PNNL VPP Program Evaluation description	1
Tenet/Element Ratings and Trends	3
Program Evaluation Summary/Issues and Recommendations	4

Datasheets

General Information	Datasheets- 1
Assurance of Commitment	Datasheets- 3
<u>Management Leadership Summary/Rating/Synopsis</u>	Datasheets- 5
Commitment	Datasheets- 7
Organization	Datasheets- 9
Responsibility	Datasheets- 11
Accountability	Datasheets-13
Resources	Datasheets-15
Planning	Datasheets-17
Contract Workers	Datasheets-20
Program Evaluation	Datasheets-22
Site Orientation	Datasheets-24
Employee Notification	Datasheets-27
<u>Employee Involvement Summary/Rating/Synopsis</u>	Datasheets-29
Degree and Manner of Involvement	Datasheets-31
Safety Committees	Datasheets-33
<u>Worksite Analysis Summary/Rating/Synopsis</u>	Datasheets-35
Pre-Use/Pre-Startup Analysis	Datasheets-37
Comprehensive Surveys	Datasheets-39
Self-Inspections	Datasheets-42
Routine Hazard Analysis	Datasheets-44
Employee Reporting of Hazards	Datasheets-46
Accident Investigations	Datasheets-48
Trend Analysis	Datasheets-51
<u>Hazard Prevention & Control Summary/Rating/Synopsis</u>	Datasheets-53
Professional Expertise	Datasheets-55
Safety & Health Rules	Datasheets-57
Personal Protective Equipment	Datasheets-60
Preventive Maintenance	Datasheets-62
Emergency Preparedness	Datasheets-64
Radiation Protection Program	Datasheets-66
Medical Programs	Datasheets-67
Occupational Safety & Health Programs	Datasheets-69
<u>Safety & Health Training Summary/Rating/Synopsis</u>	Datasheets-73
Employees	Datasheets-75
Supervisors	Datasheets-78
Managers	Datasheets-79

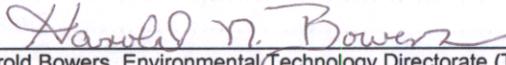
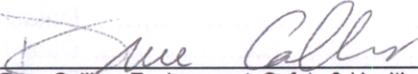
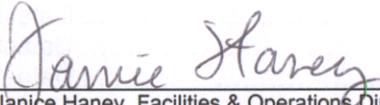
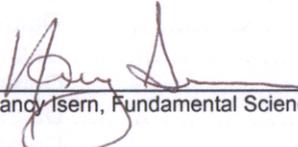
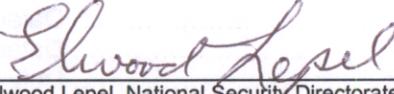
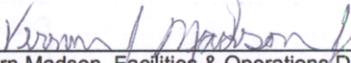
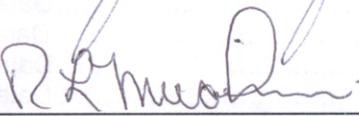
Employee Survey Results

Executive Summary	Survey- 1
Results of Questions	Survey- 3
Analysis of Responses	Survey- 8
Review of Comments	Survey-10

PNNL VPP Program Evaluation Team Signatures

The PNNL VPP Program Evaluation Team for FY 2002 is a group of Battelle employees from across the Laboratory. The team submits this Program Evaluation report and confirms that it is accurate and objective to the best of our knowledge. Although time constraints prevented us from following all areas of inquiry to the depth we would have liked, considerable effort was expended to gain input from workers, evaluate documentation, identify issues, and develop appropriate recommendations. A DOE observer also participated in the process and review of this report, but did not influence findings and conclusions.

Signatures

 _____ Harold Bowers, Environmental Technology Directorate (Team Lead)	<u>1/23/02</u> date
 _____ Drue Collins, Environment, Safety & Health Directorate	<u>1/29/02</u> date
 _____ Janice Haney, Facilities & Operations Directorate	<u>1-30-02</u> date
 _____ Nancy Isern, Fundamental Sciences Directorate	<u>1/23/02</u> date
 _____ Elwood Lepel, National Security Directorate	<u>1/30/02</u> date
 _____ Vern Madson, Facilities & Operations Directorate	<u>1-25-02</u> date
 _____ Russ Meichenheimer, Facilities & Operations Directorate	<u>1-24-02</u> date
 _____ Pat Wright, Environment, Safety & Health Directorate	<u>1/23/02</u> date

PNNL FY 2002 DOE-VPP Program Evaluation

A team of evaluators from the Pacific Northwest National Laboratory's (PNNL) VPP Steering Committee and the ES&H Directorate assessed PNNL's programs and performance with respect to DOE-VPP criteria. The overall adequacy of PNNL's program implementation for each Element and its trend (e.g. improving, declining) was rated using the criteria in the tables to the right. The "Rating" describes the current status of the program, and the "Trend" describes how the program has changed over the recent past. The performance of the program was also quantitatively rated in accordance with the following criteria (the ratings were applied to each Element and were combined (averaged) for each Tenet):

RATING
Good
Adequate
Improvement Required

TREND
↗
→
↘

TENET/ELEMENT		RATING		
		IR	Adequate	Good
General Information	3%	0-4	5-8	9-12
Assurance of Commitment	7%			
Management Leadership	18%			
Employee Involvement	18%			
Worksite Analysis	18%			
Hazard Prevention & Control	18%			
Safety & Health Training	18%			

The program team included the following:

Team Members

Harold Bowers, Team Lead

- Drue Collins
- Janice Haney
- Nancy Isern
- Elwood Lepel
- Vern Madson
- Russ Meicenheimer
- Pat Wright
- Larry Musen
(DOE Observer)

This Program Evaluation report contains a summary of results and a data sheet for each Element of each VPP Tenet. The data sheets contain a listing of strengths, weaknesses, recent/anticipated changes that will affect each Element, and a rating for each Element as described above. Recommendations are also offered for continuous improvement of each Element and the program as a whole. The results of the employee survey that supported this evaluation is also included.

Evaluation of the Tenets and Elements was based on a review of PNNL's DOE-VPP "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily the

documents of the Standards Based Management System - SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of PNNL's safety program with respect to VPP criteria. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to each Tenet/Element that exist in PNNL's program.

The evaluations of the Elements are rolled-up into an overall rating and summary for each Tenet, and those evaluations are rolled-up into an overall PNNL DOE-VPP Program Evaluation Rating and Summary for FY 2002 (see following pages). Top-level issues and recommendations from this Program Evaluation have been judged to have the potential for significant impact on PNNL's implementation of DOE-VPP and will be entered into the Assessment Tracking System (ATS) for action.

**PNNL DOE-VPP PROGRAM EVALUATION
TENET/ELEMENT RATINGS & TRENDS – FY 2002**

TENET/ELEMENT	Weight	RATING (Score)	TREND
General Information	3%	Good (12)	↗
Assurance of Commitment	7%	Good (10)	→
Management Leadership	18%	Good (9.6)	↗
Commitment		Good (12)	↗
Organization		Good (10)	→
Responsibility		Good (10)	→
Accountability		Good (10)	→
Resources		Good (10)	→
Planning		Good (10)	↗
Contract Workers		Adequate (7)	→
Program Evaluation		Good (11)	↗
Site Orientation		Good (9)	↗
Employee Notification		Adequate (7)	↗
Employee Involvement	18%	Adequate (6.5)	→
Degree and Manner of Involvement		Adequate (7)	→
Safety Committees		Adequate (6)	→
Worksite Analysis	18%	Good (9.4)	↗
Pre-Use/Pre-Startup Analysis		Good (10)	↗
Comprehensive Surveys		Good (10)	↗
Self-Inspections		Good (11)	→
Routine Hazard Analysis		Good (11)	↗
Employee Reporting of Hazards		Adequate (7)	↗
Accident Investigations		Good (10)	→
Trend Analysis		Adequate (7)	→
Hazard Prevention & Control	18%	Good (10.8)	↗
Professional Expertise		Good (10)	→
Safety & Health Rules		Good (11)	↗
Personal Protective Equipment		Good (9)	→
Preventive Maintenance		Good (10)	→
Emergency Preparedness		Good (11)	→
Radiation Protection Program		Good (12)	↗
Medical Programs		Good (11)	↗
Occupational Safety & Health Programs		Good (12)	↗
Safety & Health Training	18%	Good (9)	↗
Employees		Good (10)	→
Supervisors Managers		Adequate (8)	↗

PROGRAM EVALUATION SUMMARY

RATING	TREND
Good (9.2)	↗

PNNL has excellent safety programs and is continuously improving implementation of programs in support of VPP safety and health criteria. DOE’s fourth consecutive annual rating of PNNL’s operational performance under Battelle Memorial Institute’s contract with DOE as “Outstanding” is a strong indication of the effectiveness of our safety and health programs, and DOE-VPP’s recognition of PNNL as a STAR site is another. There continue to be improvement opportunities related to employee involvement and the work planning and control process at PNNL (also referred to as “the Laboratory”). These improvement opportunities reflect a healthy, growing program in a dynamic environment that is focused on continuous improvement. The status of the Issues and Recommendations identified below will be tracked in ATS.

PNNL’s VPP outreach activities included presenting information about the electronic application process at the VPPPA National Conference, development of a CD of, and public internet access to, PNNL’s electronic Application, participation in the Hanford Site VPP Champions, and the Safety & Health Expo.

ISSUES AND RECOMMENDATIONS FOR IMPROVEMENT

1. ISSUE: Consistent use of appropriate **personal protective equipment (PPE)**

RECOMMENDATIONS:

- Consistently interpret minimum requirements for adequate activity-based PPE across the Lab.
- Consistently implement and enforce requirements for adequate PPE across the Lab.

2. ISSUE: Timely and adequate response to **employee concerns**

RECOMMENDATIONS:

- Establish criteria for when and how to document employee concerns, including stop-work actions by workers.
- Establish a process to capture, track, and provide status/feedback regarding actions resulting from employee concerns.

3. ISSUE: **Use of results** from assessments, incidents (including near-misses), and lessons learned

RECOMMENDATIONS:

- Consider how to improve the identification and sharing of results from assessments, incidents (including near-misses), and lessons learned between organizations across the Laboratory.

4. ISSUE: **Sub-contractor safety**

RECOMMENDATIONS:

- Evaluate the progress made since the last VPP Program Evaluation related to using sub-contractor safety performance as a selection criteria and implementing appropriate safety and health clauses in contracts.
- Improve sub-contractor compliance with safety requirements by implementing a process to consistently and effectively monitor and correct sub-contractor (and sub-contractor worker) performance in a timely manner.

5. ISSUE: **IOPS reading assignments**

RECOMMENDATIONS:

- Consider how to improve IOPS delivery of required reading assignments to provide concise, relevant, timely information to workers. One approach might be to utilize summary sheets that deliver critical information to users when they need it.

6. ISSUE: **VPP Steering Committee improvement**

RECOMMENDATIONS:

- Identify a committed and energetic researcher as the research and directorate (R&D) Co-Chair of the VPP Steering Committee.
- Document a process (perhaps in a VPP Steering Committee Charter) to deal with important issues such as succession of officers and other rules of order.
- Consider how to maintain momentum and continuously improve the VPP program at PNNL by identifying strategies, goals, and specific actions to be taken.

This page intentionally left blank

**PNNL DOE-VPP
Annual Program Evaluation
FY-2002**

DATASHEETS

ORGANIZED BY:

**VPP
TENET & ELEMENT**

General Information

Evaluator: Pat Wright

ASSESSMENT

The General Information section contains information about PNNL, which sets the context for the rest of the Application.

Strengths

- PNNL's safety performance as indicated by the Total Recordable Injury/Illness Rate and the Lost Workday Case Rate continues to be better than the industry average. Preliminary results from CY2001 indicate that both rates will be lower than CY2000.
- The on-line description of how PNNL meets VPP criteria is a valuable road map to PNNL's safety program.
- The "Application" has been made available outside the PNNL firewall (although some links do not work from outside the firewall).
- PNNL has provided outreach in the form of
 1. Attendance at the VPPPA National Conference and presentation of the unique Elements of our program at that conference.
 2. CDs with the "Application" and a PowerPoint presentation. These CDs have been sent to several DOE, contractor, private sites and a State OSHA office who requested them at the VPPPA National Conference.
 3. Participation in the Hanford Site VPP Champions organization, including making electronic media available outside of PNNL.
 4. Participation in the annual Hanford Safety & Health Expo.

Weaknesses

- We continue to refer to the "Application" even though STAR status has been achieved. Perhaps a better term should be applied to refer to the on-line description of how PNNL meets VPP criteria.
- The VPP Steering Committee has not replaced the research Co-chair, since the incumbent resigned effective October 1, 2001.

Recent/Expected Changes

- The description of hazards will need to be updated when the Lab updates the standard hazards in SBMS early next year.
- Outreach will be enhanced by a PNNL staff member being trained as an OSHA Non-Governmental Employee qualified to conduct OSHA VPP evaluations.

Conclusion

RATING	TREND
Good	↗

PNNL’s safety performance, in terms of injury/illness incidence rates, continues to be very good and meet DOE-VPP criteria. The PNNL VPP Steering Committee sponsors outreach to support improving safety and health outside of PNNL. The General Information section and the PNNL VPP “Application” continues to be a valuable description of how PNNL implements worker safety & health and meets DOE-VPP criteria. The “Application” (perhaps renamed) should be maintained as an ongoing communications tool for the promotion of PNNL’s VPP program.

Opportunities for Improvement

- Replace the VPP Steering Committee R&D Co-Chair.
- Rename the “Application” with a more suitable title.
- Maintain the “Application” and continue VPP outreach activities.
- Consider how to expand outreach to local community businesses.

Assurance of Commitment

Evaluator: Pat Wright

ASSESSMENT

The Assurance of Commitment expresses management’s and labor’s commitment to support of PNNL’s VPP program. The management assurance of commitment is composed of statements from various management documents that express PNNL’s commitment to worker safety & health, following a template suggested by DOE-VPP guidelines. The labor assurance of commitment is a letter from the bargaining unit council expressing support for PNNL’s pursuit of VPP recognition.

Strengths

- The management assurance of commitment clearly demonstrates that PNNL’s management systems support the guidelines of VPP.
- There is strong labor support for PNNL’s VPP program.

Weaknesses

- None.

Recent/Expected Changes

- None.

Conclusion

PNNL’s statements of Assurance of Commitment from both management and labor clearly and strongly support PNNL’s participation in VPP.

RATING	TREND
Good	→

Opportunities for Improvement

- Consider if/when it would be appropriate to “renew” the labor assurance of commitment statement.
- Continue to maintain and update the management assurance of commitment references to PNNL management system documentation.

This page intentionally left blank

Tenet: Management Leadership

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Management Leadership		
Commitment	Good	↗
Organization	Good	→
Responsibility	Good	→
Accountability	Good	→
Resources	Good	→
Planning	Good	↗
Contract Workers	Adequate	↗
Program Evaluation	Good	↗
Site Orientation	Good	↗
Employee Notification	Adequate	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Management Leadership	Good	↗

SYNOPSIS

Management leadership at PNNL is strong. PNNL’s VPP program has a strong Element of employee ownership, and it is clearly a partnering of management, labor and other employees. PNNL needs to continue working to improve staff members’ understanding of worker safety and health processes including VPP. Other areas of potential improvement are the communication of hazards, requirements and expectations to contract workers and uniformly across the Laboratory.

