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**Voluntary Protection
Program**  **Protection**

Pacific Northwest National Laboratory
PNNL

U.S. Department of Energy
Voluntary Protection Program
DOE-VPP

FY-2004 Program Evaluation

January 2004

<http://www.pnl.gov/vpp/documents/vpppe2004.pdf>

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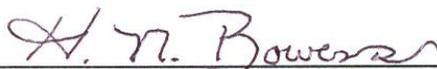
Voluntary Protection Program



FY-2004 PNNL DOE-VPP Program Evaluation

January 2004

Submitted by:


H. N. Bowers, Program Evaluation Team Leader

Approved by:

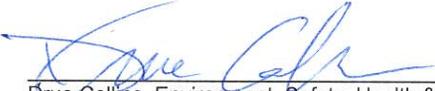
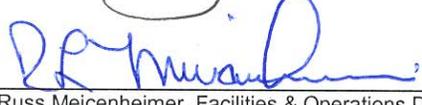
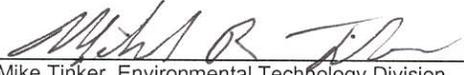

V. J. Madison, Jr., VPP Steering Committee Bargaining Unit Co-Chair


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

PNNL VPP Program Evaluation Team Signatures

The PNNL VPP Program Evaluation Team for FY 2004 is a group of Battelle staff members from across the Laboratory and two representatives of other Hanford contractors. 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 staff members, site walkthroughs, document reviews, and review of previous issues and actions. A DOE observer also participated in the process and review of this report, but did not influence findings and conclusions.

Signatures

 <hr/> Harold Bowers, Environmental Technology Directorate (Team Lead)	1/21/04 date
 <hr/> Ed Beck, Environment, Safety, Health & Quality Directorate	1/21/04 date
 <hr/> Drué Collins, Environment, Safety, Health & Quality Directorate	1/21/04 date
 <hr/> Janice Haney, Facilities & Operations Directorate	1-21-04 date
 <hr/> Nancy Isern, Fundamental Sciences Directorate	1/21/04 date
 <hr/> Vern Madson, Facilities & Operations Directorate	1-21-04 date
 <hr/> Steve Maki, Fluor Federal Services	1-26-04 date
 <hr/> Russ Meicenheimer, Facilities & Operations Directorate	1-21-04 date
 <hr/> Ron Oak, Fluor Hanford	1-21-04 date
 <hr/> Mike Tinker, Environmental Technology Division	1/21/2004 date
 <hr/> Pat Wright, Environment, Safety, Health & Quality Directorate	1/21/2004 date

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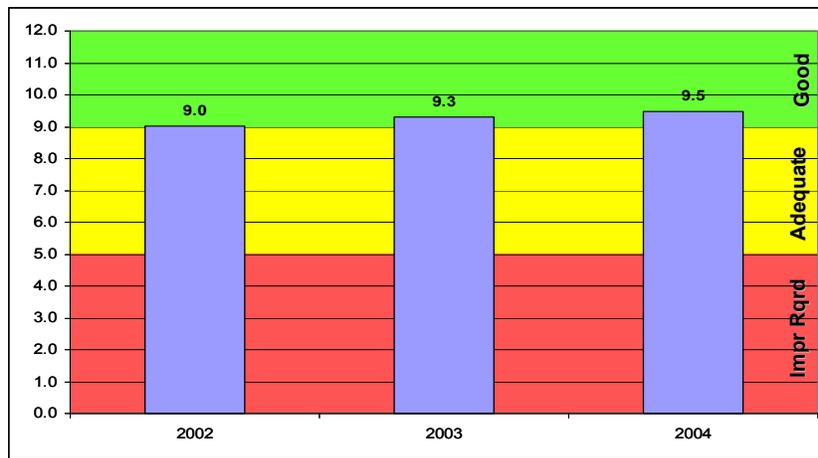
ACRONYMS

