PNNL DOE-VPP Program Evaluation

FY-2003
January 2003

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 Co-Chair

PNNL FY 2003 DOE-VPP Program Evaluation
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Employee Survey Results

PNNL VPP Program Evaluation Team Signatures

The PNNL VPP Program Evaluation Team for FY 2003 is a group of Battelle employees from across the Laboratory and a representative of Fluor Hanford's Central Plateau Project. The team submits this Program Evaluation report and confirms that it is accurate and objective to the best of our knowledge. Input into this evaluation was obtained from workers, site walkthroughs, document review, and review of previous issues and actions. DOE observers 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) — Feb 3, 2003 (date)

Drue Collins, Environment, Safety & Health Directorate — 2-4-03 (date)

Janice Haney, Facilities & Operations Directorate — 2-4-03 (date)

Nancy Isern, Fundamental Sciences Directorate — 2/3/03 (date)

Vern Madson, Facilities & Operations Directorate — 2.4.03 (date)

Russ Meicenheimer, Facilities & Operations Directorate — 2/4/03 (date)

Mike Tinker, Environmental Technology Division — 2/3/2003 (date)

Soulx Williams, Fluor Hanford Central Plateau Project — 2-4-03 (date)

Pat Wright, Environment, Safety & Health Directorate — 2/3/2003 (date)

PNNL FY 2003 DOE-VPP Program Evaluation

A team of evaluators from the Pacific Northwest National Laboratory's (PNNL) VPP Steering Committee and the ESH&Q 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.

RATING
Good
Adequate
Improvement Required

TREND
↗
→
↘

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):

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
- Vern Madson
- Russ Meicenheimer
- Souix Williams (CPP)
- Pat Wright
- Larry Musen (DOE Observer)
- Ted Pietrok (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 are 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," walkthroughs of PNNL-controlled work locations, and a review of PNNL documentation. A survey of all PNNL staff (more than 3800 total staff members) was conducted and responses from more than 1500 respondents (41%) also provided insight into the status of PNNL's safety program with respect to VPP criteria. The Program Evaluation was intended to identify: the current status of PNNL's programs with respect to the required information related to Tenets/Elements; changes that are needed to keep the "Application" current and descriptive; and the strengths, weaknesses, and improvement opportunities that exist in PNNL's program related to each Tenet/Element.

A "report card" showing the rating of each Element and Tenet along with the trend of each is given in Exhibit 1.

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 2003 (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.

This report is based on previous VPP Program Evaluation reports. Although there have been changes in some PNNL safety-related programs, most aspects of operations remain similar to what was documented in previous reports. For that reason, there are strong similarities between this report and previous reports. Changes in the Datasheets from last year's report are indicated by vertical lines in the left margin.

PNNL DOE-VPP PROGRAM EVALUATION
TENET/ELEMENT RATINGS & TRENDS – FY 2003

TENET/ELEMENT	Weight	FY03 RATING (Score)	2002	FY03 TREND	2002
General Information	3%	**Good (12)**	12	↗	↗
Assurance of Commitment	7%	**Good (10)**	10	→	→
Management Leadership	18%	**Good (9.7)**	9.6	↗	↗
Commitment		Good (11)	12*	↗	↗
Organization		Good (10)	10	→	→
Responsibility		Good (10)	10	↗	→
Accountability		Good (10)	10	→	→
Resources		Good (10)	10	→	→
Planning		Good (10)	10	↗	↗
Contract Workers		Adequate (8)	7	↗	→
Program Evaluation		Good (11)	11	↗	↗
Site Orientation		Good (9)	9	↗	↗
Employee Notification		Adequate (8)	7	↗	↗
Employee Involvement	18%	**Adequate (7.5)**	6.5	↗	→
Degree and Manner of Involvement		Adequate (8)	7	↗	→
Safety Committees		Adequate (7)	6	↗	→
Worksite Analysis	18%	**Good (9.7)**	9.4	↗	↗
Pre-Use/Pre-Startup Analysis		Good (10)	10	↗	↗
Comprehensive Surveys		Good (10)	10	↗	↗
Self-Inspections		Good (11)	11	→	→
Routine Hazard Analysis		Good (11)	11	↗	↗
Employee Reporting of Hazards		Adequate (8)	7	↗	↗
Accident Investigations		Good (10)	10	↗	→
Trend Analysis		Adequate (8)	7	↗	→
Hazard Prevention & Control	18%	**Good (10.8)**	10.8	↗	↗
Professional Expertise		Good (10)	10	↗	→
Safety & Health Rules		Good (11)	11	↗	↗
Personal Protective Equipment		Good (9)	9	↗	→
Preventive Maintenance		Good (10)	10	→	→
Emergency Preparedness		Good (11)	11	→	→
Radiation Protection Program		Good (12)	12	↗	↗
Medical Programs		Good (11)	11	↗	↗
Occupational Safety & Health Programs		Good (12)	12	↗	↗
Safety & Health Training	18%	**Good (9)**	9	↗	↗
Employees		Good (10)	10	→	→
Supervisors Managers		Adequate (8)	8	↗	↗

PROGRAM EVALUATION SUMMARY

RATING	TREND
Good (9.5)	↗

PNNL has excellent safety programs and is continuously improving implementation of programs in support of VPP safety and health criteria. DOE's fifth 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. Although most staff may not be able to speak to the specifics of VPP, they are using the Tenets and Elements of VPP in their day-to-day work. There continue to be improvement opportunities related to the maturity and implementation of certain safety program elements. 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.

INJURY AND ILLNESS PERFORMANCE

PNNL injury and illness performance continued to be very good compared to industry average. PNNL is a large employer (greater than 1000 employees) in the Standard Industrial Code (SIC) #873 "Research development and testing services." VPP criteria for STAR status require that PNNL maintains the three year average Total Recordable Rate for the most recent 3 years below industry average. That rate must include all employees covered by the program, as well as subcontractors.

One issue associated with current calculation of the rate is the OSHA/BLS conversion from OSHA-200 recordkeeping criteria to OSHA-300 recordkeeping criteria. The changes do not appear to be making a significant difference in injury and illness rates for PNNL, but the criteria are different and thus there could be a discontinuity in the comparison of rates. This discontinuity will be an issue for the next 2 years (2002-2003). During that period of discontinuity, rates from OSHA-200 recordkeeping criteria and OSHA-300 recordkeeping criteria will be combined with no attempt to reconcile recordkeeping differences between the two criteria.

Of potential concern is the increase in subcontractor injury and illness rates. The number of subcontractor hours increased approximately 20%, while the number of injuries increased substantially. The total number of injuries is low and there is significant variability in the numbers from year to year. However, the injury and illness incidence rates for subcontractor work need to be monitored so that they do not become an unacceptable trend. The addition of a dedicated safety and health professional to monitor subcontractor work should enable that higher level of surveillance.

The PNNL three year average injury and illness rates for employees, subcontractors, and combined performance for CY 2000-2002, as compared to the current industry average is given in Exhibit 2.

Historical Occupational Injury and Illness Data

PNNL Employees (Only)

Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	# of Lost and Restricted Workday Cases	Lost and Restricted Workday Case Incidence Rate
2000	6,569,516	75	2.28	37	1.13
2001	6,562,763	68	2.07	32	0.98
2002*	6,616,152	55	1.66	30	0.91
2000-2002	**19,748,431** *Total hours*	**198** *Total cases*	**2.01** *3-yr Average*	**99** *Total cases*	**1.00** *3-yr Average*

** - OSHA-300 recordkeeping criteria*

PNNL Subcontractors (Only)

Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	# of Lost and Restricted Workday Cases	Lost and Restricted Workday Case Incidence Rate
2000	65,805	4	12.16	3	9.12
2001	82,846	2	4.83	1	2.41
2002*	103,238	7	13.56	6	11.62
2000-2002	**251,889** *Total hours*	**13** *Total cases*	**10.32** *3-yr Average*	**10** *Total cases*	**7.94** *3-yr Average*

PNNL Total (including subcontractors)

Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	# of Lost and Restricted Workday Cases	Lost and Restricted Workday Case Incidence Rate
2000	6,635,321	79	2.38	40	1.21
2001	6,645,609	70	2.11	33	0.99
2002*	6,719,390	62	1.85	36	1.07
2000-2002	**20,000,320** *Total hours*	**211** *Total cases*	**2.11** *3-yr Average*	**109** *Total cases*	**1.09** *3-yr Average*
CY2001 BLS rates for SIC 873 ***"Research development and testing services"*** *(>1000 employees)*			***2.5***		***1.1***

OUTREACH

The VPP Steering Committee at PNNL expanded outreach activities substantially this year. In addition to participation in the Safety & Health Expo and the National VPPPA Conference, PNNL provided counsel and direct support to several companies considering or seeking VPP status, thus participating in community outreach. The following is a summary of PNNL VPP outreach activities:

PNNL Outreach - 2002

Date	Description
December 10 & 11, 2002	The PNNL Steering Committee participated in 2 Christmas events for children.
November 19, 2002	PNNL representatives presented part of the VPP101 course at HAMMER.
November 18-19, 2002	PNNL hosted representatives of Los Alamos National Laboratory for discussions of VPP and particularly Employee Involvement.
November 4-7, 2002	A PNNL representative participated in the On-Site evaluation of the Hanford Central Plateau Project.
October 25, 2002	The PNNL Steering Committee participated in a Halloween party for children
September 25, 2002	A representative from NASA Ames in California attended our presentations at the National Conference and later called to get an example of how we recognize staff for exemplary ES&H Performance.
September 25, 2002	Provided Yuca Mountain Project a copy of PNNL's FY-2002 Program Evaluation as an example for their use.
September 23, 2002	Representatives from Lawrence Berkeley National Lab visited PNNL's for discussions about the VPP program.
September 22, 2002	Mr. Bruce D Thorndike, requested information about PNNL's VPP program including materials presented at the VPP National Conference.
September 9-12, 2002	PNNL representatives attended the VPPPA National Conference in Orlando, Florida and presented several workshops.
June 18 2002	Energy Northwest called to discuss the Porcelain Press and other VPP issues.
May 7-9, 2002	EXPO 2002 – PNNL displayed 3 booths.
April 24 & 25, 2002	Representatives of PNNL's VPP Steering Committee participated in the Region X VPPPA meeting.
April 11, 2002	A representative of PNNL visited Energy Northwest and provided information on the benefits of and approach to VPP.
February 7, 2002	A representative of WaferTech LLC of Camas, WA contacted PNNL for a copy of the electronic application.
Ongoing	PNNL participates in the VPP Champions forum.
Ongoing	A PNNL representative has established and supports the Safe Club for elementary school children at Highlands Middle School.

STATUS OF ISSUES FROM PREVIOUS VPP PROGRAM EVALUATIONS

Issues identified in the previous two PNNL VPP Program Evaluations (FY2001 and FY2002) were accepted by PNNL management and other action owners and tracked in the Assessment Tracking System (ATS). Many actions have been completed and the ATS conditions that represent the issues have been closed. Some actions still remain to be completed. The status of issues (conditions) and actions from previous PNNL VPP Program Evaluations is summarized below.

2001 PNNL VPP Program Evaluation

3330 - Annual Voluntary Protection Program Evaluation **Owner:** Kimmel,Larry V **Status:** Closed
- 3330.1 - Subcontractor injury/illness data **Due:** 7/17/2002 **Owner:** Dossett,Sharon D **Status:**Closed
  - 3330.1.1 - Develop language for contracts **Due:** 2/15/2001 **Owner:** Dellinger,Roger D **Status:** Closed
  - 3330.1.2 - Develop procedure for collecting data **Due:** 7/15/2002 **Owner:** McAtee,Gary A **Status:** Closed
  - 3330.1.3 - Develop procedure for reporting data **Due:** 12/31/2001 **Owner:** Hardman,Mitchell S **Status:** Closed
- 3330.2 - Improve safety & health management of subcontractors **Due:** 7/17/2002 **Owner:** Dossett,Sharon D **Status:**Closed
  - 3330.2.1 - Criteria for Evaluating Sub Safety Performance **Due:** 10/31/2001 **Owner:** Hardman,Mitchell S **Status:** Closed
  - 3330.2.2 - Evaluating Safety Performance Prior to Contract **Due:** 7/15/2002 **Owner:** McAtee,Gary A **Status:** Closed
- 3330.3 - Institutionalize IOPS **Due:** 6/30/2002 **Owner:** Dewinkle,Gary M **Status:**Closed
- 3330.3.1 - Institutionalize IOPS **Due:** 6/29/2002 **Owner:** Dewinkle,Gary M **Status:** Closed
- 3330.4 - Improve safety committee processes **Due:** 1/15/2002 **Owner:** Dossett,Sharon D **Status:**Closed
  - 3330.4.1 - Develop Guidelines for Committees **Due:** 1/31/2001 **Owner:** Mitchell,Roger D **Status:** Closed
  - 3330.4.2 - Evaluate ALARA Committee **Due:** 5/18/2001 **Owner:** Hoyt,Joel R **Status:** Closed
  - 3330.4.3 - Evaluate Lock & Tag Committee **Due:** 6/1/2001 **Owner:** Fullmer,Michael W **Status:** Closed
  - 3330.4.4 - Evaluate Electrical Safety Committee **Due:** 4/15/2001 **Owner:** Sparks,Bobby R **Status:** Closed
  - 3330.4.5 - Evaluate Biological Safety Committee **Due:** 4/30/2001 **Owner:** Johanson,Richard E **Status:** Closed
  - 3330.4.6 - Evaluate Safety Review Council **Due:** 6/30/2001 **Owner:** Graham,Tonia M **Status:** Closed
  - 3330.4.7 - Evaluate Aviation Safety Committee **Due:** 4/30/2001 **Owner:** Wright,Patrick A **Status:** Closed
  - 3330.4.8 - Evaluate VPP Steering Committee **Due:** 5/31/2001 **Owner:** Hart,Todd R **Status:** Closed
  - 3330.4.9 - Evaluate SRC Committee **Due:** 6/30/2001 **Owner:** Graham,Tonia M **Status:** Closed
  - 3330.4.10 - Include appropriate references to ASP and ARMC **Due:** 1/15/2002 **Owner:** Pease,Maurice E **Status:** Closed
  - 3330.4.11 - Draft Charter for Aviation Risk Management Committee **Due:** 7/30/2001 **Owner:** Wright,Patrick A **Status:** Closed
- 3330.5 - Impr empl involvement in accid investig and access to info **Due:** 10/31/2000 **Owner:** Dossett,Sharon D **Status:**Closed
  - 3330.5.1 - Revise MA-858 & Injury & Illness Subject Area **Due:** 11/30/2000 **Owner:** Hardman,Mitchell S **Status:** Closed
  - 3330.5.2 - Develop Web-based Report **Due:** 11/30/2000 **Owner:** Hardman,Mitchell S **Status:** Closed
  - 3330.5.3 - Notification of New Web-based Report **Due:** 12/31/2000 **Owner:** Hardman,Mitchell S **Status:** Closed
- 3330.6 - Impr empl involvement and access to accid investig info **Due:** 10/31/2000 **Owner:** Kuhl-Klinger,Kristine J **Status:**Closed
  - 3330.6.1 - Impr empl involvement and access to accid investig info **Due:** 11/15/2000 **Owner:** Kuhl-Klinger,Kristine J **Status:** Closed
- 3330.7 - Assess improvement opportunities for S&H trng of mgrs **Due:** 10/31/2000 **Owner:** Dossett,Sharon D **Status:**Closed
  - 3330.7.1 - Training Course for Managers **Due:** 1/15/2001 **Owner:** Weeks,Paul L **Status:** Closed