This page intentionally left blank

Tenet: Management Leadership
Element: Commitment

Evaluator: Pat Wright

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The “Commitment” Element is where the principle aspects of PNNL’s management approach are described in the “Application”. The foundation of PNNL’s management approach is the Customer Service Model. The Roles, Responsibilities, Accountabilities, and Authorities (R²A²s) necessary to implement the Customer Service Model are described in the Standards Based Management System (SBMS). SBMS also provides the hierarchy and content of the Management Systems and their Lab-level processes that support the implementation of the Customer Service Model and the R²A²s.

Strengths

- PNNL is committed to continuous improvement of its management systems and management approach to operations.
- The vast majority of line managers are clearly committed to preserving the safety of their workers.
- PNNL’s implementation of an effective management approach is relatively mature.
- A Product Line Manager recently noted that VPP recognition has resulted in positive business opportunities and favorable responses from clients.

Weaknesses

- The Customer Service Model and the hierarchy of the Standards Based Management System are not adequately understood (and/or in some cases accepted) by some PNNL staff.
- Improvement opportunities in the design and implementation of PNNL’s management approach have been identified (e.g.; by the ~~Second Generation Management System project~~ by various Management Systems).
- The survey revealed that there is confusion regarding management commitment to the preventability of accidents.

Recent/Expected Changes

- Management, particularly in F&O, has made significant progress in addressing the issues identified last year related to worker empowerment (e.g., related to stop work authority).
- ☐ ~~The “Second Generation Management System” is a developing concept that is expected to improve the internal consistency, implementation, and acceptance of the Customer Service Model and the Management Systems that support it.~~

Conclusion

PNNL has a work force culture that is highly committed to the prevention of injuries and illnesses but many improvements are still possible. Improvements are being made and maturity is increasing in both management systems and the culture of managers and staff.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue efforts to improve commitment to preventing injuries and illnesses at all levels of the organization.
- Continue efforts to expand awareness of the benefits of VPP and other safety committee efforts to the staff and management of the Laboratory. The benefits should be related to the normal process of doing business to demonstrate how value is being added to the primary mission of the Laboratory and personal interests of workers.
- Continue to improve the utilization of lessons learned and promote employee involvement.
- Consider developing a Lessons Learned/Best Practices related to positive business opportunities and favorable responses from clients

Tenet: *Management Leadership*
Element: *Organization***Evaluator:** Pat Wright**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

PNNL's organization has not changed substantially in ways that would affect worker safety and health. A variety of personnel changes and reorganizations at lower levels of the organization have occurred but important functionalities (with respect to worker safety and health) have been preserved.

Strengths

- PNNL's organization supports strong line management commitment and responsibility.
- The ES&H organization provides a high degree of knowledge and support to line management.

Weaknesses

- Some workers do not understand the relationship between different organizational Elements and the roles they contribute to the effective execution of operations.
- Management and leadership of the VPP Steering Committee was weakened by the resignation and on-going absence of a strong R&D co-chair.

Recent/Expected Changes

- A recent announcement from the Laboratory Director communicated that the titles of organizational Elements and management positions are being changed to align more directly with other Battelle components. No significant changes are anticipated in the functions of the organizations or management positions.

Note: Since this report is retrospective, those organizations known as Divisions prior to January 1, 2002 will continue to be referred to as Divisions in this report.

Conclusion

RATING	TREND
Good	→

The management statement of assurance states that PNNL is committed to the achievement and maintenance of VPP STAR Program requirements. The leadership of the VPP Steering Committee needs to be enhanced by identifying a qualified, committed, and energetic R&D co-chair.

Opportunities for Improvement

- Identify a qualified, committed, and energetic R&D co-chair.
- Continue to improve staff and manager understanding of their role(s) in the Customer Service Model and its implementation by Management Systems
- Revise the “Application” to reflect new organizational and position terminology.

Tenet: *Management Leadership*
Element: *Responsibility*

Evaluator: Pat Wright

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The Responsibilities for roles important to safe operations are identified in the R²A²s, the implementing procedures of relevant management systems, and by the various organizations that conduct or support operations. The description and definition of some key roles have been enhanced, but no great changes have occurred.

Strengths

- Clear, effective responsibilities have been established for most roles important to safe operations.
- IOPS and SBMS clearly and effectively reinforce and communicate roles and responsibilities.

Weaknesses

- The role of “Operations Manager” has become a key role in the support of effective worker safety and health for the R&D divisions, but that role and its responsibilities are not formally recognized in the R²A² or the “Contacts” of SBMS.

Recent/Expected Changes

- No significant changes have occurred or are currently planned related to Responsibilities.

Conclusion

The Laboratory has a system of Roles, Responsibilities, Accountabilities, and Authorities that is mature and well tested. ~~The pP~~lanned and ongoing 2nd-Generation Management System-System improvements will strengthen Lab-wide processes that define and communicate expectations, including those related to environment, safety & health. IOPS is effectively engaging previously isolated and unilaterally managed safety and health issues into the larger safety and health program infrastructure and establishing clearly defined and implemented R²A²s.

RATING	TREND
Good	→

Opportunities for Improvement

- Formally recognize Operations Managers in PNNL R²A².
- Continue improvement efforts to help all managers understand their accountability for safety and their responsibilities to properly support and properly respond to hazards, employee concerns, and accidents.
- Continue efforts to reinforce staff responsibilities related to safety.

Tenet: *Management Leadership*
Element: *Accountability*

Evaluator: Pat Wright

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Accountabilities at PNNL are identified in the R²A²s of SBMS. Immediate managers are responsible for implementing accountabilities and the process for communicating and implementing accountabilities exists within the Human Resources Management System.

Strengths

- The process for implementing accountabilities is clearly established at PNNL.
- Human Resources Managers are assigned to each organization to help and support immediate managers’ implementation of accountabilities.

Weaknesses

- Accountabilities are not always consistently applied across the Laboratory.
- When implementation of accountabilities results in corrective action, most staff and managers are not aware of the lessons learned that result from the situation and the action.
- There is a lack of implementation and/or policy and management support for discipline related to safety and health reported by some managers.

Recent/Expected Changes

- No significant changes with respect to Accountabilities have recently occurred or are expected to occur in the near future.

Conclusion

The Laboratory has a mature accountability system, which has improved and continues to improve.

RATING	TREND
Good	→

Opportunities for Improvement

- Continue improvement efforts to help all managers understand their accountability for safety and their responsibilities to properly support and respond to hazards, employee concerns, and accidents.
- Consider whether information about safety and health accountability (e.g. disciplinary action as well as positive lessons learned) could be more frequently/widely distributed without compromising Human Resources principles of confidentiality.

Tenet: Management Leadership
Element: Resources

Evaluator: Janice Haney

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The “Resource” Element is devoted to staff having the necessary resources to perform work. The Element includes such resources as personnel, space, training, equipment, budget, capital investments and other resources devoted to the safety and health program, including the percentage of the current fiscal year site budget devoted to safety and health programs and the PNNL site wide budget.

Strengths

- Vast majority of interviews indicate adequate staffing, equipment, training and supplies.
- There is evidence of more budget funds being devoted to correct borderline safety concerns that were ignored in the past.
- Because of the resources PNNL has committed to the safety and health program, there is a feeling by all those interviewed that PNNL is a very safe place to work.
- Resources for S&H upgrades are readily available in some (well funded) organizations.
- Management continues to support VPP with adequate funding.

Weaknesses

- Operational resources (including safety) are not as well aligned with the business processes of the Laboratory as is desired.
- Even though funding for safety support seems to be adequate, it is not at the level that some managers and line staff believe is necessary to address all safety concerns and needs (e.g., additional S&H staff with specific technical expertise, new PPE and equipment, quick resolutions to safety concerns).

Recent/Expected Changes

- The VPP program has moved from a development mode to a maintenance mode.

~~□ The “Second Generation Management System” intends to address the alignment of operational resources via the business process.~~

Conclusion

The Laboratory resources dedicated to safety and health are of sufficient quantity and quality to support an excellent worker safety and health program.

RATING	TREND
Good	→

Opportunities for Improvement

~~□ Continue efforts to improve alignment and allocation of resources associated with the 2nd Generation Management System and the 2010 planning process.~~

- The VPP Steering Committee should work with the Worker Safety & Health Management System to address the issue of adequate safety and health resources being available across the Lab.
- Consider how to mentor and/or develop the expertise of subject matter experts and make sure that all staff know who to contact for safety and health support.

Tenet: *Management Leadership*
Element: *Planning*

Evaluator: Janice Haney

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

This Element also reviewed updated FY02 budget values.

The “Planning” Element is well ingrained into PNNL’s annual business planning which requires all managers to budget for safety and health issues including training of staff, field-deployed ES&H support, operational resources related to maintenance of capabilities (facilities, equipment, work activities). Safety and health planning begins at the site level, with the first guiding principle being “environment, safety and health excellence.”

Strengths

- The Laboratory planning process is systematic and comprehensive, and it stimulates accountability on the research side. Long term planning related to safety is addressed by the Worker Safety & Health Management System, which works in concert with the business planning process.
- Divisions and Management Systems work together for continuous safety improvement through Operations Managers and the Deputy Laboratory Director for Operations.
- There has been significant improvement in many safety & health matters over the last few years (notably self-assessment,

Weaknesses

- The Laboratory Integrated Business Planning Framework and the SBMS are highly effective; however they are complex and hard to explain to evaluator’s outside of the process.
- The planning role of “Operations Manager” is not clearly established in the SBMS.
- Safety requirements are not always well communicated between planners and doers, (e.g., PPE requirements, High Voltage Work).
- Lack of consistent, formalized Post-Job reviews for corrective measures provides little feedback for future similar jobs. Lessons Learned is not communicated effectively.
- The best/most appropriate equipment is not always available to

- training compliance, hazard identification and mitigation). Much of this improvement has been driven by IOPS.
- Critical Outcomes (goals) roll down from Lab to Division.
- The F&O Job Planning Package process is a comprehensive, integrated process providing task safety and health input from craft staff, facility/discipline SME's, supervisory, and safety and health professionals.
- A comment sheet completed after the job indicates problems encountered or special information that can serve as lessons learned.
- perform jobs (e.g. providing PPE instead of engineered controls).
- Some safety concerns identified by workers in the planning process take too long to be resolved. No formal documentation or tracking of safety issues brought up in the field or in a safety meeting. There needs to be a process of accountability for status and resolution to ALL identified concerns.
- There is not a specific form or process being followed for documenting Stop Work within the Job Planning Package. There are inconsistencies between 300 Area and 3000 Area as to how well Stop Work is documented.

Recent/Expected Changes

~~□ The 2nd Generation Management System Operational Improvement Initiative will map and describe the Customer Service Model and help implement a consistent process for work planning and control across organizations, Product Lines, and Management Systems.~~

- Formalizing a process for consistent Post-Job reviews will replace the Comment Sheet currently added by the Planning & Scheduling groups.
- A new planning and process tool will integrate and enhance the efficiency and effectiveness of R&D work planning and control. By merging the EPR, SBMS, and IOPS tools to formulate a more efficient process and tool, reduced planning labor will provide cost savings as well as improve focus on identification, evaluation, and mitigation of ES&H Hazards. Improved planning will result in fewer accidents, injuries, illnesses, and near misses, and the planning tool will help managers avoid project and overhead costs and continue to improve marketability of PNNL operational tools.

Conclusion

Work planning at the Laboratory is a constantly evolving, increasingly integrated and consistent process. Research and support work is planned with SBMS requirements for safety, health, and environmental considerations and lessons learned are increasingly incorporated in subsequent experimental and maintenance work. IOPS provides a formal process for facilities where potentially hazardous work is conducted to addressing hazards and planning out potential consequences. However, there are improvement opportunities regarding how results from assessments or lessons learned are captured and used in planning activities.

RATING	TREND
Good	↗

Opportunities for Improvement

- Consider using formal “Post Job Reviews” to capture lessons learned and feed future job planning.

Tenet: Management Leadership
Element: Contract Workers

Evaluator: Janice Haney

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The guiding principle for the Element “Contract Workers” is that all contractors to PNNL (sub-contractors) are expected to meet the same standards for safety as PNNL staff. Those sub-contractors or their workers who do not meet those standards may be barred from performing work at PNNL. The safety and health performance of all sub-contractors is a major consideration in PNNL’s selection process.

Strengths

- Safety and Health representatives, Facility Project Managers, Resource Managers, other management personnel and line staff expect sub-contractors to follow the same rules as PNNL employees. There is evidence that shows sub-contractors have been stopped from unsafe work until the work was performed in the required safe manner. Some line workers have taken an active role in reporting unsafe work by sub-contractors.
- PNNL Contract personnel indicated that sub-contractors who do not meet PNNL’s ES&H standards will not be permitted to work at the Lab.
- Job planning packages are well defined and completed with multiple inputs from stakeholders and the

Weaknesses

- The flow down of safety & health requirements and monitoring of sub-contractor performance to those requirements isn’t as strong as for employees.
- The fact that PNNL wants all unsafe work by sub-contractors (or anyone) reported needs to be better communicated and emphasized to all employees.
- Health and safety performance as part of the sub-contractor selection process still needs to be improved.
- Safety requirements are not always well implemented by sub-contractors.
- There is a lack of formal Post-Job reviews for corrective measures/lessons learned.
- The best/correct equipment is not always used to perform a job (e.g.

- respective workforce.
- Past health and safety statistics are used to help determine contract awards.
- Sub-contractors work to PNNL requirements (or equivalent) and/or job planning packages with SOPs reviewed by PNNL.
- Sub-contractor employees take the PNNL site orientation.

- a contractor may use PPE when engineered or administrative controls would be preferred).
- Process to communicate hazards to sub-contractors and verify that they work safely needs additional improvement.

Recent/Expected Changes

- Clauses for contracting with sub-contractors have recently been improved.
- ES&H recently implemented a method of tracking actual sub-contractor work hours and injury rates.
- A process is almost ready for deployment to evaluate sub-contractor safety and health performance for contract selection.

Conclusion

Work planning includes identifying and mitigating hazards. Continuous improvement measures related to the process for managing sub-contractor work have been formally scheduled and tracked to completion on ATS. Communication of safety requirements is generally good but sub-contractor implementation of requirements warrants continuous improvement.

RATING	TREND
Adequate	↗

Opportunities for Improvement

- Consider how to better monitor sub-contractor implementation of safety requirements.

Tenet: *Management Leadership*
Element: *Program Evaluation***Evaluator:** Pat Wright**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

PNNL's self-assessment process is described in SBMS. Each line organization and Management System is responsible for establishing a risk-based self-assessment program. The Integrated ES&H Management System supports the VPP program, including the VPP Program Description and the Annual VPP Program Evaluation.

Strengths

- PNNL's self-assessment programs have been continuously improving.
- The IOPS self-assessment process is effective at involving and empowering workers.
- ETD and NSD have demonstrated leadership and innovation in the continuous improvement of their management self-assessment processes.
- The Annual VPP Program Evaluation is a rigorous and continuously improving self-assessment that workers participate in.
- ATS provides an effective documentation and tracking process for assessment results.

Weaknesses

- Many aspects of the various self-assessment programs could be improved (e.g. activity-based self-assessment, use of results from self-assessments)

Recent/Expected Changes

- The recent implementation of “Maturity Assessments” for operational management systems (as initiated within the Quality Directorate Management Systems ~~and promoted by the Second Generation Management System Project~~) should result in significant improvements and better consistency related to Management System self-assessments.

Conclusion

RATING	TREND
Good	↗

PNNL has long established itself as a leader in progressive, continuous improved processes to serve its mission. The Integrated Assessment Management System provides a three-pronged approach to continually review, test, and evaluate management control systems at PNNL. These Elements are: Self-Assessment, Internal audit, and Independent Oversight activities. Integrated assessment results are comprehensive and well-utilized throughout the Lab to gain information that continues to mature the Lab as a leader in VPP readiness among all the national laboratories.