AED	Automated External Defibrillators	Buildings	
ALARA	As Low As Reasonably Achievable	APEL	Applied Process Engineering Laboratory
ARACS	Automated Radiological Access Control System	EDL	Engineering Development Laboratory
ATS	Assessment Tracking System	EMSL	Environmental Molecular Sciences Laboratory
BEP	Building Emergency Plan	ETB	Environmental Technology Building
BLS	Bureau of Labor Statistics	ISB1/2	Information Sciences Building (1 or 2)
BMS	Biological Management System	2400STV	2400 Stevens Building
CHP	Certified Health Physicist	NSB	National Security Building
CIH	Certified Industrial Hygienist	PSL	Physical Sciences Building
CMS	Chemical Management System	ROB	Research Operations Building
CSM	Cognizant Space Managers		
CSP	Certified Safety Professional		
CY	Calendar Year		
DART	Days Away and Restricted Time		
DEAR	Department of Energy Acquisition Regulation		
DOE	Department of Energy		
DOE-HQ	DOE - Headquarters		
DOE-OA	DOE - Office of Independent Oversight and Performance Assurance		
EJTA	Employee Job Task Analysis		
EPR	Electronic Preparation and Risk System		
ES&H	Environmental Safety and Health		
ESH&Q	Environment, Safety, Health and Quality		
F&O	Facilities and Operations		
FY	Fiscal Year		
HAMTC	Hanford Atomic & Metal Trades Council		
IO	Independent Oversight		
IOPS	Integrated Operation System		
ISM	Integrated Safety Management		
ISO	International Standards Organization		
JETS	Job Evaluation Training System		
MIT	Map Information Tool		
NNSA/EH	National Nuclear Security Agency/Environmental Health (DOE Offices)		
NRC	Nuclear Regulatory Commission		
NSD	National Security Directorate		
OII	Operational Improvement Initiative		
OSHA	Occupational Safety and Health Administration		
PE	Professional Engineer		
PNNL	Pacific Northwest National Laboratory		
POC	Point of Contact		
PPE	Personal Protective Equipment		
R&D	Research and Development		
R2A2 or R ² A ²	Roles, Responsibilities, Accountabilities and Authorities		
RBAC	Role Based Access Control		
RMMT	Radiological Materials Management and Tracking system		
RPL	Radiochemical Processing Laboratory		
S&H	Safety and Health		
SBMS	Standards Based Management System		
SDR	Staff Development Review		
SHIMS	Safety and Health Information Management System		
SIC	Standard Industrial Classification		
SME	Subject Matter Expert		
SOPs	Standard Operating Procedure		
T&Q	Training and Qualification		
VPP	Voluntary Protection Program		
VPPPA	VPP Participants Association		
WEA	Workplace Exposure Assessment		
WET	Worker Eligibility & Training system		
WISHA	Washington Industrial Safety and Health Administration		

PNNL FY 2004 DOE-VPP Program Evaluation

Executive Summary

The Pacific Northwest National Laboratory (PNNL) Voluntary Protection Program (VPP) Steering Committee completed the FY 2004 VPP Program Evaluation in January 2004. The evaluation indicates ongoing improvement in the already excellent worker safety and health programs at PNNL. The overall VPP Program Evaluation rating this year was 9.5 on a scale of 0-12. Administrative adjustments have been made to some ratings from previous years based on improvements in the VPP Program Evaluation process. The trend of ratings over the past three years (accounting for the administrative adjustments) is indicated in the chart below.



Although there continue to be improvement opportunities in the development and implementation of some program elements, all of the basic tenets of VPP are in place and the elements under each tenet are generally well developed and implemented.

Progress is being made on weaknesses and opportunities for improvement related to previous VPP Program Evaluations. The issues identified by the VPP Program Evaluation this year are consistent with and build on previously identified issues. The issues for improvement identified this year are:

- Accountability
- Employee Involvement
- Manager Training
- Continuous improvement of the Integrated Operations System (IOPS)
- Trend Analysis

The VPP Steering Committee will work with PNNL senior management to define the appropriate actions to address these issues.