All actions from the 2001 PNNL VPP Program Evaluation have been completed.

2002 PNNL VPP Program Evaluation

4248 - FY 2002 PNNL VPP Program Evaluation **Owner:** Madson Jr,Vernon J **Status:** Submitted
- 4248.1 - Rqmts & Impl. of approp. PPE isnt consistent across the Lab **Due:** 12/31/2002 **Owner:** Enge,Roby D **Status:**Closed
  - 4248.1.1 - Develop Comm. on Phil. for PPE (part. eye prot. & gloves) **Due:** 9/1/2002 **Owner:** Pease,Maurice E **Status:** Closed
  - 4248.1.2 - Comm. Doc. Developed in First Action at IOPS Safety Comm. **Due:** 9/30/2002 **Owner:** Wright,Patrick A **Status:** Closed
  - 4248.1.3 - Comm. Doc. Devel. in First Action in the Porcelain Press **Due:** 9/30/2002 **Owner:** Isern,Nancy G **Status:** Closed
  - 4248.1.4 - Comm. Document Developed in First Action at Safety Mtgs. **Due:** 9/30/2002 **Owner:** Sadesky,Raymond A **Status:** Closed
  - 4248.1.5 - Evaluate the Effectiveness & Consistency that IOPS provides **Due:** 12/30/2002 **Owner:** Wright,Patrick A **Status:** Closed
- 4248.2 - Not Always A Timely & Adequate Response to Employee Concerns **Due:** 4/30/2003 **Owner:** Madson Jr,Vernon J **Status:**Accepted
  - 4248.2.1 - Stop Work Card **Due:** 4/15/2003 **Owner:** Collins,Drue A **Status:** SubmittedToActOwn
  - 4248.2.2 - Communicate Stop Work/Concerns Program **Due:** 4/15/2003 **Owner:** Collins,Drue A **Status:** Accepted
- 4248.3 - Better Integ of Info Generated by Assmts, Incidnts & LL **Due:** 10/1/2003 **Owner:** Slate,Steven C **Status:**Accepted
  - 4248.3.1 - Develop/Implement the Lab Assurance Process **Due:** 9/30/2003 **Owner:** Sours,Mardell L **Status:** SubmittedToActOwn
  - 4248.3.2 - Dev Improved Methods of Distr Lessons Learned/Best Practices **Due:** 6/30/2003 **Owner:** Metcalf,Nancy W **Status:** SubmittedToActOwn
- 4248.4 - Recent Imprvmts in Sub-Cont Safety Pgrm Need to be Evluated **Due:** 6/30/2003 **Owner:** Dossett,Sharon D **Status:**Accepted
  - 4248.4.1 - Evaluate Progress **Due:** 12/31/2002 **Owner:** Wright,Patrick A **Status:** Closed
  - 4248.4.2 - Assess Effectiveness of Implem. of Sub-Cont. Safety Mgmt **Due:** 6/29/2003 **Owner:** Caldwell,Cynthia L **Status:** Accepted
  - 4248.4.3 - Develop a flowchart/process description **Due:** 12/13/2002 **Owner:** Haynie,Todd O **Status:** Closed
  - 4248.4.4 - Develop a Matrix **Due:** 12/13/2002 **Owner:** Kimmel,Larry V **Status:** Closed
  - 4248.4.5 - Verify the Deployment of Each Process Element **Due:** 3/31/2003 **Owner:** Wright,Patrick A **Status:** Accepted
  - 4248.4.6 - Establish a Follow-up Action Plan if Necessary **Due:** 4/30/2003 **Owner:** Wright,Patrick A **Status:** Accepted
- 4248.5 - Increased Use of IOPS Has Created Inefficiencies **Due:** 4/1/2003 **Owner:** Wright,Patrick A **Status:**Accepted
  - 4248.5.1 - Charter the IOPS Steering Committee **Due:** 7/30/2002 **Owner:** Wright,Patrick A **Status:** Closed
  - 4248.5.2 - Complete a Study/Assessment of IOPS **Due:** 3/30/2003 **Owner:** Wright,Patrick A **Status:** Accepted
  - 4248.5.3 - Develop/Document a Resource-Loaded Implem. Plan **Due:** 3/30/2003 **Owner:** Wright,Patrick A **Status:** Accepted
- 4248.6 - Cont Imprvmt w/VPP Steering Com. Supporting ES&H pgrms **Due:** 4/30/2003 **Owner:** Madson Jr,Vernon J **Status:**Accepted
  - 4248.6.1 - VPP Charter **Due:** 4/15/2003 **Owner:** Isern,Nancy G **Status:** Accepted

Good progress is being made toward implementation of the actions related to the 2002 PNNL VPP Program Evaluation. Several actions remain in progress.

ISSUES AND RECOMMENDATIONS FOR IMPROVEMENT

(FY2003 PNNL VPP Program Evaluation)

1. ISSUE: **IOPS Reading Assignments**

IOPS provides an effective tool for implementation of bench-level hazard mitigation in PNNL facilities. IOPS uses on-line delivery of hazard and mitigation information to workers who need access to a space and who may interact with specific hazards. IOPS information (e.g., hazard awareness summaries and work practice documents) can be extensive and may be somewhat redundant or inconsistent between facilities. This has been identified as an improvement opportunity, especially by staff with intensive need to interact with IOPS-managed hazards or who require broad access to IOPS spaces.

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. Another issue is the delivery of various similar work practice documents from different buildings. The issue of sending frequent hazard updates to workers who may not need access to a space on a regular basis (particularly those workers registered in many spaces) should also be addressed.

2. ISSUE: **VPP Steering Committee Improvement**

The PNNL VPP Steering Committee is gaining recognition and stature at PNNL related to their activities to improve worker safety and health. The committee is composed of workers who accept their VPP assignments as collateral and largely voluntary responsibilities. The VPP Steering Committee organization and "rules of order" are still maturing. Improvement in the process used by the VPP Steering Committee would improve that organization's effectiveness and efficiency.

RECOMMENDATIONS:

- Document a VPP Steering Committee Charter to deal with important issues such as succession of officers and other rules of order.
- Establish a subcommittee to set annual goals and then track progress toward the goals.
- Develop a process to recruit new VPP Steering Committee members.
- Implement a process to recognize the contributions of VPP Steering Committee members.

3. ISSUE: **Monitoring/Continual Improvement in Implementation**

Significant improvements in several safety programs have been made as a result of PNNL VPP program evaluations. Such improvements are expected to take time to demonstrate full results and become institutionalized in PNNL's culture and should be monitored closely. It may be appropriate to conduct targeted assessments to determine how well implementation is proceeding for those improved programs.

RECOMMENDATIONS:
Implement an ongoing process to monitor program status for key programs that have recently improved. The following programs have experienced recent improvement and could benefit from monitoring:

- Use of Personal Protective Equipment
- Subcontractor implementation of safety requirements

4. ISSUE: **Management Implementation of Worker Safety & Health**

Managers at different levels (e.g., senior management, middle management, first line management) need different skill sets to successfully manage worker safety and health. Based on survey and assessment results, there is evidence that some managers may not be adequately trained, informed, and skilled to manage worker safety and health programs with excellence.

RECOMMENDATIONS:

<u>Communication</u>
Line management should communicate how different managerial roles are expected to address worker safety and health issues (e.g., level 1 managers establish expectations and drive accountability, level 2 managers provide resources and implement the planning process, and immediate managers drive work-level implementation and provide direct feedback and reinforcement to staff). The communication should also help managers understand how to access resources that can help them manage worker safety and health issues.

<u>Feedback</u>
Line management should have feedback processes in place to verify that managers are adequately executing their responsibilities and are using available resources appropriately.

These four issues will be entered into the Assessment Tracking System (ATS) as conditions under the FY2003 PNNL VPP Program Evaluation and condition owners will determine what actions should be taken based on the recommendations. The actions (and conditions) will be tracked to completion in ATS.

OTHER RECOMMENDATIONS

The following additional recommendations are offered for consideration by the responsible organizations. They were identified as potential improvement opportunities as the VPP Program Evaluation team considered how PNNL meets the Tenets and Elements of VPP, but they were not considered significant enough to be tracked as part of the VPP Program Evaluation.

VPP

- With the growing emphasis on VPP as the criteria for worker safety and health at PNNL under the new contract with DOE, the VPP program documentation needs to be upgraded to effectively represent how PNNL implements worker safety and health. Included in that upgrade should be a refreshed management assurance of commitment when the new Laboratory Director is identified.

- Consider developing a Lessons Learned/Best Practices communication related to positive business opportunities and favorable responses from clients associated with VPP STAR status.

- The VPP Steering Committee should meet the new Subcontractor Safety & Health Representative, emphasize the importance of the job, and provide support.

- The VPP Steering Committee might benefit from more management involvement.

- Steering Committee members need to be recognized and rewarded for their participation

- Provide staff with brief reminders of occurrence reporting responsibilities.

Line Management

- Managers need to be more visible in the field.

- Continue to improve staff and management understanding of their role(s) in the Customer Service Model (CSM) and CSM implementation by Management Systems. In particular, continue improvement efforts to help all managers understand their accountability for safety and their responsibilities to properly support hazard identification, work planning, employee concerns, and accidents.

- Management needs to lead continual improvement in implementation of the PPE program by rigorously demonstrating proper use of PPE and by reinforcing the use of PPE to their staff. In particular, line management

should consider how to recognize/reward proper use of PPE, and how to ensure that non-compliance is eliminated.

Facility Operations

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

- If work assignments change after a pre-job plan consider performing another pre-job briefing so that the new worker is aware of the potential hazards and has the opportunity to raise concerns and provide input.

- Continuing attention should be given to the implementation of ES&H requirements by and for subcontractors (particularly construction subcontractors) so that basic worker safety and health standards are met by all workers on PNNL jobs.

Training and Qualification

- Consider improving new-hire orientation by adding more VPP information in the web-based new-hire training and providing tools/counseling to help managers with face-to-face new-hire safety orientation (e.g., introduction to the new staff member's Safety & Health Representatives, emphasis of safety rights and responsibilities, introduction to important tools and processes used to support implementation of the safety program).

Integrated Quality, Environment, Safety, and Health

- Develop plans to help R&D workers see the value-added, results-oriented benefits of programs and activities such as safety committees, awareness campaigns, etc. They need to see that such activities benefit the operations that support science and technology so that the Laboratory can continue to improve R&D involvement in safety.

- Consider how to support the improvement of safety committee processes so there is more impact on safety. It was recommended that the committees need to be more aggressive in working tomorrow's issues today: aging workforce, trending in injuries, communicating policy, medical issues.

PNNL DOE-VPP
Annual Program Evaluation
FY-2003

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.
- 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 presentations regarding 1) how to prepare for an on-site review, and 2) how to do a program evaluation at that conference.
  2. Maintaining a website with the "Application", PowerPoint presentations from the National VPPPA conference, Program Evaluations, and safety performance. This information is made available to DOE, contractor, private sites and others who are interested in PNNL's VPP program.
  3. Participation in the Hanford Site VPP Champions organization, including making electronic media available outside of PNNL.

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 on-line description of how PNNL meets VPP criteria (the "Application") is not being kept up-to-date and many links are broken.
- Subcontractor injury and illness rates have a low absolute incidence, but relatively high rates this year.