Diligent safety & health program evaluation has evolved over time and has provided strong bases for PNNL to become a premier R&D facility; repeatedly earning the highest ratings from the primary client. Performance improvements over the past few years are largely attributed to the use of a well-designed self-assessment program. Self-assessment activities provide sustained, reasonable assurance that Laboratory work is conducted in a manner that protects the environment and the health and safety of workers and the public.

Opportunities for Improvement

- Continue efforts to improve the self-assessment processes across the Laboratory.

Tenet: Management Leadership
Element: Site Orientation

Evaluator: Janice Haney

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

PNNL’s “site orientation” program includes training and documentation that applies to all entering the site. PNNL provides general and job specific training to all workers, including vendors, consultants, students, and visiting consultants. This important activity is controlled through the badging process. Orientation modules are available on the Internet, with new employees able to access training modules remotely prior to arrival on site. PNNL has developed the Integrated Operating System (IOPS) to provide job specific orientation and appropriate training to all individuals before being granted access to IOPS buildings or laboratory spaces.

Strengths

- There has been significant improvement in proper and timely site orientation and familiarization, mainly due to IOPS.
- Continually updated laboratory space access postings identifying specific room hazards is very informative and greatly increases hazard awareness.
- The PNNL Orientation modules are Web-based, available remotely and provide a broad range of information including environment, emergency, safety, and health provisions of the Laboratory.

Weaknesses

- Some IOPS training is redundant, unnecessary and complicated.
- Because of continual “refresher notices” for IOPS, many staff are circumventing the Web-based training by simply visiting web pages without conscientiously reading them.
- Brief summaries of major hazards and their mitigation by a Cognizant Space Manager would provide personal interaction with a knowledgeable person, instead of totally relying on Web based programs.
- Lack of knowledge pertaining to site familiarization (hazards)/

- Access badging is incorporated as a control point to confirm that appropriately complete site orientation is provided for all personnel at the PNNL complex.
 - Site orientation modules undergo regularly scheduled reviews and up-dates the same as all other approved training to provide accurate, current information.
 - IOPS provides job-specific orientation and appropriate safety and health training to all personnel in designated facilities.
 - Hosts of non-staff/visiting staff, and all others are responsible for communicating training/orientation needs to those individuals and ensuring completion of that training/orientation.
 - Some staff appreciate the presence of IOPS Hazard Awareness Summaries at the door to some labs.
- orientation and general knowledge of ES&H program with some summer students and interns. Some CSMs discuss safety with students, others may not.

Recent/Expected Changes

- None

Conclusion

Site Orientation at the Laboratory is a well-designed, formalized, and

RATING	TREND
Good	↗

effective process. Unique hazards of both research and support work at the PNNL complex are addressed as appropriate by utilizing hazards-based modules and general information modules. The Web-based options are excellent resources for personnel planning to visit or work at this site; platform orientation and training has been significantly decreased with this progressive and expedient means of providing needed training and orientation. However, the value of some (e.g., IOPS reading assignment) training is not universally accepted. Some staff are frustrated with the volume and redundancy of information pushed on them by IOPS and expressed the feeling that the system may be transferring liability to them rather than trying to provide them with useful information in a timely manner. New hire orientation is well-received due to its appropriate scale and timeliness. It does a good job of getting staff properly prepared to work in a comparatively short time as appropriate. This orientation process is continuously improving as a target of integrated inputs.

Opportunities for Improvement

- Consider how to provide relevant information in a quick, easily assimilated format using the IOPS tool.
- Consider providing Hazard Awareness Summaries at the door to every lab.

Tenet: *Management Leadership*
Element: *Employee Notification*

Evaluator: Janice Haney

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The “Employee Notification” Element provides methods used to confirm that all employees, including newly hired employees, are aware of the following: participation in DOE-VPP, their right to express concerns related to occupational safety and health to DOE, their right to receive the results of self-inspections and accident investigations upon request.

Strengths

- Critical safety and health rights, responsibilities, surveys and information concerning VPP is delivered to PNNL employees by numerous techniques that are designed to appeal to a diverse population, such as new hire orientation, safety/staff meetings, training, posters, brochures, newsletters, briefings, Web-pages, etc.
- SBMS provides comprehensive, cross-cutting requirements and proceduralizes activities and systems that support on-going employee clarity on ES&H expectations, (e.g. medical exams, right to review safety-related monitoring, investigations reports, etc.)
- Most staff are knowledgeable of their safety rights and

Weaknesses

- There is a need for improved communication about Rights and Responsibilities, as some staff weren’t as knowledgeable about the R2A2 as they should be.
- Interpretations, utilization, and understanding of Laboratory initiatives (e.g. VPP, R2A2, Stop Work, etc.) appear to fall from one end of the scale to the other, indicating that “Roll-Out” of meaningful information is not always strategically planned and executed.

responsibilities, including stop work authority, the right to contact DOE concerning safety and health, the rights to receive the results of inspections, the right to view their own accident reports, investigations and medical records.

- An initial VPP survey results indicated over 99% of staff is aware of PNNL’s involvement in VPP and 73% recognized the Tenets of VPP.
- A VPP newsletter is updated and posted across the Laboratory periodically.
- A second VPP survey has just been completed. This survey will be used to improve quality and effectiveness of the ES&H program and to establish a baseline to verify that VPP and the ES&H programs are continually improving and moving forward.

Recent/Expected Changes

None

Conclusion

Employees are generally aware of their safety rights and responsibilities and of PNNL’s VPP program. Continuous improvement in this area is needed to address employee involvement issues.

RATING	TREND
Adequate	↗

Opportunities for Improvement

- Continue efforts to improve employee awareness of their safety rights and responsibilities, and of the VPP program.
- Consider how to keep the VPP Website updated with current, valuable information (e.g., the Program Plan is no longer current).
- Consider ways to better disseminate information about the VPP program.

Tenet: *Employee Involvement*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Employee Involvement		
Degree and Manner of Involvement	Adequate	→
Safety Committees	Adequate	→

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Employee Involvement	Adequate	→

SYNOPSIS

SYNOPSIS

The Laboratory has experience an exceptional level of performance during the last five years and this can be attributed to the employees' involvement and focused commitment to attaining high standards. DOE has recognized PNNL's performance with four consecutive ratings of Outstanding, awarding the Laboratory the VPP STAR status in 2001, and we have experienced five years of steadily improving safety and health performance indicators.

There is adequate worker involvement in safety in R&D projects and in general across the Laboratory (i.e. workers feel empowered to address safety issues and feel that they work in a safe environment). Processes such as IOPS and SBMS provide excellent vehicles for employee involvement, and small R&D work teams practice excellent integration of safety into work processes. However, there are issues associated with employee involvement at PNNL:

- R&D workers are relatively apathetic toward traditional forms of employee involvement such as safety committees, awareness campaigns, etc. They will need to see value added, results oriented programs and activities that benefit science and technology if the Laboratory is to continue to improve involvement in safety. There are a few that believe that money spent on VPP would be better spent elsewhere.
- Not all bargaining unit workers feel involved or empowered to address safety issues. Much progress has been made on the involvement of the bargaining unit and the great majorities of the employees believe PNNL has an excellent safety and health program and feel safe at work. Some employees do not feel they have enough input or they are not listened to enough or the systems do not work fast enough or there is not enough feedback soon enough.
- The Laboratory needs to begin to target involvement of special employee that works off site in the U.S. or off site in a foreign land, and the special case

employee that travels 150,000 miles a year. The Laboratory has taken actions to cover these employees but we still have opportunities to improve.

Tenet: *Employee Involvement*
Element: *Degree and Manner of Involvement*

Evaluators: Harold N. Bowers

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A 2001 survey of staff with over 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Employee involvement at PNNL takes many forms and varies a great deal depending on the employees work assignment, work location, and potential exposure to hazards and risks. Over the last five years PNNL has made significant progress in improving the degree and manner of worker involvement of the operation of the Laboratory and this is especially true in the area of safety and health. This element has been a beneficiary of that progress. The optimum level of employee involvement on any process or operation is still under debate at PNNL.

Strengths

- A typical R&D worker said “Safety is a part of everything I do and therefore integral to the performance of my job.”
- Close-knit R&D workgroups
- Strong worker participation in safety committees, SBMS and IOPS.
- Good relationship with immediate manager is common.
- Bargaining unit workers are involved in pre-job walkthroughs, safety committees, SBMS, IOPS, and critiques.
- Workers have documented stop-work authority.
- The 2001 VPP Survey indicates

Weaknesses

- There is a sense of apathy and rejection from some R&D scientists for activities (e.g. VPP) that do not appear to be related to their science.
- There is still a legacy of concerns and injustices from the past with some workers.
- Feedback on concerns is not always provided in a timely manner from management to staff (bargaining unit and R&D staff)
- It is perceived, by some workers, that some managers do not support stop-work authority.
- Individual bargaining unit workers may not always be involved in pre-

- that 59 % of the PNNL respondents Agree or Strongly agree that they are regularly involved in decisions that affect their safety and health.
- The 2001 VPP Survey indicates that 82% of the PNNL respondents Agree or Strongly agree that they are knowledgeable regarding the PNNL Safety and Health Program.
 - job walkthroughs (although they are represented by other bargaining unit workers).
 - Pre-job walkthroughs are sometimes conducted on work when it is perceived as redundant or unnecessary.
 - Bargaining unit worker input not always incorporated into work plans.

Recent/Expected Changes

- F&O management has been working to improve processes for work planning and addressing concerns (through organization changes, better communication).

Conclusion

Progress is being made in the Employee Involvement area; however there is room for additional improvement. The Laboratory has developed excellent participation and involvement by the majority groups. It must deepen the participation by those groups that are on the fringe and have not been included because they do not work with highly hazardous operations or do not work in programs that are driven by regulatory requirements or they do their work at an off site location. The Laboratory needs to look for a strategy to promote inclusion of these staff in the system. Continuing efforts are needed to improve F&O work planning processes and the mechanism for dealing with concerns.

RATING	TREND
Adequate	→

Opportunities for Improvement

- Gain more worker involvement in safety program activities. This worker involvement should include R&D workers located at the Richland Complex and staff at other work locations, must include the administrative and support services worker, managers, as well as bargaining unit workers. Involvement must be in a real result driven effort such as ergonomics.
- Continue efforts to improve work planning and how concerns are addressed across the Lab.

Tenet: *Employee Involvement*
Element: *Safety Committees*

Evaluators: Vern Madson

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- There are numerous safety committees and activities associated with specialized subject areas (SBMS) or program implementation efforts (IOPS). Therefore there are many opportunities for staff to be involved in improvement of PNNL’s safety programs.
- Committees use the intranet to deliver information.
- The 2001 VPP survey found that 86 % of the PNNL participants were aware of some of the Safety Committee activities.

Weaknesses

- All staff do not know what VPP is about, even though they know how to work safely.
- Committee processes are often not formalized.

Recent/Expected Changes

- Porcelain Press has been formalized across the Lab.
- More staff are aware of safety committees and who to contact about concerns
- Weaknesses identified last year and above are becoming better as time goes on.

Conclusion

The use of safety committees for employee involvement has been a relatively minor approach for addressing safety issues at PNNL. Worker involvement is integral to the relatively new processes of SBMS subject area development and IOPS implementation. There

RATING	TREND
Adequate	→

has been a lack of formality and rigor in the implementation of safety committees but that has been an area of improvement opportunity for the Laboratory. Progress has been made over the last year.

Opportunities for Improvement

- Need a better method to communicate to staff the actions and resolution of concerns.
- Need to institutionalize the processes used by the VPP Steering Committee in a Charter.

Tenet: Worksite Analysis

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Worksite Analysis		
Pre-Use/Pre-Startup Analysis	Good	↗
Comprehensive Surveys	Good	↗
Self-Inspections	Good	→
Routine Hazard Analysis	Good	↗
Employee Reporting of Hazards	Adequate	↗
Accident Investigations	Good	→
Trend Analysis	Adequate	→

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Worksite Analysis	Good	↗

SYNOPSIS

Workplace hazards are well analyzed both before work begins and periodically thereafter. There are several initiatives to improve the processes and worker/management empowerment and knowledge needed to support better worksite analysis. Improvements need to be made in the area of employee reporting of hazards (particularly the process for timely resolution of concerns and feedback) and trend analysis (using results of data that is collected).

This page intentionally left blank

Tenet: Worksite Analysis
Element: Pre-Use/Pre-Startup Analysis

Evaluators: Vern Madson

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- SBMS provides comprehensive, consistent requirements for planning for, analysis of, and control of hazards.
- EPR provides a good start for hazard identification for R&D projects.
- IOPS provides excellent bench level controls including R²A², access control, and training to required practices, permits, and procedures.
- F&O work control process provides excellent planning and control for maintenance and construction work.
- There is a good process for ensuring that safety is considered in the specifications for procurement of goods and services.

Weaknesses

- The process for work planning is not fully mapped, described, or consistent across organizations and management systems.
- There are redundancies and gaps in work planning tools that are inefficient and can lead to inadequate worksite analysis.
- Existing tools that support worksite analysis are not well integrated and do not always share/communicate information between them or to key roles in the work planning and control process.
- The process to communicate hazards to sub-contractors and confirm that they work safely needs additional improvement.

Recent/Expected Changes

☐ Standardization of Job Planning Package (JPP)

- ~~Second Generation Management System improvements in progress.~~
- Hazard Analysis Operational Improvement Initiative improvements in progress

Conclusion

RATING	TREND
Good	↗

PNNL has implemented very good processes for work planning and control, including pre-use and pre-startup analysis. Given the diversity of hazards, projects, and facilities spanned by PNNL work, excellence in this area is needed. Self-evaluations have identified several opportunities for improvement, which are addressed by current initiatives at the Lab level. Those initiatives will result in continuous improvement in the identification, analysis, and mitigation of hazards.

Opportunities for Improvement

- Continued support for Operational Improvement Initiatives, including ~~Second Generation Management System and the~~ Hazard Analysis Initiative.
- Continue with actions to address FY2000 VPP Program Evaluation conditions related to sub-contractor communications and oversight.

Tenet: *Worksite Analysis*
Element: *Comprehensive Surveys***Evaluators:** Elwood Lepel**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Each Safety and Health management system performs self-assessments of the management system Elements on a periodic cycle (e.g., every 2 to 5 years). The self-assessments of the Worker, Safety and Health, Radiological Control, and Facility Safety management systems include assessing related SBMS subject areas and program descriptions.

The individual responsible for work (such as line and project manager) typically identify the potential hazards. Those individuals have experience and qualifications related to the work and typically able to identify and evaluate hazards. Qualified Safety and Health professionals are available to assist line and project managers or workers with the identification and evaluation of hazards.

Types of surveys include:

- Safety Surveys – Most initial determinations of safety and health hazards are performed when planning work. Additionally, in IOPS managed workspaces, the cognizant space manager performs a hazard evaluation to confirm that hazards are identified. Field deployed Environment, Safety, and Health (ES&H) staff support the CSM as they identify and evaluate hazards.
- Industrial Hygiene – Where work planning, or self-assessment hazard identification (e.g., noise, confined space, toxic or flammable gases and vapors) indicates that industrial hygiene monitoring is needed, qualified industrial hygiene staff use calibrated instruments according to established procedures based on nationally recognized standards. Monitoring records are maintained in files by the Occupational Safety and Industrial Hygiene Operations Group.

- Radiological Work – Radiological hazards are managed under SBMS and PNL-MA-266, PNL Radiological Control Implementing Procedures. Both of these documents contain mandatory requirements that provide for compliance with federal and state regulations as well as good practice recommendations.
- Facility Operations and Maintenance – Facility Operations and Maintenance staff conduct self-assessments biweekly and targeted assessments with corrective actions documented in the Assessment Tracking System. The self-assessment program is used to identify weaknesses, apply correct actions, and foster continuous improvement. Comprehensive review and surveillance of sub-contractor work begins with the preparation of the job planning package, reviewed, and the work monitored daily.