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PNNL VPP Program Evaluation Approach

A team of evaluators representing staff members involved with the Pacific Northwest National Laboratory’s VPP Steering Committee including safety professionals from the ESH&Q Directorate assessed PNNL's programs and performance with respect to DOE-VPP criteria. The overall performance of PNNL's program implementation for each element and its trend (e.g. improving, declining) was rated using the scales 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 past year.

RATING
Good
Adequate
Improvement Required

TREND
↗
→
↘

The performance of the program was also quantitatively rated in accordance with the following values (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%			

Criteria have been developed based on work done by the Hanford VPP Champions group to define characteristics for each rating range and each VPP element.

The FY04 PNNL VPP Program Evaluation team included the following:

Team Members

Harold Bowers, Team Lead

- Drue Collins/Ed Beck
- Janice Haney
- Nancy Isern
- Vern Madson
- Steve Maki (Fluor Fed Services)
- Russ Meicenheimer
- Ron Oak (Fluor Hanford)
- Mike Tinker
- Pat Wright
- 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 the strengths, weaknesses, recent/anticipated changes that will affect each element, and a rating for each element as described above. Recommendations for continuous improvement are provided in the data sheets of each element. Finally, 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 VPP documentation including the “Application” (the original description of PNNL’s VPP program) and previous Program Evaluations, interviews with staff members using questions based on the DOE-VPP “On-Site Review Guidelines,” walkthroughs of PNNL-controlled work locations, and a review of PNNL documentation.

Interviews were conducted with a significant number of PNNL workers, including individual staff members (scientists/engineers, crafts/bargaining unit staff members, technical support staff members, administrative staff members), managers, safety and health support staff members, and subcontractor workers. A table is provided below indicating the number of interviews and facility walkthroughs conducted during the VPP Program Evaluation this year.

Managers	82			
Staff members	226			
Safety	30			
Subcontractors	14			
	<u>352</u>			
Facilities toured	23	318	ANNEX	NSB
		326	APEL	PSL
		329	EDL	PSLshop
		331	EMSL	ROB
		337	ETB	RPL
		350	ISB1	RTL520
		2400STV	ISB2	RTLshops
		350shops	LSLII	

An electronic survey of all PNNL staff members (more than 3800) 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. This response rate is similar to the number of respondents last year and is considered to be a good rate.

A number of other significant assessment activities were conducted at PNNL in the past year, including:

- the DOE-OA 50 Integrated Safety Management Evaluation (ISME) to verify implementation of DEAR clause 970.5223-1
- a corporate Focused Safety Management Evaluation as a self-assessment in preparation for the DOE ISME
- special inspections of DOE facilities by OSHA and NRC as part of a Congressional mandate to evaluate the potential cost of external regulation
- an annual review of PNNL’s Environmental Management System by an independent ISO 14001 registrar
- a variety of high level assessments by PNNL’s Independent Oversight (IO) organization including
 - a special study of IOPS (IO-2003-02)
 - an analysis of laboratory incidents (IO-2003-15)

- a root cause analysis of a recent stop work at Radiochemical Processing Laboratory (RPL) related to asbestos work (IO-2004-01)
- a surveillance by DOE facility representatives of RPL radiological work practices, radiological monitoring, and worker radiological surveys (S-04-LOD-PNNL-001)
- a special study of Craft Resources injuries and illnesses commissioned by the VPP Steering Committee and Craft Resources management

The staff members involved with this VPP Program Evaluation studied the results of those assessments and incorporated them into the evaluation. The conclusions of this VPP Program Evaluation are generally consistent with those assessments.

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 as 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 2004 (see following pages). Five issues identified by this Program Evaluation have been judged to have the potential for significant impact on PNNL's implementation of DOE-VPP and will be entered as conditions 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, many aspects of operations remain similar to previous VPP Program Evaluations. For that reason, there are strong similarities between this report and previous reports. Changes from last year's report are indicated by vertical lines in the left margin.

A critical review of previous VPP Program Evaluation ratings was conducted this year as part of the PNNL VPP Steering Committee's effort to consistently provide an objective and valuable assessment of the status of PNNL safety and health programs. The review concluded that some ratings from previous years were inappropriately high or low based on the criteria being used by this Program Evaluation approach (which is being refined each year). Therefore, "administrative adjustments" have been made to some previous VPP tenet/element ratings to the previous ratings. The rationale for each adjustment is explained in the datasheets for the affected elements. We believe these changes are appropriate and improve the validity and value of this VPP Program Evaluation.