4. Participation in the annual Hanford Safety & Health Expo.
5. Hosting visits and dialog with LBNL regarding the possibility of establishing a VPP program.
6. Participation in and presentation of material in support of the DOE/HAMMER "VPP 101" Course

Recent/Expected Changes

- The change in OSHA/BLS recordkeeping criteria will create a discontinuity in the comparison of accident rates between dates prior to CY2002 and dates after January 1, 2002. This is not expected to have a significant impact on PNNL's accident rate trends.
- 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.

RATING	TREND
Good (12)	↗

Conclusion

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 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

- Recast the "Application" into a "Program Description" to better represent the current state of the Lab's VPP program.
- Maintain the "Application" and continue VPP outreach activities.

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

RATING	TREND
Good (10)	➔

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

Opportunities for Improvement

- Consider if/when it would be appropriate to "renew" the labor assurance of commitment statement and the management assurance of commitment section (e.g., with the new Laboratory Director).
- Continue to maintain and update the management assurance of commitment references to PNNL management system documentation.

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Tenet: *Management Leadership*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Management Leadership		
Commitment	**Good (11)**	↗
Organization	**Good (10)**	→
Responsibility	**Good (10)**	↗
Accountability	**Good (10)**	→
Resources	**Good (10)**	→
Planning	**Good (10)**	↗
Contract Workers	**Adequate (8)**	↗
Program Evaluation	**Good (11)**	↗
Site Orientation	**Good (9)**	↗
Employee Notification	**Adequate (8)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Management Leadership	**Good (9.7)**	↗

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. PNNL also needs to continue the improvement of the excellent tools that have been created to help manage operations (e.g., SBMS, IOPS, MIT, EPR) and to reinforce the execution of PNNL manager and staff R^2A^2 through those tools and other processes (e.g., performance evaluation, reinforcement, etc.). Other areas of potential improvement are the continuous improvement of safety related to contract workers.

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Tenet: ***Management Leadership***
Element: ***Commitment***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 (R^2A^2s) 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 R^2A^2s.

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.
- PNNL staff and managers understand that the Standards Based Management System is the set of requirements that they must work to.
- Safety and health goals and objectives are established and flowed-down from the Lab

Weaknesses

- The Customer Service Model and the hierarchy of the Standards Based Management System are not adequately understood by some PNNL staff.
- Improvement opportunities in the design and implementation of PNNL's management approach have been identified by various Management Systems.
- Many workers are not aware of the specific safety and health goals and objectives established for the Laboratory or their organization.
- Many workers have limited interaction with their immediate manager because they are more closely aligned with a

Agenda, through Critical Outcomes and manager/individual performance evaluations.
- All managers have an open door policy regarding safety.
- VPP recognition has resulted in positive business opportunities and favorable responses from clients.

multidisciplinary work group such as a project team or core team.
- There is concern on the part of some craft workers that there may be a lack of commitment to hold all workers (F&O, R&D, subcontractors) to the same standards.
- The survey revealed that there is confusion regarding management commitment to the preventability of accidents.
- Survey results indicate that some managers do not "get into the field" and interface with their workers very much.

Recent/Expected Changes
- Management, particularly in F&O, has made significant progress in addressing the issues from previous Program Evaluations related to worker empowerment (e.g., related to stop work authority).

RATING	TREND
Good (11)	↗

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 safety culture of managers and staff.
Note: the score for Management Leadership – Commitment was adjusted down one point to "11", not because there has been a decrease in performance in this area, but because there is still room for improvement and the evaluation team did not feel that the previous score of 12 was appropriate.

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 associated with VPP STAR status.
- Managers need to be more visible in the field.

Tenet: ***Management Leadership***
Element: ***Organization***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 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 ESH&Q organization provides a high degree of knowledge and support to line management.
- The VPP Steering Committee is active and is growing in its involvement with PNNL's already strong worker safety and health program.

Weaknesses

- Some workers do not understand the relationship between different organizational Elements and the roles they perform in support of the effective execution of operations.
- Some believe that "matrix management does not promote safety". The division of responsibility between various elements of the customer service model (expert delivery/core team vs. capability stewardship/ resource manager) can result in production pressures in conflict with resource management.

Recent/Expected Changes

- The previous Laboratory Director, Dr. Lura Powell resigned effective December 31, 2002. A new Laboratory Director is being recruited. No

significant changes in operations are anticipated from this organizational change.

Conclusion

RATING	TREND
Good (10)	➔

The organization of PNNL is strong and it supports the achievement and maintenance of VPP STAR Program requirements. The VPP program has benefited from strong leadership, but the ongoing contribution of a qualified, committed, and energetic R&D co-chair of the VPP Steering Committee needs to be assured.

Opportunities for Improvement

- Continue to improve staff and manager understanding of their role(s) in the Customer Service Model and its implementation by Management Systems.

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 R^2A^2s, 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.
- Roles and authorities are becoming better supported by automated and other institutionalized processes at the Laboratory, which support important worker safety and health responsibilities.
- All of the employees interviewed knew their responsibilities when it came to safety, that it started with them and being aware of their surroundings and the potential for hazards and to share what they

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 R^2A^2 or the "Contacts" of SBMS.
- A comment was made that **" Cleaning up is part of the Job"** and that should be included in some of the Safety Literature.

learned at home and work with their fellow employees in the line of health and safety.

Recent/Expected Changes

- Key roles for the Lab will soon be managed through the Role Based Access Control system. That change will include the role of Operations Manager.

RATING	TREND
Good (10)	↗

Conclusion

The Laboratory has a system of Roles, Responsibilities, Accountabilities, and Authorities that is mature and well tested. Planned and ongoing Management System improvements will strengthen Lab-wide processes that define and communicate expectations, including those related to environment, safety & health. IOPS continues to improve how roles and responsibilities are communicated and implemented at the Laboratory.

Opportunities for Improvement

- Formally recognize Operations Managers in PNNL R^2A^2.
- 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 R^2A^2s 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.
- Some organizations make safety performance a part of staff members' annual performance evaluation.
- It is very clear to virtually all staff that safety is important.

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.
- Several workers reported that safety is not a factor in their performance evaluation (although they are aware of safety expectations and would expect negative reinforcement if they did something wrong).

Recent/Expected Changes

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

RATING	TREND
Good (10)	➔

Conclusion

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

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.
- Continue disseminating Lessons Learned information about safety and health accountability (e.g. disciplinary action as well as positive lessons learned) without compromising Human Resources principles of confidentiality.

Tenet: ***Management Leadership***
Element: ***Resources***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 the majority of 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.
- Manpower loading on some (e.g., craft) jobs is not adequate. Some staff report feeling pressured to complete work on their own, even though another staff member helping would have made it easier and potentially safer.

Recent/Expected Changes

- The VPP program continues to improve how roles and responsibilities are communicated and implemented at the Laboratory.
- F&O is considering the creation of a temporary craft pool to assist in manpower loading on larger craft jobs.

Conclusion

RATING	TREND
Good (10)	➔

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

Opportunities for Improvement

- 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 "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 related to performance associated with Critical Outcomes. 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 continues to be significant improvement in worker safety & health (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.
- Some safety concerns identified by workers in the planning process take too long to be resolved. No

training compliance, hazard identification and mitigation). Much of this improvement has been driven by IOPS and the development of other automated processes.
- 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.
- The stop work process within F&O has been improved in terms of greater consistency and appropriate management response. *(This had previously been identified as a Job Planning Package weakness.)*

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.

Recent/Expected Changes

- The expected formalization of a process for consistent Post-Job reviews to replace or supplement the Comment Sheet has not been implemented
- 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

RATING	TREND
Good (10)	↗

Work planning at the Laboratory continues to be an 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 continue to be improvement opportunities regarding how results from assessments or lessons learned are captured and used in planning activities.

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: 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 conform to the same basic requirements 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 Contracts has established 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

Weaknesses

- The flow down of safety & health requirements and monitoring of sub-contractor performance to those requirements is improving, but is not fully implemented and institutionalized.
- The fact that PNNL wants all workers (including sub-contractors) to work to the same safety and health standards is not fully recognized and accepted by all PNNL staff. *Note that the distinction between contractors meeting basic standards and PNNL implementation of program requirements that may go above and beyond basic standards is contentious.*
- The sub-contractor selection process related to using safety and

inputs from stakeholders and the respective workforce.
- Past health and safety statistics are used to help determine contract awards.
- Sub-contractors are required to work to PNNL requirements and/or job planning packages with SOPs reviewed by PNNL.
- Sub-contractor employees take the PNNL site orientation.
- There is an improved process within WebReq to identify subcontract ES&H requirements (contract clauses).
- A dedicated Safety & Health Representative has recently been hired to overview construction subcontractors. This will strengthen the reinforcement of safety requirements for BOA (basic ordering agreement) subcontractors.

health performance has only recently been implemented.
- Safety requirements are not always well implemented by sub-contractors.
- There is a lack of formal Post-Job reviews of subcontractor work to identify lessons learned.
- The best/correct equipment is not always used to perform a job (e.g. a contractor may use PPE when engineered or administrative controls would be preferred).
- A concern was brought up that Safety and Health Policy/ Procedures should be a universal across the site and that outside contactors should have the same or more stringent training to help ensure the safety of the onsite worker.
- There was a large increase in subcontractor injury and illness rates in CY2002.

Recent/Expected Changes

- Clauses for contracting with sub-contractors have recently been improved.
- ESH&Q has implemented a method of tracking actual sub-contractor work hours and injury rates.
- A process for evaluation of sub-contractor safety and health performance for contract selection.

Conclusion

RATING	TREND
Adequate (8)	↗

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. The implementation and flow-down of ES&H requirements to subcontractors through appropriate (graded) contract clauses has been improved. Communication of safety requirements is generally good but sub-contractor implementation of requirements warrants continuous improvement. The large increase in subcontractor injury and illness rates is potentially a cause for concern.

Opportunities for Improvement

- The VPP Steering Committee should meet the new subcontractor Safety & Health Representative and emphasize how important the job is and provide support.
- Continuing attention should be given to the implementation of ES&H requirements by and for subcontractors.

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 Quality, 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.
- All directorates 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

- Aspects of the various self-assessment programs could be improved (e.g. use of results from self-assessments, sharing of results of self-assessments between organizations)

Recent/Expected Changes

- The Integrated Planning & Assessment Management System is developing plans to help the Laboratory develop an improved and better integrated self-assessment process.

RATING	TREND
Good (11)	↗

Conclusion

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 (reading assignments) is redundant, unnecessary and complicated.
- Because of continual "refresher notices" for IOPS, some staff feel overloaded with reading assignments and they may be circumventing the Web-based training by simply visiting web pages without conscientiously reading them.
- Reliance on web information does not provide the same hazard communication as face-to-face interaction with a knowledgeable person. Some CSMs provide this kind of interaction with workers and others may not.

- 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.
- Managers conduct one-on-one orientations with new staff members, during which they address applicable safety issues.
- 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.
- Everyone stated that F&O IOPS has been improved and streamlined since last year.
- Some F&O workers have been known to perform work in IOPS spaces where they are not authorized because no one is overseeing their work assignments and authorizations.

Recent/Expected Changes

- None

Conclusion

RATING	TREND
Good (9)	↗

Site Orientation at the Laboratory is a well-designed, formalized, and 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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

Weaknesses

- Some staff weren't as knowledgeable about their safety rights, the accident investigation process, and VPP 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.
- Some staff members (especially crafts workers) believe that IOPS is a redundant and excessive approach to notification of hazard information related to a space. Particularly for those who have access to many spaces, IOPS "over notification" trivializes the

their safety rights and 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.
- Worker safety and health requirements are communicated in a variety of ways, including (within F&O): safety meetings, Job Planning Packages, Lessons Learned, critiques, Plan of the Day, and pre- and post-job briefings. Safety and health requirements for R&D are typically communicated through IOPS, project planning documentation, internal operating procedures, and interaction with support staff (e.g., during self-assessment).
- The VPP newsletter (the "Porcelain Press") is updated and posted across the Laboratory periodically and it has become well accepted, as evidenced by workers providing input for topics and complaining if their copy is not updated in a timely manner.
- 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.
- IOPS provides a thorough process for notifying workers of hazards that exist in a space and of changes to those hazards.
- The Map Information Tool provides a very effective process to identify the hazards and other information related to a given space.
- Several identified that Safety is openly communicated (i.e. notification process and may not help the worker recognize significant hazard information related to their work in a timely manner (e.g., just before they begin work or during the progress of their immediate work).
- Lessons Learned/Best Practices are not always shared between organizations (particularly FO Core Teams and R&D).

meetings, the Lab web, Lessons Learned and Posters.)

Recent/Expected Changes

- None

Conclusion

RATING	TREND
Adequate (8)	↗

Employees are generally aware of their safety rights and responsibilities and of PNNL's VPP program. IOPS, MIT and other electronic tools provide a good approach to hazard communication and employee notification. Continuous improvement in this area is needed to address issues related to IOPS.

Opportunities for Improvement

- Continue efforts to improve employee awareness of their safety rights and responsibilities, goals and objectives, and of the VPP program.
- Consider how to keep the VPP Website updated with current, valuable information.
- Continue efforts to improve hazard communication through IOPS.
- Lessons Learned/Best Practices should be a part of staff meetings.
- Consider how to improve new-hire orientation by adding more about VPP to the web-based training, and counseling/providing tools to help managers with face-to-face new-hire safety orientation (e.g., introduction to the new staff member's Safety & Health Representatives, emphasis of safety rights and responsibilities, introduction to important tools and processes used to support implementation of the safety program).