Strengths

- IOPS provides a hazard awareness summary that is periodically updated
- The Chemical Management System is used to identify and quantify chemical hazards.
- Baseline hazard surveys have been conducted of all PNNL facilities for significant hazards such as asbestos, beryllium, noise, radiation, radiological contamination, and confined spaces.
- The electronic Prep and Risk (EPR) provides an initial evaluation of the hazards associated with each project.
- The Map Information Tool (MIT) is linked to IOPS to provide hazard awareness summaries of requested IOPS spaces and available information of other spaces.

Weaknesses

- IOPS is not implemented in all PNNL facilities.
- EPR is not linked to the IOPS hazard awareness summaries.

Recent/Expected Changes

- IOPS was rolled out to 350, 329, 326, and 320 Buildings in FY2001.
- IOPS will be implemented in EDL, 3720, 622R, 336, and Sigma V buildings in FY2002.
- The Hazard Analysis Operational Improvement Initiative (OII) is planned to link EPR and IOPS.
- Comprehensive surveys will be performed on Biohazards and Non-ionizing radiation in FY02.

Conclusion

Comprehensive surveys have been conducted and are continuously being performed in areas of safety and health, radiological control, and facilities and operations. The constantly changing research projects challenge CSMs to keep the hazard awareness summaries current with the work in individual spaces. The planned integration of the Electronic Prep and Risk with the hazard awareness summaries generated by IOPS should help alleviate this problem.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue support for continuous improvement initiatives such as the IOPS roll-out OII and the Hazard Analysis OII.

Tenet: *Worksite Analysis*
Element: *Self-Inspections*

Evaluators: Vern Madson

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- The self-assessment process is well defined in the SBMS subject area, Integrated Assessment.
- Line organizations perform self-assessments in accordance with an approved "Division/Directorate or Management System assessment plan".
- Field deployed subject matter experts are well integrated into the organizations’ self-assessment program.
- Management system self-assessments are performed in accordance with approved procedures.
- An independent oversight group performs unbiased assessments.
- Quarterly self- assessments are performed by the Cognizant Space Managers in IOPS facilities.

Weaknesses

- Results that are not considered "significant" may not be shared between Divisions/Directorates that may have similar circumstances.
- Matrixed ES&H staff and CSMs may become complacent with lab space and hazards.
- Strong “lines of inquiry” are not always developed by assessors.

Recent/Expected Changes

- None

Conclusion

PNNL has implemented a good self-assessment program. The program includes the assessment by Line Organizations (divisions/directorates) and the Management Systems (programs).

RATING	TREND
Good	→

Results of the self-assessment are analyzed and continuous improvement actions are identified. Results of assessments could be better communicated between similar divisions, and general improvement of the process continues to be pursued.

Opportunities for Improvement

- Develop a means to better communicate assessment results between similar divisions.
- Consider implementing a process to rotate subject matter experts between divisions in the performance of self-assessments as a way of getting “fresh eyes” to look at potentially unsafe acts and conditions.

Tenet: *Worksite Analysis*
Element: *Routine Hazard Analysis*

Evaluators: Russ Meicenheimer

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- EPR identifies hazards for projects and provides pointers/links to SBMS requirements associated with the hazards.
- IOPS provides a process to control hazards (permits in place, access to space is controlled, training is complete and current).
- Project managers, line managers, and staff member responsibilities for hazard analysis are clearly identified.
- Safety and health professionals are available to assist project managers, line managers, and staff implement their hazard analysis responsibilities.
- Hazard Awareness Summaries (IOPS) are used to inform/train staff entering space.
- Permits, procedures, and practices are used to train/qualify staff to perform work safely.
- Formal training is driven by analysis of the hazards a staff member will be exposed to through the Job Evaluation and Training System.
- Lesson plans are based on SBMS

Weaknesses

- IOPS has not yet been implemented in all facilities where potentially hazardous work is performed.
- EPR does not “inform” IOPS of hazards that are planned for a space.
- There is inconsistent implementation of routine hazard analysis (particularly in non-IOPS spaces).

- requirements, lessons learned, and program assessments.
- Hazard awareness walkdowns greatly improving knowledge of hazards and actions being taken – staff involved in walkdowns

Recent/Expected Changes

- An IOPS Safety Committee is working to standardize the program and procedures for crafts who work in IOPS facilities.
- IOPS is being rolled-out to all facilities where potentially hazardous work is conducted.
- The Hazard Analysis OII is linking EPR and IOPS.

Conclusion

There is a strong process for ensuring that hazards are routinely analyzed and mitigated. The process is being improved by several Operational Improvement Initiatives.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue support for continuous improvement initiatives such as the IOPS roll-out OII, and the Hazard Analysis OII, which will integrate tools for routine worksite analysis.

Tenet: *Worksite Analysis*
Element: *Employee Reporting of Hazards*

Evaluator: Russ Meicenheimer

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- Response to hazards and accidents is greatly improved
- The need to report accidents and significant hazards is well established.
- Workers have documented stop-work authority
- Communications between employees and immediate managers, and with support staff such as Building Managers, Safety & Health Representatives, etc. is typically open and effective at identifying and resolving issues.
- Numerous avenues are available for employees to report hazards, both formally and informally.

Weaknesses

- Hazards may not always be reported if they are fixed by employees. This may lead to loss of trend information.
- In some cases relationships between employees and immediate managers or support staff could be strengthened.
- There continue to be employees who are not satisfied with the way their concerns about hazards were addressed.
- In some cases, employees may not recognize the need to take action to report hazards that affect workers other than themselves (e.g., sub-contractor employees).
- There is no formal process for capturing minor employee reports of hazards.

Recent/Expected Changes

- The new Crafts IOPS Safety Committee is providing a better way of addressing F&O staff issues.
- There is improving communication and action from immediate managers regarding safety issues.

Conclusion

There is a good culture of employees

RATING	TREND
Adequate	↗

identifying and correcting hazards. IOPS is helping to strengthen that culture. Workers typically have a good relationship with their immediate manager and support staff who can help them properly address hazards. There is less focus on documenting employee-reported hazards and analyzing the information for trends (both related to hazard as well as culture). Management in some parts of the organization still does not consistently demonstrate excellent response to employee concerns and reports of hazards, although performance in that area is improving with greater formality in operational processes (e.g. IOPS) and culture. The DOE-VPP On-Site Review noted: "PNNL's current work process does not record an explanation of the specific reason behind the "stop work" and attach or flag this explanation to the work package, making it's correction a requirement prior to reissue or restart. Accomplishment of this action would further develop an accountability of actions, assist the lessons learned program (proactive action can develop), and enhance PNNL's creditability."

Opportunities for Improvement

- Consider ways to improve consistent timely action and feedback regarding employee concerns.
- Continue programs and efforts to confirm that immediate managers encourage employee reporting of hazards and respond properly to such reports.
- Continue improving operational processes such as IOPS, which empower staff to identify and address hazards.
- Consider ways to improve how employee reports of hazards are captured, and use the results for trend analysis.

Tenet: *Worksite Analysis*
Element: *Accident Investigations***Evaluators:** Janice Haney**Assessment**

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

This Element also evaluated current (CY01 YTD) accident information.

The "Accident Investigations," Element involves the systems used to conduct accident and incident investigations; the training and/or guidance given to investigators; how near miss incidents are handled and the lesson learned program used at the site.

Strengths

- The lab has a comprehensive program for reporting off-normal events. The program is well defined through the Off-Normal Event (ONE) Reporting program that consists of the SBMS subject area Event Reporting and the Off-Normal Event program description.
- Accident investigations relating to injury/illness are well defined in the SBMS subject area Injury or Illness. The subject area incorporates the Safety and Health Management System (SHIMS). The SHIMS program enables a variety of reports and trending analysis. Management, staff and integrated ES&H staff members are incorporated into the process.
- Work related injuries and illnesses, no matter how minor, are reported using the SHIMS program.

Weaknesses

- Line staff involved in work related injuries or illness should be encouraged to read the SHIMS report before it is filed with DOE and/or the PNNL OSHA Recordkeeping Clerk.
- Lessons learned are not communicated or used effectively.
- Staff below the management level should be more knowledgeable of the reporting requirements relating to occurrences and at work injuries or illnesses.
- Staff should have better access to the results of accident investigations (including critiques).
- Results of occurrences and accident investigations are not always integrated into future planning processes.
- There continues to be a need to better communicate the results of

- PNNL investigates all off-normal events and evaluates their causes. As a result, corrective actions for adverse events are incorporated in the Laboratory's improvement initiatives.
 - Occurrence reporting guidelines are well described in the Event Reporting SBMS subject area. The Assessment Closure (Corrective Action Management) is well defined and provides a good means to track corrective actions.
 - Employees are allowed to participate in accident investigations, either as part of the initial investigation or as a member of the safety team conducting the required follow up evaluations.
 - The Lab is continuing to improve its distribution of Lessons Learned and Best Practices through the implementation of a web site.
 - The Radiological Problem Reports program is well defined and detailed in the SBMS subject area.
 - The occurrence reporting process uses a strict root cause analysis on a graded approach.
 - Critiques are completed as soon as practicable, preferably within 24 hours. They are attended by all employees involved in the event and other interested parties.
 - Critiques are required for all radiological events and recommended for non-radiological events as well.
- better communicate the results of occurrence reports and critiques back to the workers involved and all potentially interested/affected staff.
- Near misses are usually not reported, investigated or tracked.

Recent/Expected Changes

- OSHA 300 reporting requirements will impact reported injury and illness rates.

Conclusion

Accident investigations are well defined and incorporate a rigorous

RATING	TREND
Good	→

reporting, investigating, analysis, tracking, and distribution process. General knowledge regarding staff reporting requirements could be enhanced.

Opportunities for Improvement

- Provide staff with a brief reminder of Occurrence reporting responsibilities.
- Consider improving the process for sharing lessons learned from critiques with staff.
- Consider developing a process for reporting and using results of near misses.

Tenet: *Worksite Analysis*
Element: *Trend Analysis***Evaluators:** Elwood Lepel**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Safety and Health Information Management System (SHIMS) safety performance reports are available and may be customized for a given organization/level or date range for trending purposes.

Current occupational injury and illness rates are available to management and staff through a SHIMS Reporting Tool. Occupational injury and illness trends are reported quarterly to management.

Safety performance trends are used by management to verify that PNNL’s goals of excellence and continuous improvement are attained.

Occurrence Reports – The Off-Normal Event Coordinator monitors the results of occurrence reports and makes the trending information available to management and others.

Radiological Problem Reports – Radiological Control staff examine Radiological Problem Reports quarterly, compare performance against the previous three quarters, and submit a report to appropriate line organizations.

Staff Concerns – Staff concerns are evaluated for trends monthly. A quarterly report is provided to the Directors of Human Resources, Internal Auditing, Legal, and the Price-Anderson Amendments Act Office.

Critical Outcomes – Significant performance measures related to safety performance are monitored as Critical Outcomes of the Laboratory.

The Independent Oversight organization annually reviews self-assessment results from the line organizations for trends and cross-cutting issues.

Strengths

- ATS system captures assessment information and provides good reporting (including some trending)
- Radiological dose trend analysis is very strong (ALARA program)
- Injury and illness trends are analyzed and reported.
- IOPS captures hazard analysis data
- Let's Talk process trends employee reports of problems

Weaknesses

- There is no comprehensive Lab-level trend analysis process
 - Injury/illness cause
 - Self-assessment data
 - Employee reporting of hazards

Recent/Expected Changes

- Movement of record keeping from OSHA 200 system to OSHA 300 system.
- Some Divisions are doing a better job of monitoring trends from self-assessments

Conclusion

The ALARA program provides good trending of radiological dose data. The ATS system and IOPS provide good systems to capture data. However, trend analysis processes across the Lab (particularly related to self-assessment results and hazard analysis information) could be improved.

RATING	TREND
Adequate	→

Opportunities for Improvement

- Improve trend analysis processes across the Lab (e.g., self-assessment results and hazard analysis information).

Tenet: Hazard Prevention & Control

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control		
Professional Expertise	Good	→
Safety & Health Rules	Good	↗
Personal Protective Equipment	Good	→
Preventive Maintenance	Good	→
Emergency Preparedness	Good	→
Radiation Protection Program	Good	↗
Medical Programs	Good	↗
Occupational Safety & Health Programs	Good	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control	Good	↗

SYNOPSIS

There is very good prevention and control of hazards at PNNL. The availability of excellent programs (SBMS and IOPS) and highly knowledgeable support staff assure that significant hazards are properly addressed. There is a need to better communicate safety and health principles and requirements to staff. This is not so much a deficiency as it is a reflection of the complexity of the hazards and the business environment that PNNL operates under.

This page intentionally left blank

Tenet: Hazard Prevention and Control
Element: Professional Expertise

Evaluators: Elwood Lepel

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

PNNL’s Safety and Health Department is staffed by highly qualified professionals, including Certified Safety Professionals (CSPs), Certified Industrial Hygienists (CIHs), Certified Health Physicists (CHPs), and Professional Engineer (PE) Fire Protection Engineers. Other staff who have credentials in hazardous materials management, training, transportation, and environmental compliance are also available to support the program. Although not all staff members who support the Safety and Health Program currently have professional certifications, all have been selected for their knowledge, experience, and ability to provide first-class safety and health support to the Laboratory.

The Safety and Health Department has 76 staff members with an average of approximately 9 years experience at PNNL each (several have over 20 years experience). Within the Department, there are six CSPs, three CIHs, 8 CHPs, sixteen certified by the National Registry of Radiation Protection Technologists, and one PE (Fire Protection). Most (56) have professional degrees in their field.

Strengths

- There are an adequate number of well-qualified safety and health professionals supporting Hazard Prevention and Control at PNNL.
- Safety and health professionals are **field deployed** to provide support to all potentially hazardous activities.
- Well documented IH sampling/monitoring procedures are used including the use of certified laboratories for analysis.

Weaknesses

- There is not adequate training for CSMs to complement their safety responsibilities.
- Some disciplines (e.g. biological safety) may not be adequately staffed within the Safety & Health Department.
- Records from various safety and health-related activities are not stored in a central location for use by all safety and health staff.

Recent/Expected Changes

- Safety training for new managers is being implemented in FY02.

Conclusion

PNNL has a very high degree of professional expertise in the field of worker safety and health. That expertise is well utilized and is available to managers and staff members who need it. Improvements could be made in the training of those with ancillary safety responsibilities and in communication of the availability of safety and health expertise.

RATING	TREND
Good	→

Opportunities for Improvement

- Centralize the storage of files associated with self assessments and other pertinent surveillances.
- Consider how to mentor and/or develop the expertise of subject matter experts and make sure that all staff know who to go to for safety and health support.

Tenet: Hazard Prevention and Control
Element: Safety & Health Rules

Evaluators: Nancy Isern

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The Standard Based Management System’s FY01 Customer Service Report was also reviewed as a part of this assessment Element.

The “Safety and Health Rules” Element is where the principle aspects of PNNL’s hazard prevention and control compliance and training approaches are described in the “Application”. The foundation of PNNL’s hazard prevention and control compliance and training approach is the Standards Based Management System. SBMS is a “living document” developed by PNNL based on its evaluation of external requirements documents, including: 1) DOE orders and directives; 2) federal, state and local laws; and 3) Battelle policy. In order to obtain a broader perspective and to build a sense of ownership in the system, research and other staff participated on the various teams that developed and updated the SBMS subject areas. The Roles, Responsibilities, Accountabilities, and Authorities (R²A²s) necessary to implement hazard prevention and control at PNNL are also described in the Standards Based Management System (SBMS).