PROGRAM EVALUATION SUMMARY

RATING	TREND
Good (9.5)	↗

PNNL has excellent safety programs and is continuously improving implementation of programs consistent with VPP safety and health criteria. Once again, DOE rated PNNL’s operational performance as “Outstanding” for FY2003. DOE’s six consecutive annual ratings of PNNL’s operational performance as “Outstanding” under Battelle Memorial Institute’s contract with DOE is a strong indication of the effectiveness of our safety and health programs. DOE-VPP’s recognition of PNNL as a STAR site is another. In FY2004 DOE conducted an Integrated Safety Management (ISM) Evaluation that confirmed PNNL’s continuing adherence to the guiding principles and effective implementation of core functions of ISM. Although most staff members 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 by this program evaluation will be tracked in ATS as part of PNNL’s feedback and improvement processes that are directed toward continuous improvement.

Note: Administrative adjustments to the ratings of various tenets and elements have affected the baseline performance as reported in previous years. Those adjustments are reflected in the tenet/element Ratings and Trends table on the next page.

Exhibit 1

**PNNL DOE-VPP PROGRAM EVALUATION
TENET/ELEMENT RATINGS & TRENDS – FY 2004**

Changes	TENET/ELEMENT Weight	FY04 RATING (Score)	2003	2002	FY04 Trend	2003	2002	2004	2003	2002	
→	General Information 3%	Good (12)	12	12	→	↗	↗	12	12	12	
none	Assurance of Commitment 7%	Good (11)	10	10	→	→	→	11	10	10	
Admin adj →	Management Leadership 18%	Good (9.6*)	9.7 9.6	9.6 9.4	→	↗	↗	9.6	9.6	9.4	
→	Commitment	Good (11)	11*	12	→	↗	↗	11	11	11	
none	Organization	Good (10)	10	10	→	→	→	10	10	10	
→	Responsibility	Good (10)	10	10	→	↗	↗	10	10	10	
Admin adj	Accountability	Good (9*)	10 9	10 9	→	→	→	9	9	9	
none	Resources	Good (10)	10	10	→	→	→	10	10	10	
→	Planning	Good (10)	10	10	→	↗	↗	10	10	10	
→	Contract Workers	Adequate (8)	8	7	→	↗	↗	8	8	7	
→	Program Evaluation	Good (11)	11	11	→	↗	↗	11	11	11	
→	Site Orientation	Good (9)	9	9	→	↗	↗	9	9	9	
→	Employee Notification	Adequate (8)	8	7	→	↗	↗	8	8	7	
Improved	Employee Involvement 18%	Adequate (8)	7.5	6.5	↗	↗	→	8	7.5	6.5	
Improved	Degree and Manner of Involvement	Adequate (8)	8	7	↗	↗	→	8	8	7	
Improved	Safety Committees	Adequate (8)	7	6	↗	↗	→	8	7	6	
Improved	Worksite Analysis 18%	Good (9.4*)	9.7 9.3	9.4 9.0	↗	↗	↗	9.4	9.3	9.0	
none	Pre-Use/Pre-Startup Analysis	Good (10)	10	10	↗	↗	↗	10	10	10	
none	Comprehensive Surveys	Good (10)	10	10	↗	↗	↗	10	10	10	
Admin adj.	Self-Inspections	Good (10*)	11 10	11 10	→	→	→	10	10	10	
Admin adj.	Routine Hazard Analysis	Good (10*)	11 10	11 10	↗	↗	↗	10	10	10	
Improved	Employee Reporting of Hazards	Good (9)	8	7	↗	↗	↗	9	8	7	
Admin adj.	Accident Investigations	Good (9*)	10 9	10 9	↗	↗	→	9	9	9	
none	Trend Analysis	Adequate (8)	8	7	↗	↗	→	8	8	7	
Admin adj.	Hazard Prevention & Control 18%	Good (10.4*)	10.8 10.4	10.8 10.4	↗	↗	↗	10.4	10.4	10.4	
→	Professional Expertise	Good (10)	10	10	→	↗	→	10	10	10	
Admin adj →	Safety & Health Rules	Good (10*)	11 10	11 10	→	↗	↗	10	10	10	
none	Personal Protective Equipment	Good (9)	9	9	↗	↗	→	9	9	9	
↗	Preventive Maintenance	Good (10)	10	10	↗	→	→	10	10	10	
none	Emergency Preparedness	Good (11)	11	11	→	→	→	11	11	11	
Admin adj →	Radiation Protection Program	Good (10*)	12 10	12 10	→	↗	↗	10	10	10	
→	Medical Programs	Good (11)	11	11	→	↗	↗	11	11	11	
→	Occupational Safety & Health Programs	Good (12)	12	12	→	↗	↗	12	12	12	
none	Safety & Health Training 18%	Good (9)	9	9	↗	↗	↗	9	9	9	
none	Employees	Good (10)	10	10	→	→	→	10	10	10	
none	Supervisors	Adequate (8)	8	8	↗	↗	↗	8	8	8	
none	Managers	Adequate (8)	8	8	↗	↗	↗	8	8	8	
* indicates that the score from prior year(s) was administratively adjusted to correct for previously incorrect rating (strikeout shows previous score)								baseline change =	9.5	9.3	9.0