Tenet: *Employee Involvement*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Employee Involvement		
Degree and Manner of Involvement	**Adequate (8)**	↗
Safety Committees	**Adequate (7)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Employee Involvement	**Adequate (7.5)**	↗

SYNOPSIS

The Laboratory has experienced 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 five 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. While there is evidence of a significant level of worker involvement and empowerment, there is a perception that there could and should be much more. 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 exhibit a certain level of apathy 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. Our annual site-wide survey indicates that there remain a few individuals that believe that money spent on VPP would be better spent elsewhere. However, the VPP Steering Committee has had success in the past year reaching more people with the Porcelain Press, and the well-received introduction of blood pressure monitors in two locations. This year's comments in the site survey also contained kudos for VPP "doing a great job!"
- There continues to be a concern that a few bargaining unit workers may not 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 employees that work off-site, and employees that travel 150,000 miles a year. The Laboratory has taken actions to cover these employees but there are still opportunities to improve.

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

Evaluators: Nancy Isern, Vern Madson, and Souix Williams

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 FY2003 survey of staff with more than 1500 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.

<u>Strengths</u>

- R&D workers continue to believe that "Safety is a part of everything I do and therefore integral to the performance of my job."
- When asked "How are you involved?", R&D staff answered "We are the idea people – we identify what needs to be done!"
- Workers have documented stop-work authority. Stop Work has become more clearly understood by staff. Those interviewed said they have no fear of reprisal in using their stop work authority.
- Close-knit R&D workgroups
- Strong worker participation in safety committees, the F&O Job Planning Package process, SBMS and IOPS. Workers

<u>Weaknesses</u>

- 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 a few workers, but this is decreasing.
- Communication of lessons learned and best practices are not always effectively shared.
- New managers are given little training in the value of or processes for achieving good worker involvement.
- IOPS reading assignments do not achieve good/effective worker involvement when a large amount

believe their input is used and that issues/concerns are resolved.

- Good relationship with immediate manager is common.
- Bargaining unit workers are involved in pre-job walkthroughs, safety committees, SBMS, IOPS, and critiques.
- Staff members are aware of programs to resolve employee concerns, including; Electrical Safety Committee, PNNL/HAMTC Lab Safety Committee, VPP Steering Committee, and the HAMTC Safety Rep program. Most workers believe that issues are typically resolved/resolvable by raising an issue/concern with their immediate manager.
- Most managers believe that workers are highly skilled and have a lot to offer. *(From interviews with F&O management.)*
- The FY2003 VPP Survey indicates that 62 % of the PNNL respondents Agree or Strongly Agree that they are regularly involved in decisions that affect their safety and health.
- The FY2003 VPP Survey indicates that 84% of the PNNL respondents Agree or Strongly Agree that they are knowledgeable regarding the PNNL Safety and Health Program.
- Workers felt that there was good interaction with management, making it a team effort, showing professionalism in the workplace.
- Eight safety issues were identified and resolved on “Let’s Talk” last year. “Let’s Talk” seems to be working better for safety issues. The Staff of what is perceived to be low value material is pushed over the web.
- Some managers report that safety is often inappropriately raised as an issue when non-safety (e.g., jurisdictional) issues are in dispute.
- Some Craft workers believe that over-emphasis on procedures is diluting the benefit that could come from workers applying “skill of the craft” to simple jobs.

Concerns program addressed 6 formal employee concerns related to safety.

Recent/Expected Changes

- None.

RATING	TREND
Adequate (8)	↗

Conclusion

The Laboratory has developed excellent participation and involvement within most work groups. It must deepen the participation by those groups that are on the fringe and have not been included, particularly those who do not work with highly hazardous operations, do not work in programs that are driven by regulatory requirements, or who work at an off site location. Workers are being asked for input into most of the important processes of the Lab that affect them, including hazard recognition and work planning.

Opportunities for Improvement

- Continue to work to gain more staff involvement in safety program activities. This worker involvement should include R&D workers located at the Richland Complex and staff at other work locations, and it should include the administrative and support services worker, managers, as well as bargaining unit workers.
- Develop processes to better prepare managers to implement and take advantage of worker involvement related to safety issues.
- Improve IOPS to achieve greater perceived value by workers, thus gaining better worker involvement.

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

Evaluators: Nancy Isern, Vern Madson, and Souix Williams

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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. Of the 87 major revisions to SBMS subject areas in FY02, users were involved in 98% either through active team discussions or on-line review of the proposed new content.
- Committees such as the Electrical Safety Committee, PNNL/HAMTC Lab Safety Committee, VPP Steering Committee, and the HAMTC Safety Rep program help staff members (particularly bargaining unit workers) get and stay involved in the safety program.
- Committees use the intranet to deliver information.
- The FY2003 VPP survey found that 88% of the PNNL

Weaknesses

- All staff do not know what VPP is about, even though they know how to work safely.
- Committee processes are often not formalized.
- The VPP Steering Committee has not yet adopted a charter to guide its activities.
- VPP Steering Committee members feel a lack of recognition for their VPP activities.

participants were aware of some of the Safety Committee activities.
- Let's Talk, the Staff Concerns Program, the PNNL VPP Steering Committee and the Porcelain Press all provide venues for employees to raise safety concerns and discuss health and safety topics.

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.
- There is a new Biosafety Committee with good worker involvement, which is making decisions about how biohazards should be controlled.

RATING	TREND
Adequate (7)	↗

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 continues to be a lack of formality and rigor in the implementation of some safety committee processes but that will be an area of improvement opportunity as the use of safety committees becomes more mature at the Laboratory. Progress has been made over the last year.

Opportunities for Improvement
- Need to institutionalize the processes used by the VPP Steering Committee in a Charter.
- Safety committees (e.g., the HAMTC Safety Committee) need to be improved so there is more impact on safety. The committee needs to be more aggressive in working tomorrow's issues today: aging workforce, trending in injuries, communicating policy, HEHF issues.
- The VPP Steering Committee might benefit from more management involvement.
- Steering Committee members need to be recognized and rewarded for their participation.

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Tenet: *Worksite Analysis*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Worksite Analysis		
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 (8)**	↗
Accident Investigations	**Good (10)**	↗
Trend Analysis	**Adequate (8)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Worksite Analysis	**Good (9.7)**	↗

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, including full/enhanced implementation of the Integrated Operations System (IOPS), integration of Electronic Prep & Risk with SBMS and IOPS, and improved self-assessment and Lessons Learned/Best Practices processes. Improvements have been 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), and ongoing efforts to improve those areas need continuing support. Further efforts need to be expended toward better implementation and integration of self-assessment processes (particularly IOPS) to achieve the highest level of excellence in self-assessment.

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

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 survey of all PNNL staff (over 3800 total staff members) was conducted and responses from more than 1500 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 R^2A^2, 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 could be improved to make worksite analysis better.
- 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.
- When prejobs are performed, the person involved in the prejob is not always the one doing the actual work.

Recent/Expected Changes

- Standardization of Job Planning Package (JPP)
- Hazard Analysis Operational Improvement Initiative improvements in progress

- A construction safety professional has been hired recently to focus on contractors and construction work and this should improve the communication to sub-contractors, worksite analysis, hazard control, and oversight.

RATING	TREND
Good (10)	↗

Conclusion

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 ongoing initiatives will result in continuous improvement in the identification, analysis, and mitigation of hazards.

Opportunities for Improvement

- Continued support for Operational Improvement Initiatives, including the Hazard Analysis Initiative.
- Continue with actions to address FY2000 VPP Program Evaluation conditions related to sub-contractor communications and oversight.
- After a pre-job, if the worker changes then another prejob should be performed so that the new worker is aware of the potential hazards and has some input into the prejob.

Tenet: *Worksite Analysis*
Element: *Comprehensive Surveys*

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 are 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.
- Buildings are continuing to be incorporated into IOPS.

Weaknesses

- EPR is not linked to the IOPS hazard awareness summaries.

Recent/Expected Changes

- IOPS was rolled out to EDL, 3720, 622R, 336, and Sigma V buildings in FY2002.
- The Hazard Analysis Operational Improvement Initiative (OII) is planned to link EPR and IOPS. It will be implemented in FY03.

- A comprehensive survey was completed by the Bio-safety committee for bio-hazard use and storage. IOPS provides a limited survey and some directorates perform self-assessments on Non-ionizing radiation.
- A comprehensive survey is being performed on IOPS to determine areas of improvement.
- FO is completing a review to compare actual hazards with those listed in the building specific FUA.

RATING	TREND
Good (10)	↗

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.

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: 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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.
- ES&H staff share information during a bi-weekly staff meeting. Matrixed ES&H staff frequently interface informally about common issues in shared lab space within a facility. Research Operations Managers meet monthly to discuss issues which include ES&H.
- Management system self-assessments are performed in accordance with approved procedures.
- An independent oversight group performs unbiased assessments.
- Quarterly self- assessments are

Weaknesses

- Results that are not considered "significant" may not be shared between Divisions/Directorates that may have similar circumstances.
- Strong "lines of inquiry" or assessment plans are not always developed by assessors.
- Safety and health professionals are not involved in all self-assessments.
- IOPS CSM self-assessments still need improvement.

performed by the Cognizant Space Managers in IOPS facilities.

- RPL rewards Cognizant Space Managers for timely performance of self-assessments.

Recent/Expected Changes

- None

RATING	TREND
Good (11)	➔

Conclusion

PNNL has implemented a good self-assessment program. The program includes the assessment by Line Organizations (divisions/directorates) and the Management Systems (programs). IOPS self-assessments provide good worker involvement in the self-assessment process. Results of the self-assessment are analyzed and continuous improvement actions are identified. Results of assessments could be better integrated and results communicated between organizations. Improvement of the process continues to be pursued.

Opportunities for Improvement

- It would be desirable to have safety and health representatives involved in more self-assessments.

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

Evaluator: Mike Tinker

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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).
- Cognizant Space Managers play a key role in routine hazard analysis since they are very knowledgeable of the work in their assigned space and they are the ones responsible for identifying hazards and taking steps to make sure that hazard controls are implemented.
- 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

Weaknesses

- IOPS has yet to be implemented in the Marine Sciences Laboratory.
- EPR does not "inform" IOPS of hazards that are planned for a space.
- There is inconsistent implementation of routine hazard analysis (particularly for work not covered by IOPS).
- Safety & Health Reps for some IOPS spaces are not as actively involved in overviewing hazards and hazard controls as would be desirable.
- Concerns were expressed by some bargaining unit staff that not all procedures are up to date.
- Other concerns by bargaining unit staff relate to overly prescriptive procedures.

(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 requirements, lessons learned, and program assessments.
- Hazard awareness walkdowns greatly improve knowledge of hazards and actions being taken – staff are involved in walkdowns
- PM procedures get a lot of attention and work control procedures are always being improved. Some F&O procedures are up to date and are very useful.

Recent/Expected Changes
- Implementation of IOPS for crafts who work in IOPS facilities has been significantly improved and streamlined through the implementation of global hazard awareness summaries and focused work practice documents.
- IOPS is being rolled-out to all facilities where potentially hazardous work is conducted.
- The Hazard Analysis OII is linking EPR and IOPS.

Conclusion

RATING	TREND
Good (11)	↗

There is a strong process for ensuring that hazards are routinely analyzed and mitigated. IOPS is a key part of that process in PNNL-operated facilities. SBMS provides the foundation for routine hazard analysis for all PNNL work. The process for routine hazard analysis has been improved by several Operational Improvement Initiatives and continues to be the focus of such initiatives.

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: Mike Tinker

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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
- Stop work is much more clearly understood.
- 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.
- Eight safety issues were identified and resolved on "Let's Talk" last year. "Let's Talk" seems to be working better for safety issues. The Staff Concerns program addressed 6 formal employee concerns related to safety.

Weaknesses

- Hazards may not always be reported if they are fixed by employees. This may lead to loss of trend information.
- It continues to be the case that some 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.
- Some workers are intimidated by the attention that is brought to bear on concerns.
- One worker felt that there was communication about specific safety/health concerns, but not

- Most workers feel very comfortable bringing up issues.

always in a timely manner, and that there should be a better way of communication what the priority standards were.

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.

RATING	TREND
Adequate (8)	↗

Conclusion

There is a good culture of employees 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 response to employee concerns and reports of hazards is improving with greater formality in operational processes (e.g. IOPS) and culture. F&O has improved the formality and response to employee reporting of hazards and VPP-led actions are underway to provide additional support for this issue.

Opportunities for Improvement

- Continue to address the issue of 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: 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 "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 required to be reported using the SHIMS program.

Weaknesses

- There continues to be an improvement opportunity regarding the level of understanding that some (typically R&D) managers and staff have regarding reporting of injuries and illnesses, particularly minor or delayed-onset cases such as "paper cuts", back injuries, and cumulative trauma illness. There has been and continues to be improvement in this area, but there is not universal understanding of the value of reporting truly minor events or near misses.

- 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.
- Workers are involved in the critiques and there are several ways that they receive information; distribution of hardcopy, lessons learned website, and the Inside PNNL website.
- 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.
- Lessons learned are posted on the Lessons Learned Best practices web site and advertised every

Wednesday with a direct link from the Inside PNNL website. Forty percent of all PNNL staff has accessed the web site. Staff in safety meetings and for general safety information often uses the Lessons Learned and Best Practices information.

- The PNNL Lessons Learned Best Practices program was awarded the Best Practice award by DOE in 2002.
- A graded approach is used when reporting and investigating near misses. The lessons learned program provides a vehicle for communicating near misses.

Recent/Expected Changes

- OSHA 300 reporting requirements changed the basis of injury and illness rates.