Strengths

- SBMS is an excellent repository and vehicle for safety and health “rules” (required procedures and suggested guidelines).
- SBMS are developed using a team approach, with input from the research and other staff. This makes the system more responsive to R&D and other staff concerns.
- SBMS contains standards and applicability statements that make it clear that safety and health rules apply to all staff members,

Weaknesses

- SBMS is somewhat complex and difficult to navigate.
- As a “repository”, SBMS is written for a general audience and covers a very broad range of information, sometimes making it difficult for an individual to extract relevant information in a timely fashion. In addition, the wealth of information presented may interfere with the assimilation of information that is most urgently needed.
- Some R&D personnel still feel that

- including managers.
- The Worker Safety and Health Management System provides excellent stewardship for safety and health rules.
- There are clear Roles, Responsibilities, Accountabilities and Authorities for most important safety and health-related roles contained in SBMS (see opportunity for improvement identified in Management Leadership).
- There is a clear, consistent process for accountability articulated by the Human Resources Management System and contained within the SBMS. This includes the establishment of expectations and goal-setting, annual performance evaluations, and disciplinary action.
- There are good processes for recognizing ES&H Excellence within the rewards and recognition programs for each organization, and at the Lab-level.
- Lessons learned regarding safety issues are communicated via the SBMS Lessons Learned/Best Practices website, and through direct e-mails to special mailing lists when judged to be appropriate by managers or support staff.
- The availability of a responsible and responsive ES&H staff assists researchers to develop and conduct world-class research programs in compliance with safety and health rules.
- The excellent relationship between ES&H staff and researchers provides an attention to safety and health that may often exceed minimum requirements.

they are disenfranchised from the development and implementation of SBMS.

Recent/Expected Changes

- The subject areas have been consolidated, and the information in SBMS has been made more concise and relevant. In particular, in “Working with Chemicals” several subject areas were combined. The Procedures subject area was combined with Operator Aids and some unnecessary information was eliminated.
- New portals to access information in SBMS that is most relevant to a person's assignment or work activity have been provided. These include the view by position and work type, and the forms listing (both alpha and by category).
- SBMS web pages (home page and subject area pages) have been redesigned to make access to information easier for users and to help them understand where they were in the system or subject area.
- Several management systems have been combined, including Internal Communications and External Interface into Communications; Facility Operations & Maintenance and Facility Acquisition & Disposition into Facility Management; and included Emergency Preparedness into Safeguards & Security.

Conclusion

RATING	TREND
Good	↗

PNNL Safety & Health Rules are a model for other laboratories and have been a major factor in Battelle’s selection to manage other national laboratories. The rules are broadly available to staff and managers and they are consistently implemented. There is certainly room for improvement in both the content and organization of Occupational Safety & Health Programs, and continuous improvement is being achieved through self-assessment by Management System Owners (such as the Worker Safety & Health Management System) and involvement of staff members in the development of new requirements (SBMS subject areas) and the roll-out of Integrated Operations (IOPS). In particular, the user interface and several major sections of SBMS has been significantly improved. There is strong accountability for safety and health performance based on compliance with safety and health rules.

Opportunities for Improvement

- Continue planned improvement initiatives (SBMS continuous improvement, IOPS OII, ~~2nd Generation Management System~~, and Hazard Analysis Initiative).
- Consider whether information about safety and health accountability (e.g. disciplinary action as well as positive lessons learned) could be more frequently/widely distributed without compromising Human Resources principles of confidentiality.
- Consider how to deliver SBMS and IOPS information in a more concise and relevant format.

Tenet: Hazard Prevention and Control
Element: Personal Protective Equipment

Evaluators: Nancy Isern

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The “Personal Protective Equipment” Element is where PNNL’s requirements for obtaining and using personal protective equipment are described in the “Application”. The use of personal protective equipment “is the last line of defense against workplace hazards and is only used when engineering and administrative controls are not feasible, or as an interim measure while other controls are being implemented.” Use of personal protective equipment is guided by job-specific hazard evaluations, including hazard control permits, technical work procedures, or work planning documents. Use of personal protective equipment may be associated with industrial hygiene or radiological monitoring (especially for use of respiratory protection); ES&H staff are always involved in the selection of respiratory protection.

Strengths

- PNNL employees generally feel that they always have access to the appropriate PPE for the job.
- Some PNNL employees report that use of PPE during on-the-job activities has made them more likely to use appropriate PPE at home.
- PNNL employees exhibit awareness of the need to inspect PPE and replace when needed.
- There is a written program that addresses the Elements defined in regulatory requirements for a PPE program.
- PPE is provided free and readily made available to the users. (R&D

Weaknesses

- Users of PPE may not always be aware of the correct PPE for a given application. This would indicate a difficulty in extracting the appropriate information from SBMS.
- Compliance with requirements may be an issue; individuals may, without proper oversight, disregard known requirements.
- There continues to be an issue related to consistent implementation of adequate PPE (especially eye protection).

groups are responsible for purchase of such PPE as safety goggles, suitable gloves, etc.)

- Specific training programs (e.g. fall protection, electrical, respiratory and hearing protection are provided as per regulatory standards.
- Permits and training identify the correct PPE to be used for potentially hazardous situations.
- PPE is defined as the “last line of defense against workplace hazards”; to be used only when engineering and administrative controls cannot feasibly be used to mitigate a given hazard.

Recent/Expected Changes

- None

Conclusion

RATING	TREND
Good	→

There is a written program that when followed would provide adequate protection for staff members using PPE. Staff members who perform routine tasks (e.g. working in machine shops or laboratories) involving potential hazards that require the use of PPE have a good understanding of PPE protection requirements. Staff members who perform infrequent or non-routine jobs that are not formally evaluated sometimes do not understand the level protection required to mitigate the hazard. There is inconsistent application of PPE requirements in some areas and there continue to be some staff who do not always wear PPE that is indicated (e.g. eye protection, gloves).

Opportunities for Improvement

- A method should be implemented to assure that users of PPE not associated with a specific PPE training program understand the use and limitations of PPE they are expected to wear for hazards they could encounter.
- Address the issue related to consistent implementation of adequate PPE (especially eye protection).
- Consider ways to monitor the proper use of appropriate PPE.

Tenet: Hazard Prevention and Control
Element: Preventive Maintenance**Evaluators:** Russ Meicenheimer**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

Strengths

- There is a formal process for evaluating equipment and systems for developing PMs based on risk and regulatory requirements. The equipment and systems are evaluated using criteria defined as Category I, II, or III. All Category I and II equipment and systems have written PMs.
- Written PMs have been implemented for all equipment and systems that have a regulatory requirement for PMs.
- Craft representatives have an opportunity to provide comments and request changes during the PM development process. Craft people are encouraged to provide feedback when performing PMs to improve the PM.
- All completed PMs are reviewed by the Facility Engineer to make corrections to the PM process and to verify that any discrepancies noted on the PMs are corrected.
- Normally a pre-job planning meeting is conducted with craft people before the PM is performed to confirm that they understand the

Weaknesses

- The planned reformatting and rewriting of PMs has not been implemented as of yet.
- There are disagreements between F&O management and craft workers regarding the performance of PMs.

requirements and to address any concerns they have with the PM.

Recent/Expected Changes

- None

Conclusion

The changes mentioned above have not been totally implemented. There is a formal PM Program implemented that meets the regulatory requirements for performing PMs. Improvements are being implemented to make the PM Program more user-friendly.

RATING	TREND
Good	→

Opportunities for Improvement

- Continue improvements planned for PM program.

Tenet: Hazard Prevention and Control
Element: Emergency Preparedness

Evaluators: Elwood Lepel

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The Emergency Preparedness management system within PNNL’s Standards-Based Management System (SBMS) provided expertise, guidance, oversight, training, and counsel related to implementing emergency preparedness activities and coordinating and directing the planning, preparedness, and response to emergency conditions and/or off-normal events.

Key functions are as follows:

- Emergency planning includes ongoing efforts necessary to develop, distribute, and update emergency plans and procedures.
- Emergency preparedness includes activities related to the acquisition of resources and facilities, training of response personnel, and the timely exercising of plans and procedures by means of drills and exercises to practice effective response.
- Readiness assurance includes reviews to verify that emergency plans are consistent with hazards and appraisal programs so that emergency capabilities are adequate to implement the emergency plans. It also addresses the adequacy of timely needed improvements.
- Emergency responses are those activities related to the effective and efficient management of an emergency that occurs.

Strengths

- SBMS subject area *Emergency Preparedness*
- All Building Emergency Response personal receive an annual table top emergency drill evaluation or are provided personal training
- All occupied facilities participate in

Weaknesses

- None

- one evacuation drill a year
- All table top and evacuation drills are critiqued to correct any identified deficiencies
- PNNL has established teams that can provide technical assistance involving radiological and chemical hazards in the event of an emergency response.
- PNNL relies on two emergency response providers. Their area of coverage is well defined and they participate in emergency response drills.
- There has been a great deal of emergency preparedness information provided to staff after the September 11 tragedy.

Recent/Expected Changes

- None

Conclusion

PNNL has a formal emergency response program that meets the intent of OSHA and contractual agreements with clients. The program is evaluated on a frequency that would identify deficiencies and make corrections to maintain an effective emergency response capability for anticipated emergencies. Staff members understand their responsibility in the event of an emergency in their Facility. PNNL received an “Outstanding Performance Award” for their Emergency Response Program in FY 2001.

RATING	TREND
Good	→

Opportunities for Improvement

- None

Tenet: Hazard Prevention and Control
Element: Radiation Protection Program

Evaluators: Russ Meicenheimer

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

Strengths

- There is a strong, rigorous program based on DOE RadCon.
- Radiological control staff are well qualified and well trained.
- Focus Groups within the RadCon organization provide for good employee involvement, concentrating on continuous improvement (e.g. communications, procedures, etc.).
- There is a strong culture of RadCon compliance throughout the Lab.

Weaknesses

- There are overly restrictive requirements for some kinds of low-risk work (potentially leading to lack of credibility and acceptance of program requirements by staff).
- Some staff believe that radiological requirements are not consistently implemented in some cases.

Recent/Expected Changes

- The ACES program just implemented is an outstanding change, well received and very user friendly.
- The Management System Owner is exploring ways to alleviate restrictions for low-risk radiological work.

Conclusion

The Radiological Control program was rated “Outstanding” by DOE in PNNL’s performance evaluation. This program Element is considered to be very good and improving.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue current improvement initiatives such as the Focus Groups. Verify that they are properly chartered.

Tenet: Hazard Prevention and Control
Element: Medical Programs**Evaluators:** Drue Collins**ASSESSMENT**

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

The "Medical Programs" Element is a strong program within PNNL's Hazard Commitment & Control Element. The Element is well integrated into PNNL's management structure and does an excellent job of integrating management, staff, and the Hanford Site Medical Contractor into the process. The program shows that PNNL is committed to continuous improvement of its management system and the identification of hazards to which workers are exposed.

Strengths

- The Employee Job Task Analysis (EJTA) program continues to improve. Further quantitative data collection in the EJTA exposure field will better enable PNNL to become compliant with the new WISHA Ergonomics requirements in 2003.
- The "Return to Work" program continues to improve. Bi-weekly Case Management meetings are conducted with staff management; ES&H field representatives, Human Resources, and OSHA record keeping.
- The Medical monitoring program continues to improve. The Current Worker Past Exposure physical was recently implemented. Since the EJTA process was implemented in 1998, workers who believe they had previous work

Weaknesses

- Upgrading of EJTA to interact with JETS (training) has been put on hold due to funding issues.

related exposure may be able to receive a physical targeted at the specific exposure. The Medical Exams SBMS subject area has been updated to reflect the change.

- The online Map Information Tool (MIT) has been enhanced to identify specific locations of trained first aid responders and first aid kits within individual facilities.
- The Voluntary Employee Assistance Program continues to be available for the improvement of staff member’s health and well being on and off the job.
- The development of a new process for “new-hire” medical examinations has improved. The process is expected enhance the initiation of the EJTA process to reduce the likelihood that new staff will work for extended periods of time without the completion of an EJTA or the appropriate medical exam.

Recent/Expected Changes

- The Medical Exams SBMS subject area was updated to reflect the implementation of the Current Worker Past Exposure physical.
- The integration of JETS and the EJTA system has been slated for funding in FY03.
- Implementation of the enhancements of the new-hire EJTA process is expected in FY02.

Conclusion

PNNL has a better than adequate Medical Program to assist in the determination that hazards are identified and controlled and that the electronic tools are available to assist management, staff and the Hanford Site Medical Contractors with the documentation of hazards associated with work. Safety and Health professionals are well integrated into work processes and assist staff with hazard recognition.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue funding efforts for the integration of JETS with the EJTA process.
- Continue implementation of the enhancements to the new-hire EJTA process.

Tenet: Hazard Prevention and Control
Element: Occupational Safety & Health Programs

Evaluators: Drue Collins

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The “Occupational Safety & Health Programs” Element is where the safety and health requirements for staff to perform their work within the relevant Occupational Safety and Health requirement reside. PNNL uses the Standard Based Management System (SBMS) structure to communicate these requirements.

Strengths

- SBMS continues to deliver strong well-documented programs.
- Subject Matter Experts and users continue to formally review SBMS subject areas and identify areas of improvement. ES&H Staff are currently looking at the Washington Industrial Safety and Health Administration (WISHA) codes to determine compliance.
- SBMS is currently implementing process to become compliant with WISA ergonomics rule prior to the 2003 deadline.
- The SBMS Continuous Improvement Initiative is streamlining subject areas and implementation of search engines are making it less difficult to navigate while searching for specific safety requirements. The SBMS screen redesign enhancements undertaken this

Weaknesses

- SBMS is somewhat complex and difficult to navigate.
- Staff often rely on past experience/ knowledge rather than current information/ requirements.

fiscal year were designed to address most of the reported problems staff have with their inability to easily find information within the system. Unsolicited feedback on these enhancements has been very positive in regards to staff's improved ability to find the information they were seeking.

- PNNL continues to seek expert guidance for the assessment of ES&H programs. ES&H management funded an independent expert to assess the existing electrical safety program. Subject Matter Experts from the Battelle Corporate Office provided an onsite assessment of the Bio-Safety program.
- IOPS is enhancing the flow of ES&H requirements down to the bench top. Staff are not as likely to rely on past experience/knowledge when requirements are more easily identifiable and accessible.
- The Hazard Analysis Initiative continues to receive strong development support and is progressing at a rapid pace. The initiative continues to involve staff throughout the lab to develop a comprehensive means of assessing risk prior to the initiation of Research and Development work.
- PNNL continues to self-assess and provide recommendations for management systems improvement. ~~The Second-Generation Operation Improvement Initiative (OII) was established to clearly understand the operational issues that are making it more difficult to complete research and development (R&D) activities for staff working at Pacific Northwest National Laboratory (PNNL). The~~ recent Operational Improvement

~~Initiative OH~~ critically reviewed PNNL's existing first generation management system concepts and benchmarked those concepts with Brookhaven National Laboratories SBMS to identify improvements that can be incorporated into the PNNL management system. Improvement opportunities are documented on the PNNL Strategic Planning Web Site

Recent/Expected Changes

- ~~Although the Second Generation Operation Improvement Initiative was not funded for FY02, mManagement System improvements identified is striving to fund the improvement opportunities resulting from their an FY01 Operational Improvement Initiative through other means are being implemented.~~
- IOPS continues to improve customer satisfaction through worker involvement. ES&H staff have become more integrated into the self assessment process.

Conclusion

PNNL Occupational Safety and Health programs continue to be a model for other laboratories throughout the DOE community. Benchmarking, self-assessment, expert guidance, SBMS Continued Improvement Initiatives and the Hazard Analysis Initiative continue to reflect PNNL's goal of continuous improvement.

RATING	TREND
Good	↗

Opportunities for Improvement

- Continue benchmarking, self-assessment, and expert guidance activities. Continue to promote worker involvement in such activities.

This page intentionally left blank

Tenet: Safety & Health Training

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Safety & Health Training		
Employees	Good	→
Supervisors Managers	Adequate	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Safety & Health Training	Good	↗

SYNOPSIS

Safety and health training of workers is very good in terms of scope, coverage, timeliness, and quality. The training of supervisors and managers is less comprehensive and timely, and represents an improvement opportunity. First line managers (supervisors), in particular, could benefit from improved knowledge of their responsibilities and technical aspects of safety, as well as the skills necessary to successfully support and empower workers.

Note: PNNL’s management approach makes little distinction between Managers and Supervisors. For that reason, the evaluation of those two Elements is combined.

This page intentionally left blank

Tenet: Safety & Health Training
Element: Employees

Evaluator: Nancy Isern

ASSESSMENT

Evaluation of this Tenet and Element was based on a review of the "Application", interviews with staff using questions based on the DOE-VPP "On-Site Review Guidelines", and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL's programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the "Application" current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL's program.

In assessing this Element, results of the Standards Based Management System's FY01 Customer Survey Report were also considered.

The "Employees" Element is where the principle aspects of PNNL's safety and health training program are described in the "Application". The required procedures and suggested guidelines for identifying, planning and completing training are described in the Standards-Based Management System subject area, Training and Qualifications. Individual staff training needs are identified by the immediate manager, the training coordinator, and/or the staff member. A general training plan is developed within 30 days of hiring and updated at least annually using the Job Evaluation Training System (JETS). Additional training requirements are assigned when needed to address local, organizational, project-specific or job-specific needs.

The training requirements of visiting scientists and vendors are determined in IOPS, based on requested room access and a CSM assessment of hazards relevant to the work being performed. It is now possible for visiting scientists and vendors to complete many training requirements on-line, prior to their site arrival date. This enables them to devote more of their actual PNNL visit to research.

Strengths

- A well-established ES&H T&Q Program is now implemented through SBMS Subject Areas, facilitating the flow of information from ES&H to the worksite and lab bench.
- Eighty percent of staff report confidence that information in the system is current, accurate and

Weaknesses

- Some employees feel that so much generalized material is presented in training that it is difficult to assimilate precisely what is needed for a given situation. (In order to help address this problem, ES&H representatives try to help staff interpret information specific to their needs.)

- relevant to work activities, an increase from previous years.
- JETS is a useful tool to provide a graded approach to implementation of safety and health training.
- On-line Site Orientation and room-specific training expedites safety and health readiness of visitors, vendors, new hires, and all other non-staff.
- T&Q maintains a service posture to assist PNNL organizations in training preparation, utilizing the systematic approach to training.
- PeopleSoft tracking and computer registration, and payment utilization is continuously improving capability at measurable cost savings.
- Thirty-one percent of staff report problems reading or using the on-line system, a higher percentage than in previous years.
- There are presently are no good classes to integrate safety into line management responsibilities
- Many staff are circumventing IOPS Web-based training by simply visiting web pages without conscientiously reading them. This is related to a sense that too much material is presented to be useful in an appropriate time frame to the individual staff member.
- Some visiting scientists have expressed frustration with the burdensome nature of IOPS training. The process of obtaining appropriate passwords and completing training in a timely fashion remains problematic. In addition, many visiting scientists feel they are not given proper credit for their level of professional expertise.

Recent/Expected Changes

- Offsite web-based IOPS training has been expanded to allow completion of room-specific training by those anticipating a visit to PNNL. Although offsite users of IOPS have not experienced uniform success with accessing and completing IOPS training, this is a valuable expansion of capability which assists visiting scientists in making the most of their actual time at PNNL.

Conclusion

Safety & health training processes for PNNL employees and on-site non-staff are well-established, well-received, and continuously improving. Integrated Operations provides a formal process for identifying worker training needs based on their interaction with hazards. However, the value of some (e.g., IOPS reading assignment) training is not universally accepted. Some staff are frustrated with the volume and redundancy of information pushed on them by IOPS and expressed the feeling that the system may be transferring liability to them rather than trying to provide them with useful information in a timely manner.

RATING	TREND
Good	→

Opportunities for Improvement

- Consider how to improve IOPS by providing relevant information in a quick, easily assimilated format using the IOPS tool.
- Consider ways to provide important information in a synopsis or summary format for quick perusal (although not all important information can be provided on badge cards, one good example of a quick synopsis is the Emergency Preparedness badge card that provides a summary of various alarm sirens, their meanings, and the appropriate response, as well as emergency contact phone numbers.)

Tenet: *Safety & Health Training*
Element: *Supervisors*

Evaluator: Pat Wright

ASSESSMENT

PNNL's management approach makes little distinction between Managers and Supervisors. This is reflected in the VPP application and the FY2002 VPP Program Evaluation finds that this approach continues to be valid. See the Program Evaluation Worksheet for the Safety & Health Training Tenet - Element "Managers" for the assessment of both Supervisor and Manager safety and health training.

Tenet: Safety & Health Training
Element: Managers

Evaluators: Pat Wright

ASSESSMENT

Evaluation of this Tenet and Element (including Supervisors) was based on a review of the “Application”, interviews with staff using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A survey of all PNNL staff (over 3300 total staff members) was conducted and responses from 1245 respondents also provided insight into the status of this Tenet. The evaluation was intended to identify the current status of PNNL’s programs with respect to the required information related to this Tenet/Element, to identify changes that are needed to keep the “Application” current and descriptive in that regard, and to identify the strengths, weaknesses, and improvement opportunities related to this Tenet/Element that exist in PNNL’s program.

The safety and health related training of PNNL managers and supervisors is generally based on what is needed for their work and the work of their staff members. Each manager/supervisor has a training plan that identifies required training and is capable of identifying additional training needs.

Strengths

- Several manager-specific training courses related to safety are required (e.g. respiratory protection, radiation protection).
- Some managers and supervisors take the training that is required of their staff to better appreciate the hazards and mitigations (e.g. RadCon Supervisors take Blood-Borne Pathogen training).

Weaknesses

- There is very little general safety and health training that is formally required for managers and those responsible for work planning.
- It is not clear that sufficient training is provided for first line supervisors and those responsible for planning.

Recent/Expected Changes

- Safety training for new managers is being implemented in FY02.

Conclusion

Management Safety & Health training continues to be limited and there is no “basic training” course available within PNNL to introduce managers and supervisors to the basics of safety and health management.

RATING	TREND
Adequate	↗

However, most managers appear to be adequately qualified and perform adequately, and they have excellent operational support services available, including field deployed safety and health staff.

Opportunities for Improvement

- Continue efforts to develop a safety and health training program for managers.

**PNNL DOE-VPP
Annual Program Evaluation
FY-2002**

EMPLOYEE SURVEY

**EXECUTIVE SUMMARY
QUESTIONNAIRE RESULTS
SUMMARY OF COMMENTS**

This page intentionally left blank

Employee Survey Results

Executive Summary

The Employee Survey was 15 questions, 3 related to each VPP Tenet (plus a question related to the Job Category of the respondent). The questions were based very closely on a survey that Fluor Hanford has used for several years.

Responses were received from 1245 staff members. Not all staff members responded to every question, but many (151) staff members also provided additional comments. The fact that over 1/3 of PNNL staff responded to the survey during the holiday season and in a climate that tends to be “over surveyed” is a very positive indication in itself.

Responses to the Employee Survey questions were relatively positive. The results are evaluated in more detail by Tenet below. Additional comments that were received tended to be relatively negative, but that is to be expected since comments are optional and tend to reflect issues that the workers have some energy about.

Questionnaire Results

Management Leadership (Questions 1-3)

Management works to improve safety and health. There was some concern about the question “Your manager exhibits the attitude that all accidents can be prevented” because many respondents noted that accidents will happen. However, there was strong consensus that individual accidents are preventable and that there are good efforts at PNNL to plan for accident prevention. Most respondents said that management visits their workplace on a routine basis.

Employee Involvement (Questions 4-6)

Most respondents agreed that they are regularly involved in work planning and they also recognized at least some safety committee activities. There was slightly less strong support for the statement that “you are knowledgeable regarding PNNL’s safety & health program”, but responses still indicated a largely positive response.

Worksite Analysis (Questions 7-9)

Most respondents are aware that worksite safety inspections are conducted and they feel that their concerns are addressed in a timely and adequate manner. Most respondents also agreed that they have been involved in worksite analysis such as project planning, IOPS, etc.

Hazard Prevention and Control (Questions 10-12)

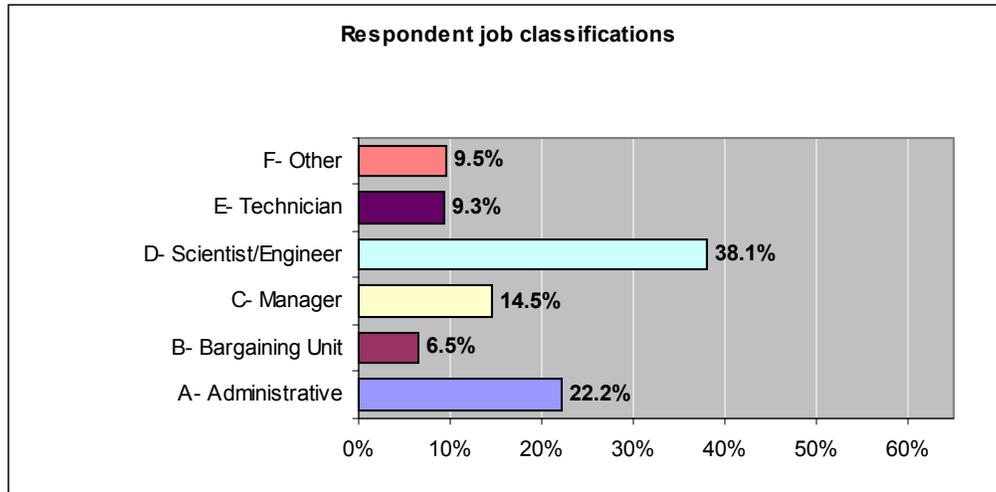
Most respondents believe that safety controls support their work and they have seen safe work procedures fairly and consistently enforced. They also believe that equipment that they use is properly maintained for safe operation.

Safety & Health Training (Questions 13-15)

Most respondents feel that they and their co-workers have been adequately trained to identify and mitigate the hazards of their work.

Job Classification of Respondents

Respondents were asked to classify themselves regarding their job category. Most respondents classified themselves as scientists and engineers (474). Administrative, secretarial, and clerical respondents were next (276), followed by managers (180). 116 technicians responded as did 81 bargaining unit workers. This distribution of respondents is similar to the distribution of jobs at PNNL.



Comments

While many of the comments received (151) were judged by the evaluation team to be “negative” (approximately 90), the comments primarily addressed 3 main concerns:

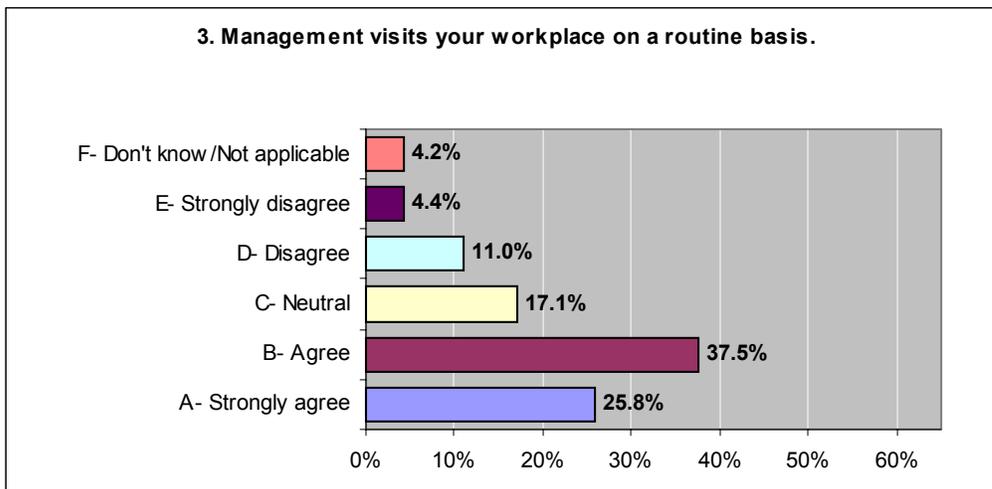
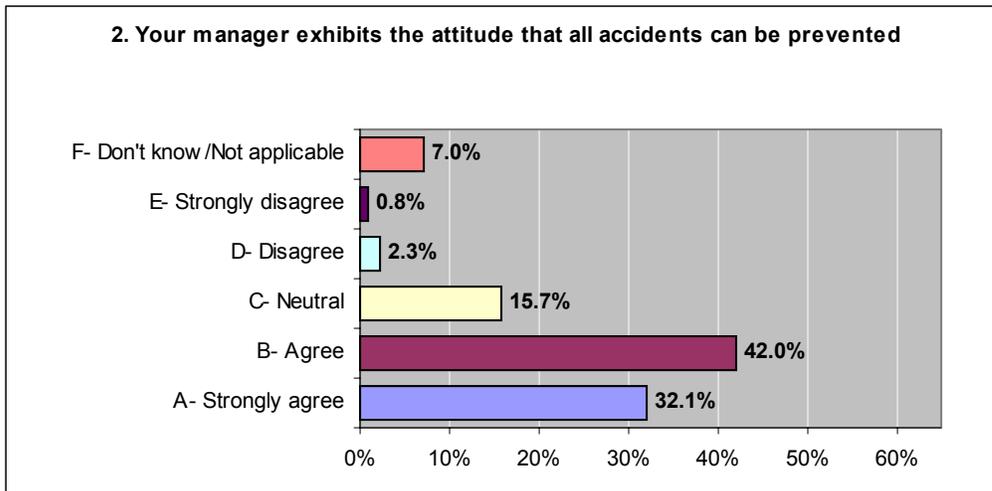
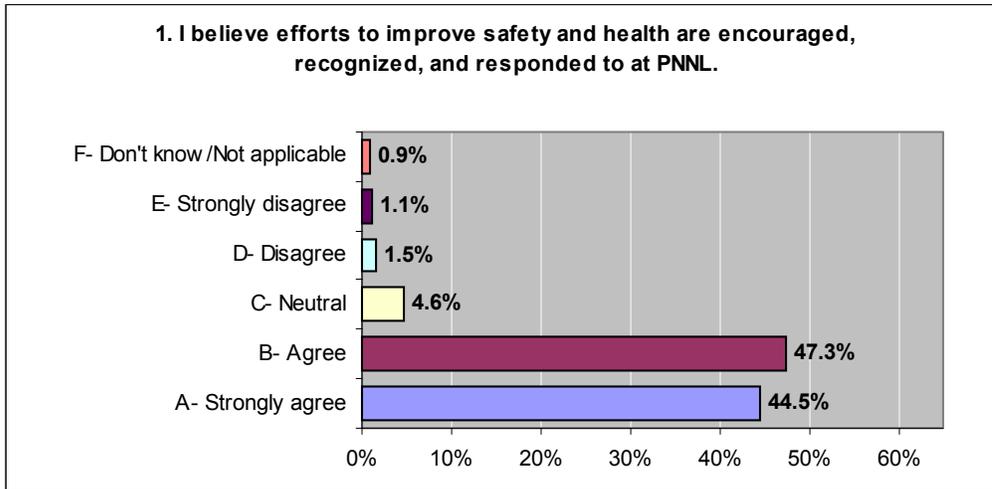
- Management commitment to worker safety & health.
- The respondent’s perceived value of the VPP program and its methods.
- Current issues (such as speed bumps, indoor air quality, training, IOPS, ergonomics, first aid, etc.).