Conclusion

RATING	TREND
Good (10)	↗

Accident investigations are well defined and incorporate a rigorous reporting, investigating, analysis, tracking, and distribution process. General knowledge regarding staff reporting requirements could be enhanced.

Opportunities for Improvement

- Provide staff with brief reminders of Occurrence reporting responsibilities.

Tenet: ***Worksite Analysis***
Element: ***Trend Analysis***

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 survey of all PNNL staff (more than 3800 total staff members) was conducted and responses from more than 1500 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.

Management to verify that PNNL's goals of excellence and continuous improvement are attained uses safety performance trends.

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.

Safety & Health Training- Staff Safety and Health Training Performance is trended monthly for each organization. Each staff member is required to complete the Job Evaluation & Training System Tool (JETS) that identifies required training. Training and Qualification then trends completion of required training and reports this information back to the organization. Completion rate for the Laboratory for FY-02 was 99.7%

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
- Safety and health training performance is trended.
- The VPP Employee Survey is developing a good and relatively comprehensive baseline for future trending of issues important to worker safety and health.

Weaknesses

- There is no single 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

RATING	TREND
Adequate (8)	↗

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. The VPP Employee Survey has two data points (FY-2002 and FY-2003). There may be indications of a negative trend for some questions and job categories, but the results are ambiguous because of lack of data. Future surveys will help clarify this issue.

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 (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)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control	**Good (10.8)**	↗

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 was a notable improvement in the understanding and implementation of Personal Protective Equipment requirements during the past year. There is a need to better communicate safety and health principles and requirements to staff, and to ensure that everyone recognizes and implements the common standards that all workers must comply with. 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.

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Tenet: ***Hazard Prevention and Control***
Element: ***Professional Expertise***

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 survey of all PNNL staff (more than 3800 total staff members) was conducted and responses from more than 1500 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 75 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

- Some additional discipline (e.g. biological safety) specific development may be needed within the Safety & Health Department based on the research agenda.
- Records from various safety and health-related activities are not stored in a central location for use by all safety and health staff.
- Some field deployed safety and health staff are better in the field than others. It is important to have

- Worker Safety & Health has strengthened technical qualifications through key hires during the last year.

strong field-deployed safety and health professionals helping staff and management implement safety and health programs

Recent/Expected Changes

- Safety training for new managers is being implemented in FY02.
- Course 1499 and Course 1556 have been established to provide training to the CSM.

Conclusion

RATING	TREND
Good (10)	↗

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.

Opportunities for Improvement

- 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***

Evaluator: Mike Tinker

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 (R^2A^2s) 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

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

make it clear that safety and health rules apply to all staff members, including managers.
- IOPS provides a vehicle for flow-down of a concise, tailored set of rules to the workbench.
- 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. For example, RPL rewards CSMs for timely self-assessment of their spaces.
- 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 needed.
- The flow-down of safety and health rules from SBMS to IOPS is somewhat inconsistent between facilities and may not adequately represent the appropriate set of requirements that workers need to know to fully mitigate some hazards in some of those facilities.
- IOPS requirements and changes are communicated to staff through e-mails and the requirement that they promptly review the information. For staff (such as craft workers) who have broad access to spaces, this can result in information overload and lack of timely, useful information.

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.
- Workers felt that the Health and Safety program had a high visibility and it was introduced in a way where the worker had the opportunity to be informed and proactive in their own safety and health without fear of reprisal.

Recent/Expected Changes

- 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.
- Management systems continue to be combined in the interest of rationalizing the requirements management process of the Laboratory. Recently combined management systems related to the VPP program include the Quality and Integrated ES&H Management Systems (which became the Integrated Quality and ES&H Management System), and the Integrated Planning and Integrated Assessment Management Systems (which became the Integrated Planning and Assessment Management System).

RATING	TREND
Good (11)	↗

Conclusion

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 have 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, and Hazard Analysis Initiative).

- Continue to disseminate information about safety and health accountability (e.g. disciplinary action as well as positive lessons learned) through Lessons Learned 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***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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

Weaknesses

- Users of PPE may not always be aware of the correct PPE for a given application.
- Compliance with requirements has been an issue in the past; on occasion, individuals (reportedly even managers, on occasion) could be identified not wearing proper PPE.
- Inconsistencies in implementation of PPE have been reported.
- One survey respondent said that safety glasses weren't provided and they had to buy their own.

made available to the users. (R&D 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. Job Planning Packages and the plan-of-the-day emphasize the use of PPE when required.
- Routine PPE requirements are posted by signs and other hazard markings.
- 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.
- PPE is required when hazards are present and the hazards cannot be controlled by other means.
- Improvements in the use of PPE and the awareness of proper PPE have been noted during the past year, and there have been significant efforts on the part of management to support these improvements.
- The supervisor of the 350 shop reliably reminds visitors to put on required PPE before entering the shop. Workers are consistently observed wearing appropriate PPE.

Recent/Expected Changes

- Significant improvements in the awareness and implementation of PPE have been noted in the past year as a result of several campaigns led by management and the VPP Steering Committee, resulting from last year's VPP Program Evaluation

Conclusion

RATING	TREND
Good (9)	↗

There is a written program that specifies appropriate PPE and provides protection for staff members using PPE. Staff members and other workers have varying degrees of understanding of PPE protection requirements. Requirements for PPE are specified in work planning and control documents such as Job Planning Packages, Chemical Process (and other) Permits, and procedures. There is improving implementation of PPE requirements across the Laboratory.

Opportunities for Improvement

- Management needs to lead the implementation of the PPE program by rigorously demonstrating proper use of PPE and by reinforcing the use of PPE to their staff.
- Continue efforts to improve awareness of appropriate use of PPE.
- Consider ways to monitor the proper use of appropriate PPE.
- Consider how to recognize/reward proper use of PPE, and how to ensure that non-compliance is eliminated.

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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

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 (e.g., the "run to failure" issue).
- There are reported to be inconsistencies and inefficiencies in the PM review process. Discrepancies are reported to not be resolved in a timely fashion and the interface between facility engineers and the PM group could be improved.

meeting is conducted with craft people before the PM is performed to confirm that they understand the requirements and to address any concerns they have with the PM.
- It was reported that PM procedures get a lot of attention.

Recent/Expected Changes
- None

Conclusion

RATING	TREND
Good (10)	➔

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.

Opportunities for Improvement
- Continue improvements planned for PM program.

Tenet: ***Hazard Prevention and Control***
Element: ***Emergency Preparedness***

Evaluator: 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 (more than 3800 total staff members) was conducted and responses from more than 1500 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

Weaknesses

- The IOPS Global Hazard Information for a Facility contained specific Building Emergency Preparedness (BEP) procedures for some, but not all buildings. Some of the BEP

personal training
- All occupied facilities participate in 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.
- Homeland security issues are being incorporated into building emergency plans.

documents within IOPS were outdated.

Recent/Expected Changes

- The revised Electronic Prep and Risk process is currently being modified to add additional criteria that will assist in the identification of hazardous material requiring planning. When complete, it will assist in identifying requirements and processes for Emergency Preparedness that need to completed prior to the initiation of work.
- The EP web page within the FO website continues to be enhanced. The recent addition of a eight minute emergency preparedness video enables staff to review the EP requirements in a video format.
- Information regarding the response to Chemical/Biological and radiological incidents, Sarin nerve gas, and Anthrax have been added to the EP website for staff information purposes.

RATING	TREND
Good (11)	➔

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.

Opportunities for Improvement

- The BEP should be integrated into IOPS in a consistent manner and provide the most recent BEP available.

Tenet: ***Hazard Prevention and Control***
Element: ***Radiation Protection Program***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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.
- Improvements in the RadCon program related to low-risk work have enhanced the credibility of the radiation protection program.
- ARACS and the computerized rad worksheet has improved perceptions regarding the consistency and ease of use of RadCon requirements.

Weaknesses

- None

Recent/Expected Changes

- ARACS has improved the process of identifying and monitoring radiological control requirements.

RATING	TREND
Good (12)	↗

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.

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***

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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

Weaknesses

- Upgrading of EJTA to interact with JETS (training) has been put on hold due to funding issues.
- The "Return to Work" program could benefit from more definition and higher worker involvement.

believe they had previous work 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. A high percentage of bargaining unit workers took advantage of Past History physicals.
- 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.
- The VPP Steering Committee sponsored the installation of two blood pressure units to encourage worker health by allowing staff to monitor their blood pressure.

Recent/Expected Changes

- The integration of JETS and the EJTA system continues to be an objective of the ESH&Q directorate.
- The process for requiring EJTAs for subcontractor workers has been improved.
- The VPP Steering Committee is preparing a proposal to deploy Automatic External Defibrillators (AEDs). AEDs are being deployed for high risk groups (divers and electricians).

Conclusion

PNNL has a better than adequate Medical Program to assist in the

RATING	TREND
Good (11)	↗

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.

Opportunities for Improvement

- Continue funding efforts for the integration of JETS with the EJTA process.
- Continue supporting worker health initiatives such as the blood pressure monitors and AEDs.

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

Evaluator: Mike Tinker

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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.
- Field deployed subject matter experts help with the communication and interpretation of safety and health programs.
- SBMS is currently implementing process to become compliant with WISHA ergonomics rule prior to the 2003 deadline.
- The SBMS Continuous Improvement Initiative is streamlining subject areas and implementation of search engines

Weaknesses

- SBMS is somewhat complex and difficult to navigate.
- Staff often rely on past experience/ knowledge rather than current information/ requirements.
- There needs to be greater emphasis on occupational ergonomics.
- Chemical Process Permits (and other health and safety information such as IH monitoring results) needs to be archived and made more accessible to facilitate the legacy building information.

are making it less difficult to navigate while searching for specific safety requirements. The SBMS screen redesign enhancements undertaken this 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. Management system improvements are reportedly helping.

- Legacy building hazards are receiving attention and the results are being documented for future use. The information will be accessible through the Map Information Tool (MIT).
- The 2003 VPP Survey indicates that 84% of the staff that responded to the survey agrees that they are knowledgeable regarding the PNNL Safety and Health Program. Only 3% disagree.

Recent/Expected Changes

- Management System improvements identified in an FY01 Operational Improvement Initiative 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

RATING	TREND
Good (12)	↗

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

Opportunities for Improvement

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

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Tenet: *Safety & Health Training*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Safety & Health Training		
Employees	**Good (10)**	➔
Supervisors Managers	**Adequate (8)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Safety & Health Training	**Good (9)**	↗

SYNOPSIS

Safety and health training of workers is very good in terms of scope, coverage, timeliness, and quality. The training of supervisors and managers in topics related to worker safety and health 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. It should be noted that the excellent support network provided to managers by professional safety and health staff compensates to some extent for their limited training in those areas.

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

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

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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 "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 relevant to work activities, an increase from previous years.

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.)
- Staff report problems reading or using the on-line system.

- 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.
- Mentoring is very important in some organizations.
- Last fiscal year 99.8% of required training was taken in a timely fashion.
- The 2003 VPP Survey shows that 84% of the staff completing the survey is knowledgeable regarding the PNNL Safety and Health Program. Only 3% disagreed.
- The 2003 VPP Survey indicates that 89% of the staff completing the survey agrees that the safety and health training they receive is appropriate for their jobs. Only 3 % disagree.
- 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.
- IOPS reading assignment completion is not verified in any effective way.
- 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.
- Some staff report that web based training is less effective for them and that they would appreciate more personal training.
- The FY2003 VPP Survey indicates that 21% of the Bargaining Unit disagrees that the safety and health training they receive is appropriate for their job.

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

RATING	TREND
Good (10)	➔

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.

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.)
- Add additional information on PNNL VPP in the New Employee Orientation.

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

Evaluator: Harold N. Bowers

ASSESSMENT

PNNL's management approach makes little distinction between Managers and Supervisors. This is reflected in the VPP application and the FY2003 VPP Program Evaluation finds that this approach continues to be valid. See the Program Evaluation Datasheet 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: Harold N. Bowers

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 (more than 3800 total staff members) was conducted and responses from more than 1500 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).
- The 2003 VPP Survey indicated that 95% of the managers that completed the survey responded that they were knowledgeable regarding the PNNL Safety and Health Program. Only 1% disagreed.
- The 2003 VPP Survey indicated that 97% of the managers that completed the survey responded that they received safety and health training appropriate for their job. Only 1% disagreed.

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.
- A Managers Safety Training course has been scheduled for completion but will not be completed until 2003.

- The F&O manager qualification process (e.g., for Building Managers) and the implementation of Leadership Development – 101 are signs of good manager training in that organization.

Recent/Expected Changes

- Safety training for new managers is being implemented in FY03.

RATING	TREND
Adequate (8)	↗

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.