Comments that negatively reflected on management commitment to worker safety and health were a minority of total respondents, but are of particular concern. Comments that negatively reflected on the VPP program largely exhibited a lack of understanding about the objective of the VPP program. The survey provided a venue for some workers to address current issues and concerns that are being addressed or discussed at the Lab level. Further evaluation of the comments is included at the end of this section.

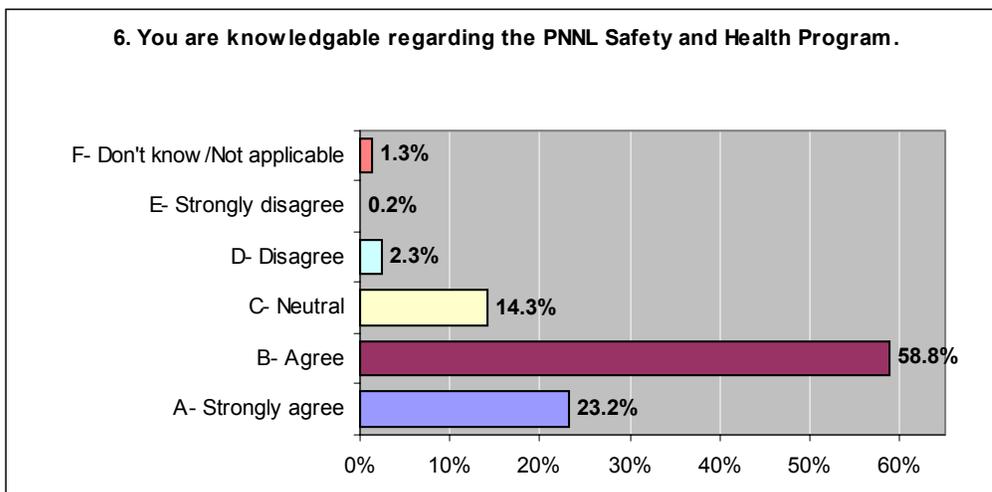
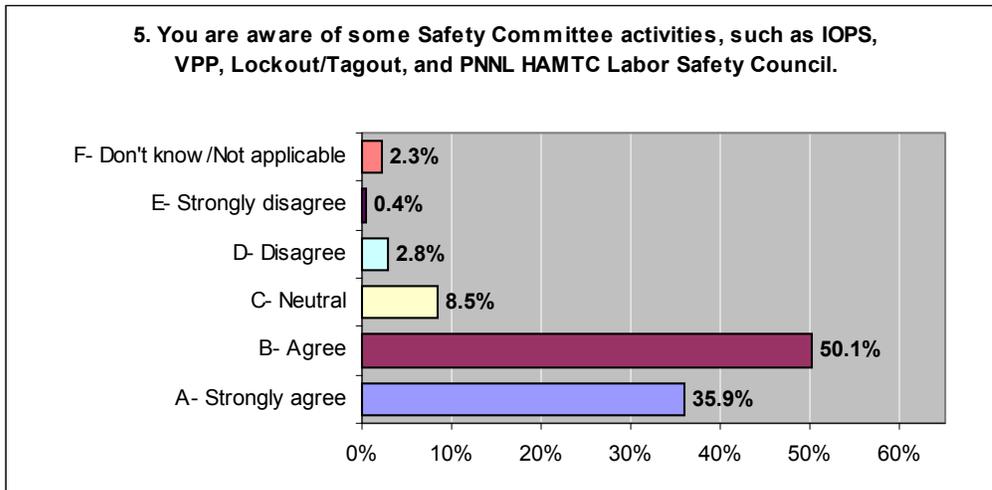
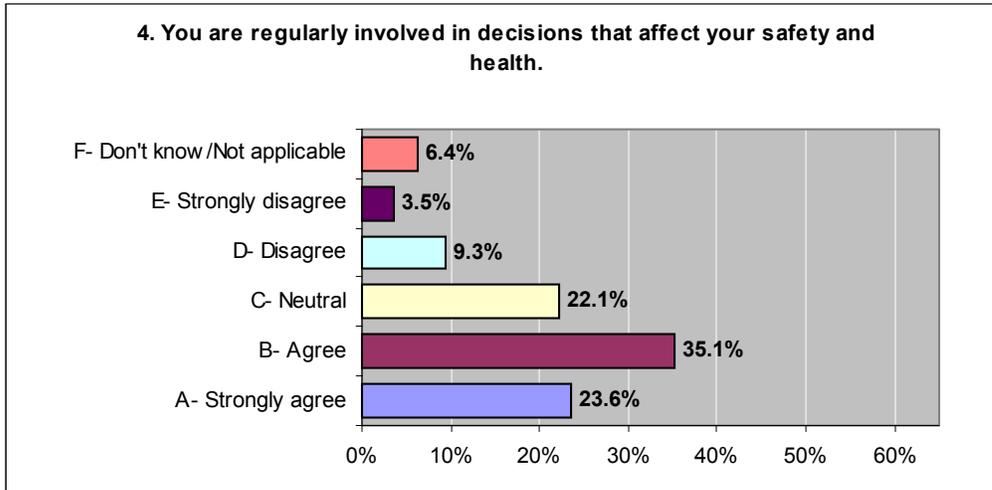
A number of the comments provided contact information and the VPP Steering Committee will reply individually to those respondents.

Results of Questions

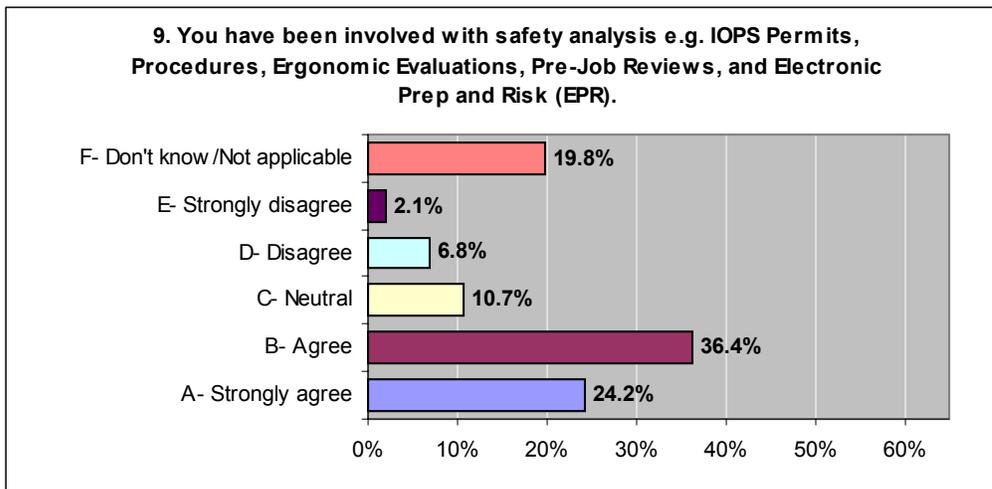
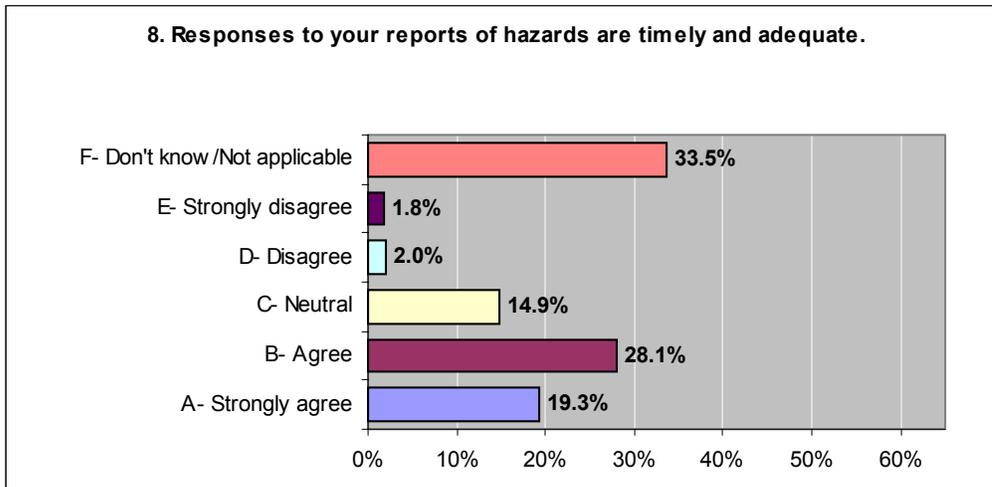
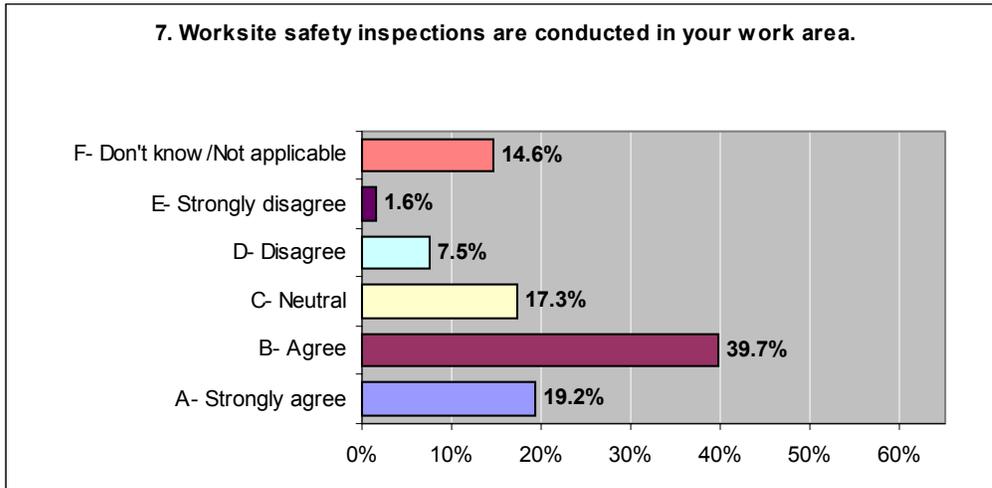
Management Leadership



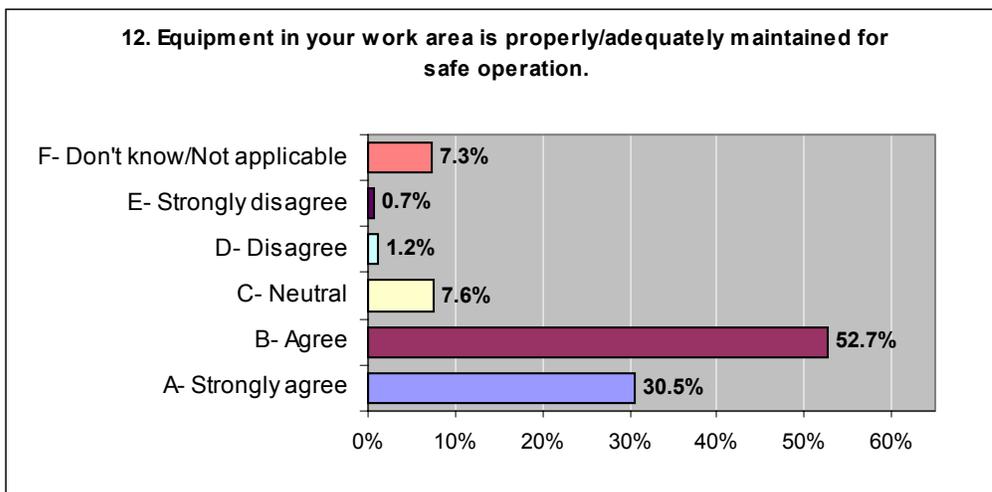
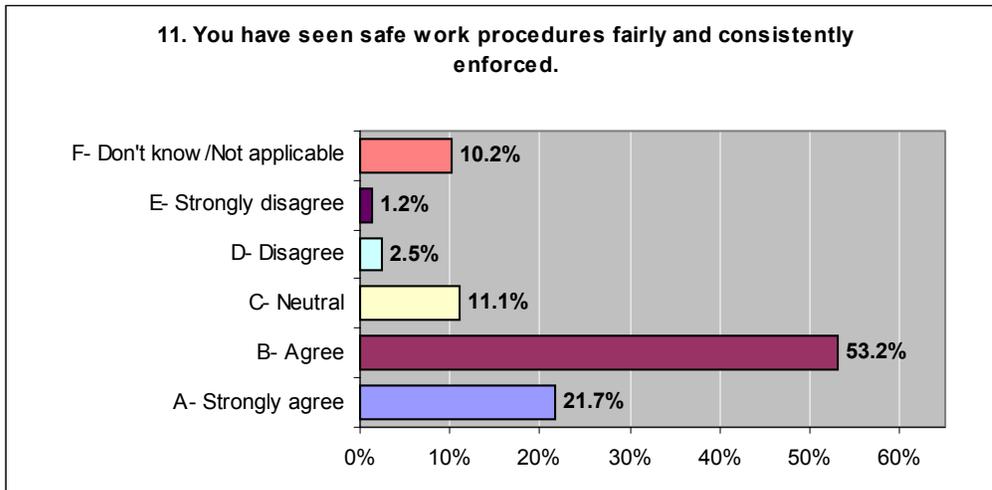
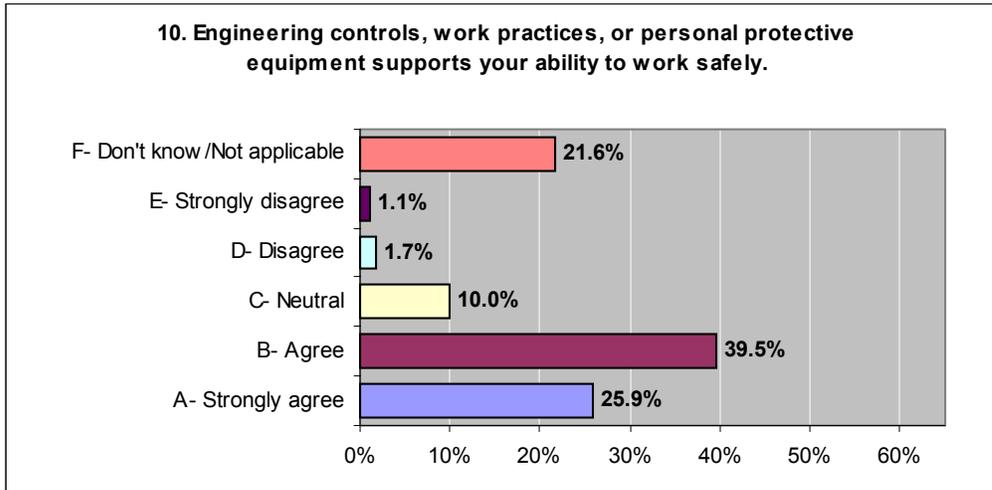
Employee Involvement