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-2003

EMPLOYEE SURVEY

EXECUTIVE SUMMARY
QUESTIONNAIRE RESULTS
SUMMARY OF COMMENTS

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Employee Survey Results

Executive Summary

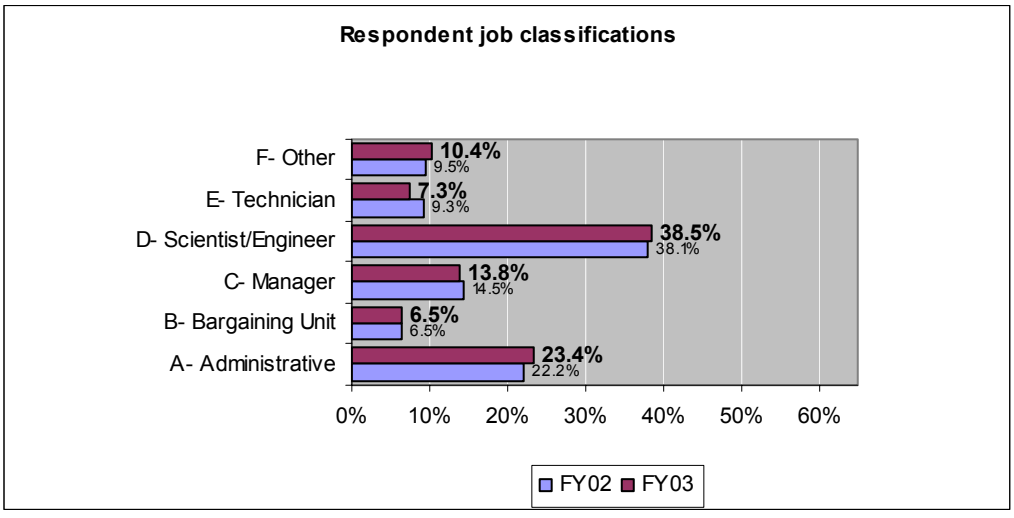
The Employee Survey was 15 questions, 3 related to each VPP Tenet (plus a question related to the Job Category of the respondent). The questions were based very closely on a survey that Fluor Hanford has used for several years.

Responses were received from 1574 staff members (an increase of more than 300 over last year, and 40.9% of PNNL's 3846 total staff members). Not all respondents answered every question, but many (149) staff members provided additional comments. The fact that 40% 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

Job Classification of Respondents
Respondents were asked to classify themselves regarding their job category. Most respondents classified themselves as scientists and engineers (604). Administrative, secretarial, and clerical respondents were next (366), followed by managers (217). 115 technicians responded as did 102 bargaining unit workers. This distribution of respondents is similar to the distribution of jobs at PNNL. A chart showing the response from different job classifications for FY02 compared with FY01 is shown below. Several negative comments were received on the choice of job classifications presented, related to the terminology used ("bargaining unit" vs "Crafts", "Technician", and "Administrative").



Management Leadership (Questions 1-3)
Management works to improve safety and health. There continues to be 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. An analysis of the data by job classification indicated that there are significant bargaining unit issues (~20% "disagree" with each of the questions).

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. Over 84% of staff members agreed with the statement that “you are knowledgeable regarding PNNL’s safety & health program”. An analysis of the data by job classification indicated that there are significant bargaining unit issues - those workers appear to be knowledgeable but not involved (~35% "disagree").

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. Many respondents chose the “Don’t Know/Not Applicable” response. An analysis of the data by job classification indicated that some bargaining unit workers (and to a lesser extent others) aren't aware of safety inspections (~30%), get good response to concerns (~17%), or get involved with safety evaluations (~35%).

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. An analysis of the data by job classification indicated that there are bargaining unit issues again - noticeably higher levels of "disagreement" (~20%) for the questions related to use of controls and enforcement of procedures.

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. An analysis of the data by job classification indicated that hazard recognition training is good across the board. However, some bargaining unit workers don't believe training is appropriate for their job (~20% "disagree") or that coworkers know how to respond to an emergency (~11% "disagree").

Comments

The number of comments received this year (149) was very similar to the number of comments received last year (151). While many of the comments received were judged by the evaluation team to be "negative" (approximately 73 – as compared to 90 last year), about 50 were neutral and about 26 were positive. The comments primarily addressed 5 main issues:

- General comments about the safety program
- Management commitment to worker safety & health.
- The respondent's perceived value of the VPP program and its methods.
- Concerns about the survey question regarding managers' attitudes about prevention of ALL accidents
- Current issues (such as IOPS training, safety training, and various other specific safety topics).

The bargaining unit workers had some particularly negative comments. Scientists and engineers had lots of comments, many critical of safety and/or management.

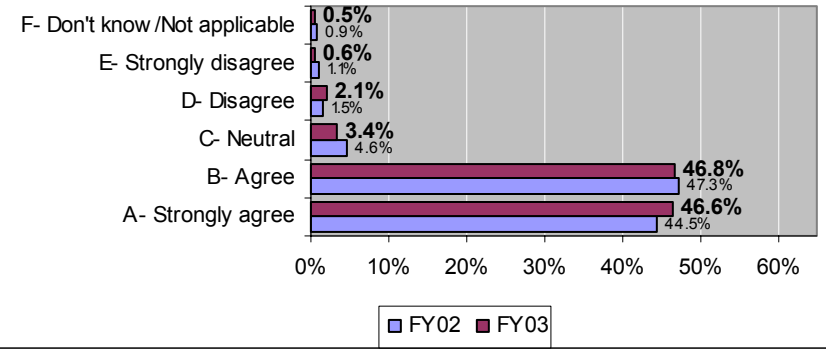
Comments that negatively reflected on the safety program and management commitment to worker safety and health were a minority of total respondents, but are of particular concern (however, there were a number of positive comments about safety at the Laboratory). Comments that negatively reflected on 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 specific concerns or contact information and the VPP Steering Committee will respond to those comments.

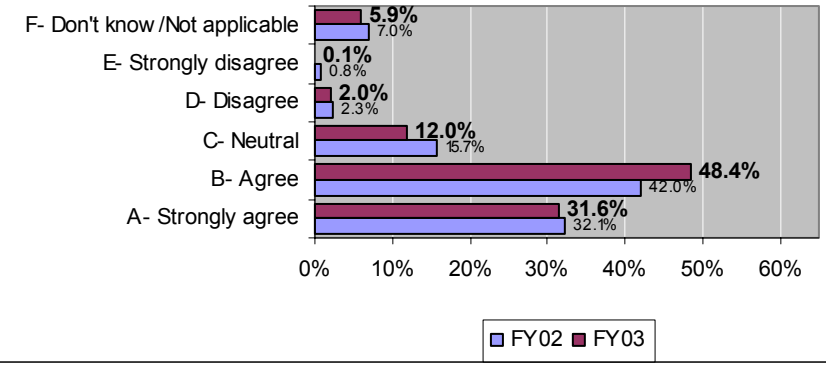
Results of Questions

Management Leadership

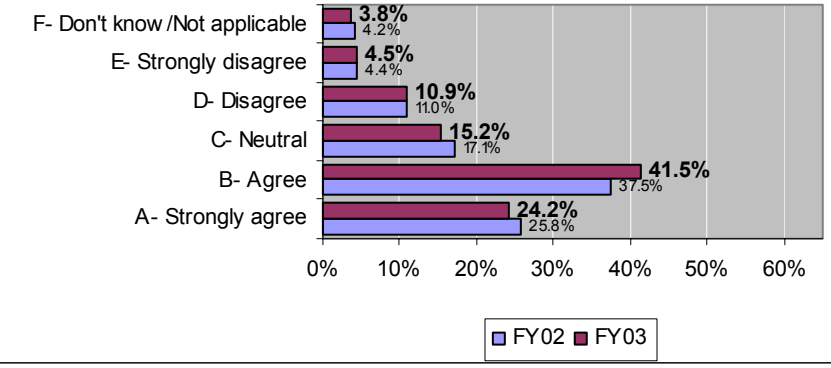
1. I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.



2. Your manager exhibits the attitude that all accidents can be prevented

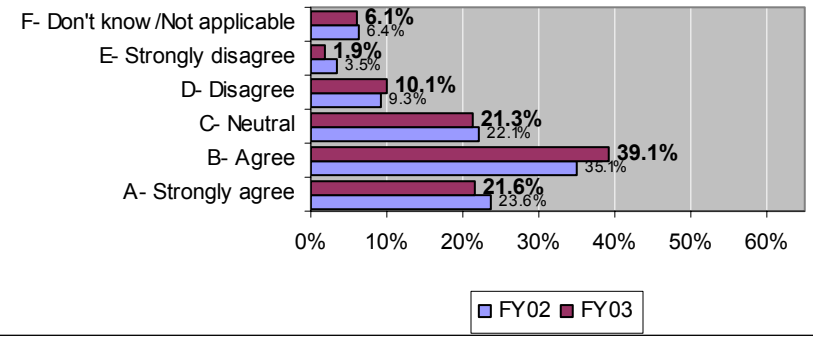


3. Management visits your workplace on a routine basis.

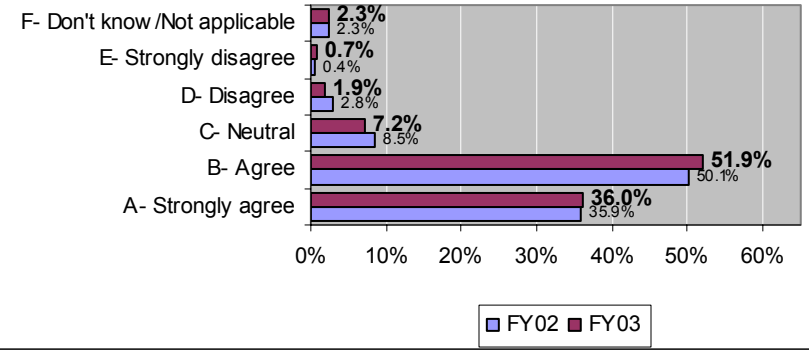


Employee Involvement

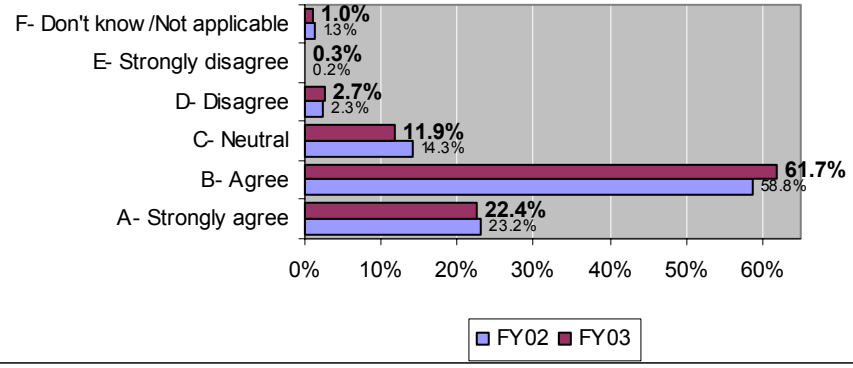
4. You are regularly involved in decisions that affect your safety and health.



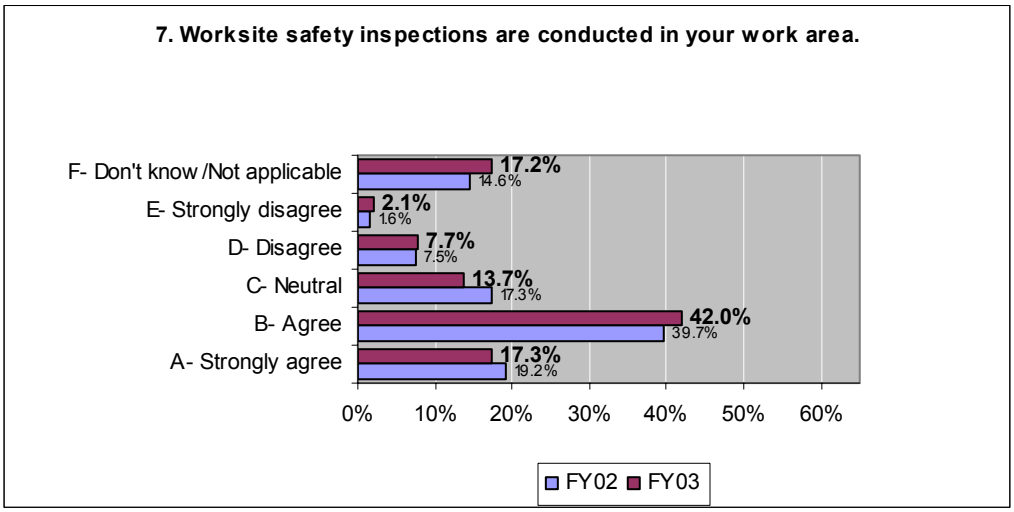
5. You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Labor Safety Council.