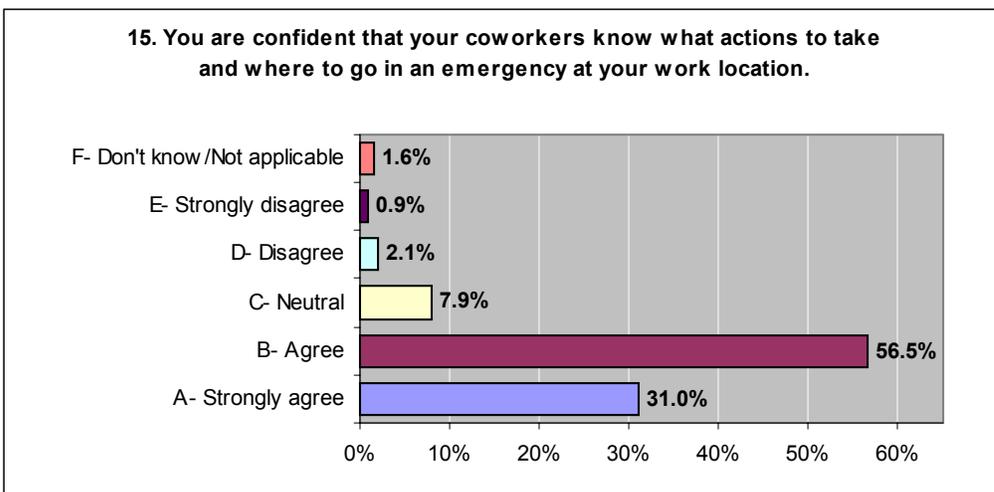
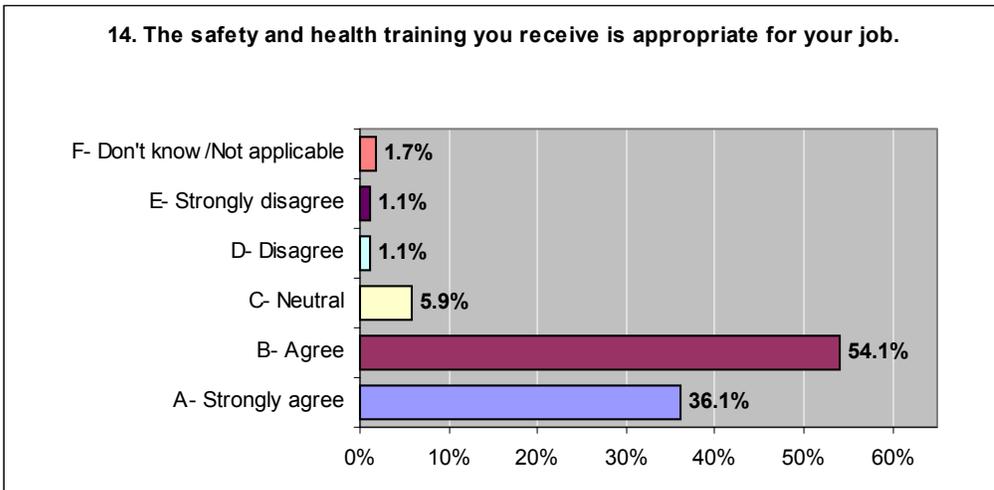
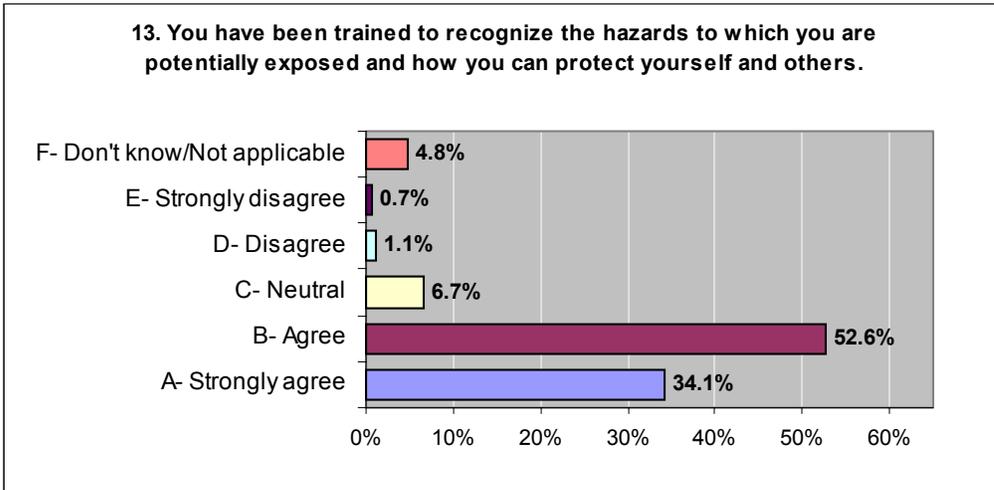
Worksite Analysis



Hazard Prevention and Control



Safety & Health Training



Analysis of Responses

Although not all questions were answered by all respondents, and some responses were ambiguous (e.g., “Don’t know/Not applicable” and “Neutral”), a simple way of analyzing the data is to compare questions with a high degree of Agreement and questions with a high degree of Disagreement. Agreement is defined as “Agree” or “Strongly agree” and Disagreement is defined as “Disagree” or “Strongly disagree”.

The questions were first sorted in order of level of agreement from highest to lowest:

Level of Agreement (Question responses in order from highest agreement to lowest)

#			Agree	Disagree
1	Mgmt Ldrshp	I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.	92%	3%
14	S&H Trng	The safety and health training you receive is appropriate for your job.	90%	2%
15	S&H Trng	You are confident that your coworkers know what actions to take and where to go in an emergency at your work location.	87%	3%
13	S&H Trng	You have been trained to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.	87%	2%
5	Empl Invol	You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Labor Safety Council.	86%	3%
12	Haz Prev & Cntrl	Equipment in your work area is properly/adequately maintained for safe operation.	83%	2%
6	Empl Invol	You are knowledgeable regarding the PNNL Safety and Health Program.	82%	3%
11	Haz Prev & Cntrl	You have seen safe work procedures fairly and consistently enforced.	75%	4%
2	Mgmt Ldrshp	Your manager exhibits the attitude that all accidents can be prevented.	74%	3%
10	Haz Prev & Cntrl	Engineering controls, work practices, or personal protective equipment supports your ability to work safely.	65%	3%
3	Mgmt Ldrshp	Management visits your workplace on a routine basis.	63%	15%
9	Wrksite Analy	You have been involved with safety analysis e.g. IOPS Permits, Procedures, Ergonomic Evaluations, Pre-Job Reviews, and Electronic Prep and Risk (EPR).	61%	9%
7	Wrksite Analy	Worksite safety inspections are conducted in your work area.	59%	9%
4	Empl Invol	You are regularly involved in decisions that affect your safety and health.	59%	13%
8	Wrksite Analy	Responses to your reports of hazards are timely and adequate.	47%	4%

Questions were also sorted in order of Disagreement with the statement, from highest level of disagreement to lowest:

Level of Disagreement (Question responses in order from highest disagreement to lowest)

#			Disagree	Agree
3	Mgmt Ldrshp	Management visits your workplace on a routine basis.	15%	63%
4	Empl Invol	You are regularly involved in decisions that affect your safety and health.	13%	59%
7	Wrksite Analy	Worksite safety inspections are conducted in your work area.	9%	59%
9	Wrksite Analy	You have been involved with safety analysis e.g. IOPS Permits, Procedures, Ergonomic Evaluations, Pre-Job Reviews, and Electronic Prep and Risk (EPR).	9%	61%
8	Wrksite Analy	Responses to your reports of hazards are timely and adequate.	4%	47%
11	Haz Prev & Cntrl	You have seen safe work procedures fairly and consistently enforced.	4%	75%
5	Empl Invol	You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Labor Safety Council.	3%	86%
2	Mgmt Ldrshp	Your manager exhibits the attitude that all accidents can be prevented.	3%	74%
15	S&H Trng	You are confident that your coworkers know what actions to take and where to go in an emergency at your work location.	3%	87%
10	Haz Prev & Cntrl	Engineering controls, work practices, or personal protective equipment supports your ability to work safely.	3%	65%
1	Mgmt Ldrshp	I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.	3%	92%
6	Empl Invol	You are knowledgeable regarding the PNNL Safety and Health Program.	3%	82%
14	S&H Trng	The safety and health training you receive is appropriate for your job.	2%	90%
12	Haz Prev & Cntrl	Equipment in your work area is properly/adequately maintained for safe operation.	2%	83%
13	S&H Trng	You have been trained to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.	2%	87%

These responses are consistent with other inputs to this Program Evaluation and were factored into the Datasheets.

Some interesting conclusions from the analysis of the survey question results include:

- Management commitment to worker safety and health is evident.
- Safety and health training is appropriate and effective.
- There is good knowledge and awareness regarding safety and health requirements and processes.
- Management presence in the workplace may be less than desired.
- Worker involvement in decisions affecting their safety, and feedback regarding reports of hazards may be less than desired.

Review of Comments

Additional comments were provided by 151 respondents. Over twenty comments were judged by the evaluation team to be positive, about ninety comments were at least somewhat negative, and around forty comments appeared to be neutral. This preponderance of negative comments was expected, because respondents sufficiently motivated to provide additional comments would be likely to have some energy on a particular issue. The existence of over twenty positive comments (~15%) is considered to be a very good sign.

The responses were also grouped into the following categories:

Management	52
Bargaining Unit	4
VPP	27
Porcelain Press	8
Facilities	27
Office	23
Training	12
IOPS	8
First Aid	3

Note: some responses were placed into more than one category.

The following excerpts from the responses provide a sense of the comments:

Management

Positive

- “I appreciate the level of emphasis on safety and health matters at PNNL.”
- “Just a great place to work.”
- “When I had a safety issue it was handled promptly.”

Negative

- “DOE (and PNNL under its influence) has taken safety to the point where real technical progress has become prohibitively expensive and is impacting our future technical progress.”

- “Many employees often do not report safety incidents (minor injuries, acid burns, etc.) because such a big deal is made about them that the employee is unwilling to endure the embarrassment and loss of valuable work time that invariably results from reporting them.”
- “I find that raising issues dealing with safety and health are met with irritation. It is 'healthiest' to say nothing and not 'rock the boat'.”
- “This entire survey is written from the point that additional measures need to be taken to increase safety and health. That position ought to be challenged. Is it possible that we already do too much to restrict effective work?”

Neutral

- “I'm not sure what answer is sought in question 2 above. While each individual accident could be prevented, I do not believe that, taken together, all accidents can be prevented. I do not think zero-risk is physically achievable, and one should not make that the goal. I think my manager feels this way, also.”

Bargaining Unit

(These responses indicated bargaining unit issues in the text or context of the comment)

Positive – None

Negative

- “Battelle doesn't take safety serious! VPP is a political JOKE! Lab Safety is scared to do the right thing!”
- “Working level staff of both bargaining and non-bargaining unit still need to be more engaged in the up front planning of work activities. Likewise the bargaining unit staff involved need to adapt a 'can do' rather than a 'shut it down' attitude toward the work activities.”

VPP

Positive

- “I think it is imperative that the VPP Steering Committee, and/or others continue to champion VPP and provide the maintenance required to sustain such a program. We don't want this to be perceived as another 'flavor of the day'. The Committee has done an outstanding job to date and I am confident they will continue to promote/support the tenants and the overall vision of VPP.”
- “Recommend keeping the VPP program in front of staff so they don't forget about it now that we have Gold STAR status.”
- “I'm sure since we became a VPP site, we are better now about responding to concerns.”

Negative

- “VPP looks good on paper, but doesn't do much to make workers feel like they can take a stand.”

- “I still don't know what the VPP is really all about, or how it differs from any other common sense safety policy. I've seen more stuff advertising it (and ensuring PNNL wins the Gold STAR status) than about the policy itself.”
- “I feel VPP committee should get in the field and talk with workers face to face, ask if their is anything about safety that is bothering them, and insure them that the committee will work to reach a decision in a timely manner ‘one week’ and also insure them that their concerns are kept confidential. VPP in the field is very important, it makes people feel that their voice means something especially when you go to them and ask them personally if something might be bothering them about safety. To this day I haven’t seen the committee in the field. What do they do besides go to meetings, lets see them get out their and get involved with the work force face to face...AT LEAST ONCE A MONTH.”

Porcelain Press

Positive

- “The VPP staff are doing an excellent job of getting the message out regarding safety in the work environment (I particularly like the ‘Porcelain Press’ concept!). The message is informative and realistic.”
- “Putting the VPP information sheets in the restrooms was a brilliant idea”

Negative

- “I personally find the "porcelain press" method of communicating objectionable and very irritating.”
- “I find the porcelain press to be way over the top and an invasion of my privacy.”
- “Get your newsletters out of our restrooms!!!”

Facilities

Positive

- “Q Street marked crossings really help. The speed bumps have done their job. Now how about a few speed bumps in the parking lots. My life is still in danger in the parking lots by speeders.”

Negative

- “If the new speed-bumps on Q Ave are improvements to PNNL worker safety and health, in the future please refrain from making other such improvements. They seem to be randomly placed and pose more a threat to pedestrians because they distract drivers.”
- *There were numerous other location-specific complaints, many having to do with indoor air quality, nuisance noise, water quality, ice removal, etc.*

Office*Positive*

- “I am in an office setting with relatively low risk. Safety and health is integrated into my thinking and activities. I also believe that safety awareness and involvement has increased significantly over the past 5 years.”
- “There is less attention to ergonomics here than on other jobs I have held. I'm personally not sure that's a bad thing, but just an observation. Overall, I believe the laboratory is very conscious of personal (personnel) safety, and is a good place to work.”

Negative

- “Ergonomics of desk/computer work stations are poor; apparently, limited funds allow only band-aid approaches”
- “As a recent sufferer from work place injury due to ergonomically unsound work station set up I found the information available within the PNNL system - absolutely useless in helping deal with early problems.”
- “I believe that more attention should be given to the indoor-air quality of PNNL's buildings; leased or owned. Poor indoor-air quality can cause different types of illnesses to employees, reducing productivity.”

Training*Positive*

- “I feel that the level of safety and safety training is appropriate for my work area(s) and my jobs.”

Negative

- “In many cases there is overkill of "required training", mainly in refresher training. I also think there is a need for greater buy-in and acceptance of responsibility for safety by workers.”

Neutral

- “Most of my useful safety training has been a result of my professional education and work experience as opposed to formal training.”

IOPS

Positive – None

Negative

- “You reference IOPS as a safety committee activity. I wish it were only that rather than a mandate because it doesn't function properly in multipurpose, multifunction labs.”
- “Many of the reading assignments (and there are many) leave me in doubt as to putting suggested actions in place should the need arise. The reading assignments begin to take on the appearance of liability limitations - we told them so now they should know everything. It takes practice to make perfect - not just reading about it.”
- “IOPS is a joke!!!!!! It looks good from the outside, I'm sure. We crafts are responsible to know ALL the hazards, in ALL the rooms, in ALL the buildings. GET SERIOUS!! We have had a lot of training in most of the areas of danger in these buildings, but certainly not ALL the hazards. Then they change (SOMETHING??????) in a room and we are responsible to go through the IOPS training "MAZE" and figure out what is different, if anything... They are all filled with so much boiler plate that they all sound alike anyway. There is no way to find out what has changed.”

First Aid

Positive – None

Negative

- “First aid training is for industrial/office setting and is inadequate for staff involved in remote/field environments.”
- “One of the things we lack.....and this may not sound important.....and that isband-aids.....I have received paper cuts.....and can't find a simple band-aid....to prevent the contamination of blood..... there are times a little cut will bleed.....and it is NOT significant enough for HEHF.....you merely don't want to get blood everywhere”
- “I would like to see AED units added to all the buildings and (within) a building some sort of database which allows one to find the qualified people for first aid or other as sometimes you only know of one person (especially if you are new).”

All comments wherein staff provided their name were followed up on by the VPP Steering Committee.