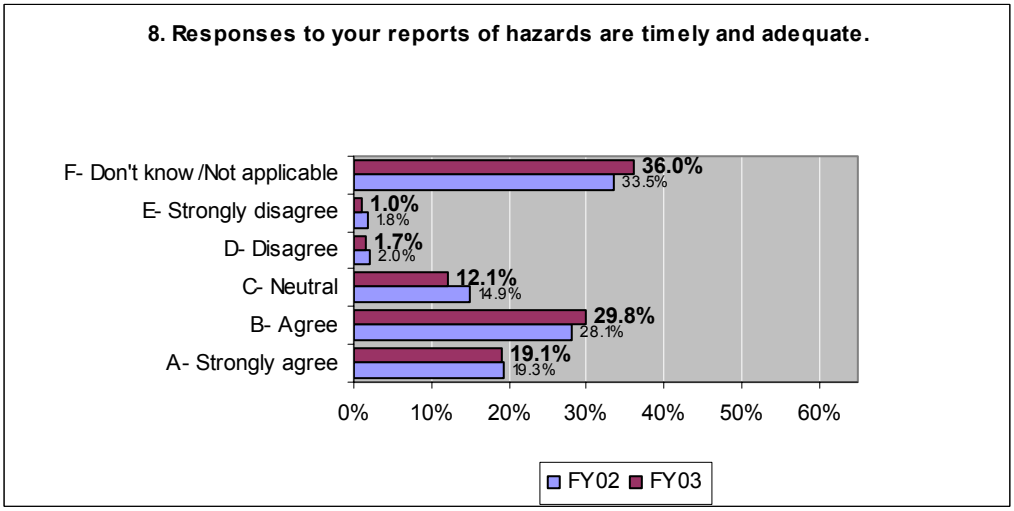


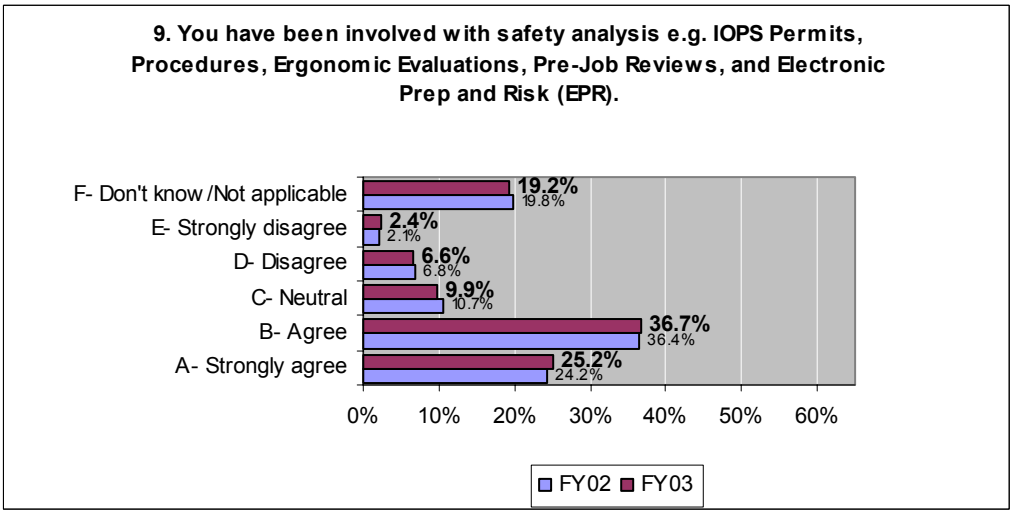
6. You are knowledgable regarding the PNNL Safety and Health Program.



Worksite Analysis

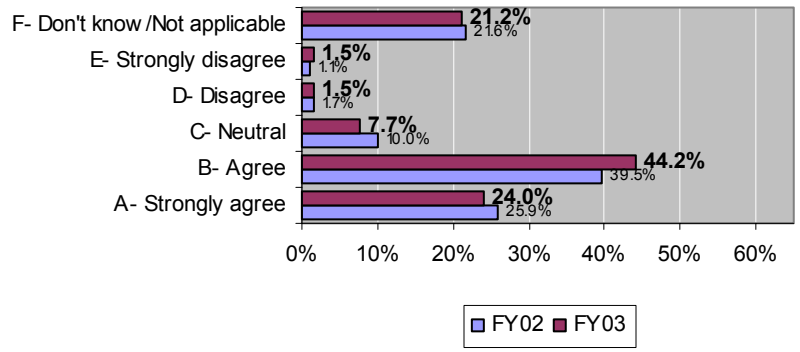




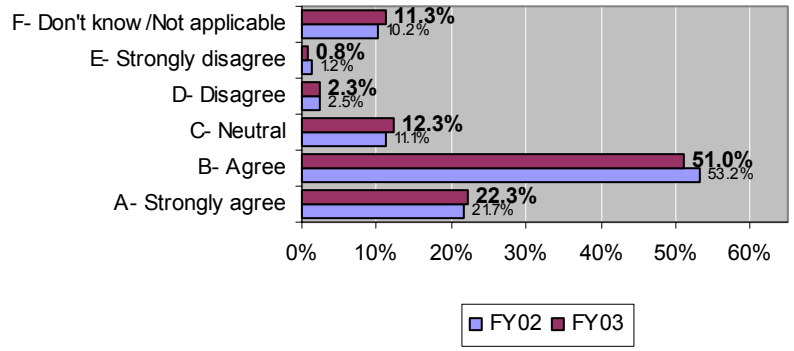


Hazard Prevention and Control

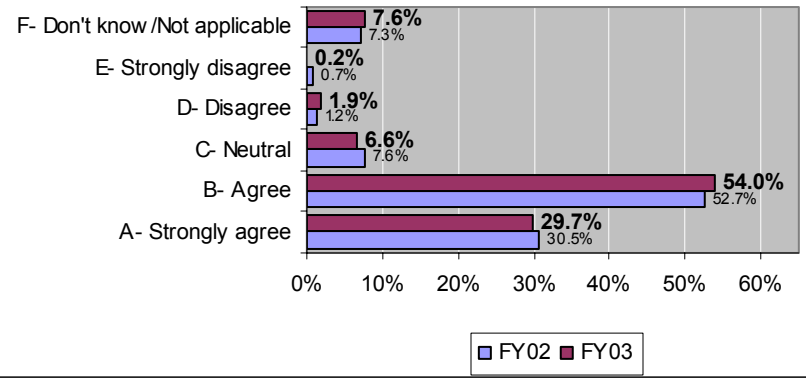
10. Engineering controls, work practices, or personal protective equipment supports your ability to work safely.



11. You have seen safe work procedures fairly and consistently enforced.

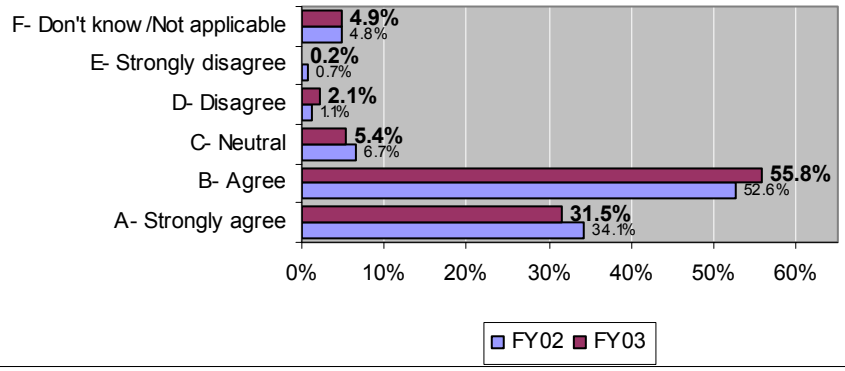


12. Equipment in your work area is properly/adequately maintained for safe operation.

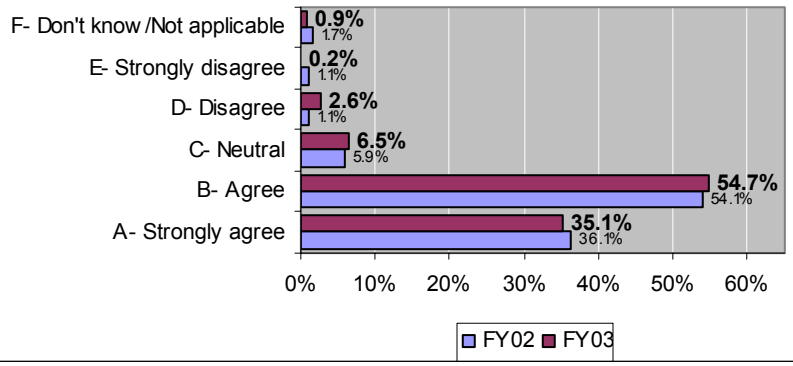


Safety & Health Training

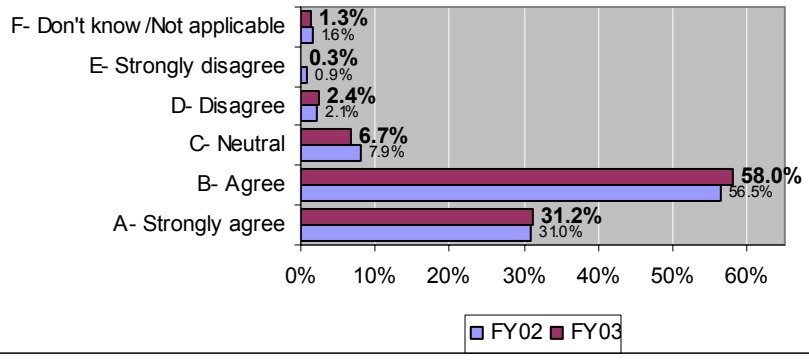
13. You have been trained to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.



14. The safety and health training you receive is appropriate for your job.



15. You are confident that your coworkers know what actions to take and where to go in an emergency at your work location.



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 and compared to the results of last year:

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

Question #		FY03 Agree	FY02
1	**I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.**	93%	92%
14	**The safety and health training you receive is appropriate for your job.**	90%	90%
15	**You are confident that your coworkers know what actions to take and where to go in an emergency at your work location.**	89%	87%
5	**You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Labor Safety Council.**	88%	86%
13	**You have been trained to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.**	87%	87%
6	**You are knowledgeable regarding the PNNL Safety and Health Program.**	84%	82%
12	**Equipment in your work area is properly/adequately maintained for safe operation.**	84%	83%
2	**Your manager exhibits the attitude that all accidents can be prevented.**	80%	74%
11	**You have seen safe work procedures fairly and consistently enforced.**	73%	75%
10	**Engineering controls, work practices, or personal protective equipment supports your ability to work safely.**	68%	65%
3	**Management visits your workplace on a routine basis.**	66%	63%
9	**You have been involved with safety analysis e.g. IOPS Permits, Procedures, Ergonomic Evaluations, Pre-Job Reviews, and Electronic Prep and Risk (EPR).**	62%	61%
4	**You are regularly involved in decisions that affect your safety and health.**	61%	59%
7	**Worksite safety inspections are conducted in your work area.**	59%	59%
8	**Responses to your reports of hazards are timely and adequate.**	49%	47%

Questions were also sorted in order of Disagreement with the statement, from highest level of disagreement to lowest and compared to results from last year:

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

Question #		FY03 Disagree	FY02
3	**Management visits your workplace on a routine basis.**	15%	15%
4	**You are regularly involved in decisions that affect your safety and health.**	12%	13%
7	**Worksite safety inspections are conducted in your work area.**	10%	9%
9	**You have been involved with safety analysis e.g. IOPS Permits, Procedures, Ergonomic Evaluations, Pre-Job Reviews, and Electronic Prep and Risk (EPR).**	9%	9%
11	**You have seen safe work procedures fairly and consistently enforced.**	3%	4%
6	**You are knowledgeable regarding the PNNL Safety and Health Program.**	3%	3%
10	**Engineering controls, work practices, or personal protective equipment supports your ability to work safely.**	3%	3%
14	**The safety and health training you receive is appropriate for your job.**	3%	2%
8	**Responses to your reports of hazards are timely and adequate.**	3%	4%
15	**You are confident that your coworkers know what actions to take and where to go in an emergency at your work location.**	3%	3%
1	**I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.**	3%	3%
5	**You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Labor Safety Council.**	3%	3%
13	**You have been trained to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.**	2%	2%
2	**Your manager exhibits the attitude that all accidents can be prevented.**	2%	3%
12	**Equipment in your work area is properly/adequately maintained for safe operation.**	2%	2%

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

Analysis of the aggregate survey question results reveals similar conclusions to last year's results:

- 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.

Analysis of Results by Job Classification

Respondents were asked to classify themselves as: Administrative, Bargaining Unit, Management, Scientist/Engineer, Technician, or Other. Some respondents were not happy with the job classifications provided (e.g., "Administrative", "Bargaining Unit"), but most respondents placed themselves into one of the categories provided. The responses from those groups may provide some insight into specific areas of opportunity for improvement within the Laboratory. Results from different job classifications will be reviewed and provided for consideration by appropriate elements of the organization.

Review of Comments

Additional comments were provided by 149 respondents. More than twenty five comments were judged by the evaluation team to be positive, about seventy comments were at least somewhat negative, and around fifty 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 twenty six positive comments (~17%) is considered to be a very good sign.

The responses were grouped into the following categories:

- General comments about the safety program
  - Positive comments
  - Negative comments
  - Comments about safety priorities
  - Comments about how concerns are handled
  - Comments about safety policies
- Comments about management
  - General management
  - Resources
  - Management communications
  - Safety meetings
- Voluntary Protection Program

  - VPP in general
  - Steering Committee
  - Porcelain Press
- Question #2, which said: "Your manager exhibits the attitude that all accidents can be prevented."
- Other topics
  - IOPS training
  - Safety training in general
  - Other specific topics including: emergency exercises, personal protective equipment, international travel, ergonomics, pedestrian safety, and chemical safety

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

<u>General comments about the safety program</u>

- Positive comments
  - *"I'm proud to work at a national laboratory where an employee's safety and health is highly valued."*
  - *"The quality and effectiveness of the worker safety and health at PNNL has improved drastically in the last several years."*
  - *"I thought PNNL's safety attitude was a bit excessive until I left to work in industry for a few years. I found their safety programs were more for the companys protection rather than the workers. I now have a better appreciation of Battelle's commitment to safety and feel my concerns are addressed."*
  - *"SME's are available to provide support to staff at all levels and in all stages of their work"... "improvements to the PNNL Safety program have greatly improved over the last few years. Part or the change has been by the implementation of VPP but also just by Management's effort to keep workers safe and to give our customers a good product."*
  - *"I think our health and safety folks are great too!"*
  - *"I think level of work safety concern is appropriate -- but wouldn't want it to get any more rigorous."*
  - *"the worker safety and health program at PNNL is outstanding."*

  From these comments we can conclude that there is evidence that PNNL's safety program in general is strong and appreciated by at least some staff.

- Negative comments
  - *"Safety is not consistant and is at best maintained at the minimum required by law. It is (at times) depeneant on cost or time" ... "We are still in the dark in general when we are working with chemical or biological hazards. 'HAZWOPER' training is given to very very few 'hands-on' workers but liberally to the management."*
  - *"'Am I a Safe Worker?' heck everyone is going to say YES, if they don't they are already dead or mangled which proves they aren't, or*

someone around them wasn't. Am I a Safe Worker - uumm yeah. Do I take risks on the job - Yes, do I do things that are Unsafe - probably - but they are inside MY SAFETY BUBBLE boundaries. If I tried to follow all the rules I could accomplish nothing - either for myself or for anyone else/the job. While Safety, IOPS, and all the other programs are here to protect the worker, they are really here to protect "the COMPANY" by trying to stop stupid people from doing stupid things to themselves or those around them. Ie - mixing caustic chemicals while wearing shorts and sandals. When I tried to stop that practice I took a lot heat, both from the stupid person and a manager."

- *"The safety requirements sometimes make the job more hazardous then if you did not use the latest greatest safety gear!!!!!!!"*
- *"I feel their has been an effort to step up safety to get the VPP stamp of approval."*

These negative perceptions of our safety program indicate that there are some significant improvement opportunities in the consistent application of safety program elements and the communication of priorities and intentions related to the safety program.

- Comments about safety priorities
  - *"It has and always will be MONEY first not safety!!!!!!!"*
  - *"It seems to me that the Lab is spending WAY too much time on this "triple crown" thing and not nearly enough time on our core business and mission. ... Is management really focusing on the right thing?"*
  - *"If anything, there is too much emphasis on safety in my environment. I work on computers, not a wet-lab, or with power tools."*
  - *"I think there's a lot of overkill on safety issues, especially with IOPS."*
  - *"Safety & Health needs to be more cost effective and solution oriented. Tendency at PNNL is for the safety professionals to be ultraconservative which drives up labor costs and spreads fear in the craftsmen."*

Other than the first comment, these responses reflect how strong the safety program is – perhaps stronger than some staff believe is appropriate. There is probably room for greater tailoring of safety requirements in some areas to get away from the “overkill” concern. The contrast between the first comment “MONEY first not safety” and the other comments related to overkill and ultraconservative safety indicates that a minority don’t believe that the Lab is committed to safety, but most see ample evidence that safety is a priority.

- Comments about how concerns are handled
  - *"my manager and I complained, but nothing was ever done to eliminate this safety hazard. Now I'm moving to another building so I no longer care to push the issue. It was frustrating for my boss and I to point out an obvious safety hazard and be ignored. It certainly left the impression that safety isn't as important as all the rhetoric claims it is."*
  - *"Management allows staff to raise issues as ?safety? concerns that are not safety related such as slightly elevated room temperatures or*

personal preference in products or how to accomplish a job. This does not promote safety, increases cost, and degrades staff confidence in management and the safety function."

Although the Program Evaluation saw evidence that there has been significant improvement in how concerns are handled, particularly within F&O, these comments indicate that there is room for more improvement. These comments appear to come from non-bargaining unit staff. Our experience has been that there is a long memory with people who have not been satisfied with how concerns are handled. There is also a significant difference in how people perceive the priorities of concerns. This matter bears further attention as time goes on.

- Comments about safety policies
  - *"I work entirely from my home. I'm not sure how or if PNNL's health and safety program rules apply to me."*
  - *"Some safety procedures seem to contradict expected outcomes. eg. management visit workspaces for safety ... IOPS tends to discourage this, placing the inspection emphasis on the "room owner""*

These comments indicate that we should clarify some policy issues. Health and safety for telecommuters is an issue of growing concern and the Laboratory should improve its policy and communication about that. The need to clarify the relationship between IOPS self-assessments and other kinds of self-assessments has been recognized in various other forums and deserves attention as well.

Comments about management

- General Management
  - *"Management seems to be mostly talk and no action,the front line workers are never in on the ground floor planning, but when something goes wrong management will put the blame on its workers and never back them up.!!!!!!"*
  - *"no one truly cares about what is going on"*
  - *"When I bring up safety related issues they seem to be ignored unless I continually bring it up. Therefore I feel like a complainer and don't want to bother next time."*
  - *"I was injured on the job..I had a manager and a safety person that did not take me seriously...That I was hurt. The manager is not longer here..But the safety person is..It took six monthes for action to take place."*
  - *"I don't feel that Management is any more serious about safety issue's than there budgets allow them to be! In other words if the money isn't there to address an issue then it gets swept under the carpet, sometimes called priorityes. ... This applies clear up to and with in DOE. A policy of "If we don't acknowlage there is a problem then we (the Co.)can't be held accountable" is the rule not the exception."*
  - *"This place is NOT a business and cannot be run like a business. We don't produce widgets, we are an R&D facility. … Try doing things first*

like raising the morale of the workers in the bargaining Unit. Get rid of the deadwood in F&O management F&O is so fat on management it's sickening. …they haven't the skills to run this place and those incompetent management skills trickle down through management chain. You have a few really wonderful people … that if they were left alone to manage their way, at least their people would be happy. But, that's not what happens in F&O, they just make you a supervisor and you're on your own no training, no security so it's the same visous cycle. Now with budget restraints it's gettting worse"

- *"While the safety culture at PNNL is expressed in emails and other documents, there does not appear to be a strong committment by management to ensure "all" staff are aware of workplace, home and road safety. Compaines like Bechtel, CH2MHill and Fluor all start meetings with safety lectures, discuss it in all meetings, and require staff to bring forward safety issues, ideas and recommendations."*

Management support of workers regarding safety is extremely important and it is an issue that will stand out to workers if there is anything less than exemplary performance. These comments indicate that we have a number of issues where workers perceive management to have failed them. This should be a matter of strong emphasis throughout the organization.

- Resources
  - *"Provide some time to staff for safety related issues, as opposed to expecting them to do this on their own time."*

Other assessments have noted that some staff report not getting enough resources to support safety responsibilities.

- Management communications
  - *"My opinion on health has to do with mental and physical also. I feel stress is added to the job when the manager will not communicate with her employees (ie, a simple hello)."*
  - *"I seldom see my line manager"*
  - *"The only problems that I have is the unbelievably poor communications", e.g. the handling of the asbestos and beryllium issues*

These comments indicate that some (presumably small number) managers may not be doing a good job of interfacing with their staff. The last comment relates to communications led by the Worker Safety & Health Management System related to the potential for asbestos and beryllium contamination in some facilities.

- Safety meetings
  - *"It is my belief that Safety meetings are for everyone. I would like to see one being held (at least) once in awhile…"*
  - *"We used to have a regularly scheduled safety meeting but don't have them any more."*

Safety meetings are not required at PNNL and many managers no longer hold them. Some workers valued those meetings as opportunities to learn about safety requirements and lessons learned.

Voluntary Protection Program

- VPP in general

(Positive)

- *"These surveys are an excellent refreser to keep safety and health on people's minds."*
- *"VPP is doing a good job."*
- *"Keep the E-mail and newsletters coming steadily for the latest updates."*

These comments make it clear that some staff appreciate the emphasis on safety that VPP brings.

(Negative)

- *"I see the value in safe operations and my management is very involved and has clearly expressed safety as extremely important. That aside, the actual purpose of the VPP status eludes me. The toilet press is of little or no value, and besides that I'm not clear what the VPP is doing that we did not already do extremely well."*
- *"VPP to me is a sign on the back of the toilet stall door. ... Seems like a waste of resourse when so many of us are very overworked."*
- *"Besides being a check off on some DOE sheet somewhere, what added value is actually provided by VPP above the systems that were in place prior to VPP?"*
- *"I would be a bigger proponent of VPP if I wasn't aware of bargaining unit staff using safety as a work slow down reason for worker related grievances."*
- *"That VPP flag that flys next to the American flag should be taken down. Its the utmost in arrogance for the Bureaucrats to think their program merits a flag."*
- *"VPP is the solution to a probem that didn't exist."*

However, a number of staff fail to see the purpose or value of the VPP program. This indicates that the VPP Steering Committee and management needs to continue to focus communications on why VPP is important to PNNL.

- Steering Committee
  - *"I think the VPP Steering Committee does a great job."*
  - *"The Steering Committee has been doing an outstanding job throughout this entire effort. The longevity of the "Porclain Press" has demostrated that this is not just another "flavor of the day"."*
  - *"PNNL management should take a stronger role in the VPP Safety Program. To be effective (and consistent with other sites) the program must be a joint effort, not a bargaining unit effort with management fearful of "taking over"."*

There were no negative comments about the Steering Committee, which is an endorsement. These positive comments and the recommendation that management become more involved in the VPP program are welcome and valuable.

- Porcelain Press
  - *"I think it's great that there is a periodic newsletter talking about safety and health issues, making people aware of the VPP and its status in PNNL."*
  - *"Keep up the good work with the Porcelain Press!!"*
  - *"Get rid of porcelin press....."*

  The Porcelain Press is becoming more valued by staff and there are fewer complaints than in previous years.

Question #2: "Your manager exhibits the attitude that all accidents can be prevented."

- *"We know that accidents happen even when an effective comprehensive program of prevention exists"*
- *"It is not possible to prevent ALL accidents."*
- *"I agree that all accidents are preventable, however whenever there are human beings involved it is naive to think that there will never be an accident. I believe it is the responsibility of everyone involved to ensure there is a safe work environment and to be attentive to detail to reduce the risk of an accident. ...eventually (maybe over the course of several years) something will go wrong and there will be an accident. Hopefully on the very rare occasion that an accident does occur, people will keep in mind the human factors and not punish those involved in the spirit of 'no accidents...none...not ever'."*
- *"I find question #2 lacking in reality. We do everything to minimize the chance of an accident, but accept the fact that they do happen. We always try to ask the question "what if?" when we are planning our work. But to say that "ALL accidents can be prevented," fails to understand that some accidents are simply "acts of God" while others result from the fact that we are human and are not perfect. No matter what we do, there will always be some element of risk and thus a chance for an accident. I believe my manager is a realist, not an idealist."*
- *"Question 2 above is based on a fallacy, since all accidents CANNOT be prevented. However, most accidents can be prevented and the impacts those that cannot be prevented can be mitigated."*
- *"I personally believe that management workplace visits with the attitude that ALL accidents can be prevented through enforcement, procedures, inspections, controls etc. are all WAY SECONDARY to education, knowledge and attitude of the workforce who perform"*

Question #2 is clearly problematic for many staff members. The concept that accidents are preventable is contentious and arguments against the concept revolve around the inevitability of accidents based on chance or "acts of God". The principle that all accidents are preventable is not the first

thing that comes to mind with the question as it is currently phrased and it may be desirable to modify the terminology in future surveys.

Other topics

- IOPS training
  - *"We need to continue to improve our ES&H performance by continuing to build on our safety culture here at PNNL. One of the best ways to do this is for PNNL Management to embrace and reinforce the use of the IOPS system by our lab staff."*
  - *"Some of the <IOPS> training is good, but there are also some that are generalized or send you off to SBMS for definitive answers which cannot be found or take much too long to find."*
  - *"I think there's a lot of overkill on safety issues, especially with IOPS. It tends to be a shotgun approach, resulting in training for hazards that are never encountered"*
  - *"IOPS is a joke!!!!!!! It looks good from the outside, I 'm sure. We crafts are responsible to know ALL the hazzards, 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 differant, 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. If we 'punch' onto any topic for that room, the IOPS system is satisfied, wether we visited the right space or not!!"*

  IOPS training has been criticized in a number of past assessments. The concept and process presented by IOPS is generally acknowledged to be good for hazard communication purposes, but the implementation (especially for some groups such as Crafts) is tedious and is reported to be of low value. This is an improvement opportunity that is being worked on by the owners of IOPS.

- Safety training in general
  - *"PNNL/BNW has no safety training. They do have regulation training. All safety training is really carried out like the apprentice programs of old"*
  - *"Many of the on-line courses could be streamlined considerably as there is much information of little to no value. While this is sometimes unavoidable because a wide range of people are being trained, there should be more recognition that this is wasting many folks' time."*
  - *"All I took was computer-based training. Real presentation would be appreciated."*
  - *"PNNL's 100% computer based training does not afford the opportunity for researchers to interact with others, hear there lessons learned, give feed back, etc."*

  The debate about the cost-effectiveness of computer based training, vs. the preference of some to attend classroom training has been an issue for some

time. The demand for classroom training is decreasing and the reviews of computer based training have been improving. This will continue to be an issue.

- Other specific topics including: emergency exercises, personal protective equipment, international travel, ergonomics, pedestrian safety, and chemical safety
  - *"Emergency exercises are almost non-existent, thus staff would probably falter in a real emergency situation requiring reporting and/or evacuation. Bomb threats and fires are examples."*
  - *"Had to purchase my own safety glasses; none were provided for me"*
  - *"The greatest weakness in PNNL's Health and Safety program is in the area of travel, especially international travel." (e.g., travel for 24 to 30 hours before arriving at their destination."*
  - *"I wish there was more information given to workers on health problems resulting from sitting in front of a computer for prolonged time periods."*
  - *"OUR NEW SAFE CHEMICALS HELPS."*
  - *"The comingling of foot traffic and cars in parking lots is an area that has the potential for a serious accident."*

  These specific kinds of comments are notable in terms of the small number and the relatively positive tone. The one about safety glasses not being provided is troubling and contrary to PNNL requirements. All of these items will be followed up on as appropriate.

All comments identifying issues of concern will followed up on by the VPP Steering Committee.