Exhibit 2

Three-year Occupational Injury and Illness Data					
PNNL Employees (Only)					
Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Rate	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) rate
2001	6,562,763	68	2.1	32	1.0
2002	6,616,152	55	1.7	30	0.9
2003	6,713,623	51	1.5	33	1.0
2001-2003	19,892,538 <i>Total hours</i>	174 <i>Total cases</i>	1.7 <i>3-yr Average</i>	95 <i>Total cases</i>	1.0 <i>3-yr Average</i>
PNNL Subcontractors (Only)					
Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Rate	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) rate
2001	82,846	2	4.8	1	2.4
2002	103,238	7	13.6	6	11.6
2003	78,362	2	5.1	0	0.0
2001-2003	264,446 <i>Total hours</i>	11 <i>Total cases</i>	8.3 <i>3-yr Average</i>	7 <i>Total cases</i>	5.3 <i>3-yr Average</i>
PNNL TOTAL (including subcontractors)					
Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Rate	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) rate
2001	6,645,609	70	2.1	33	1.0
2002	6,719,390	62	1.8	36	1.1
2003	6,791,985	53	1.6	33	1.0
2001-2003	20,156,984 <i>Total hours</i>	185 <i>Total cases</i>	1.8 <i>3-yr Average</i>	102 <i>Total cases</i>	1.0 <i>3-yr Average</i>
CY2002 Bureau of Labor Statistics rates for SIC 873 "Research development and testing services" (establishments >1000 employees)			2.3		1.0

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 staff members) in the Standard Industrial Code (SIC) #873 "Research development and testing services." VPP criteria for STAR status require that PNNL maintain the three year average Total Recordable Rate for the most recent 3 years below industry average. That rate must include all staff members covered by the program, as well as subcontractors. The most recent data available from the Bureau of Labor Statistics (BLS) is for CY 2002. That data shows the Total Recordable Case Rate for SIC 873 establishments greater than 1000 staff members is 2.3 recordable cases/200,000 worker hours. The rate for cases involving Days Away and Restricted Time (DART) including permanent transfers for our SIC code is 1.0. The PNNL three year average injury and illness rates for staff members, subcontractors, and combined performance for CY 2001-2003, as compared to the current industry average is given in Exhibit 2 (preceding this page). PNNL three-year average rates for these types of occupational injuries and illnesses continue to be at or below the average for our industry.

VPP is encouraging reporting of all injuries and illnesses, no matter how minor. It is important to note that PNNL is seeing an increase in injuries and illnesses reported, but the recordable and DART rates are not going up. This is a sign of a health safety culture that will improve our ability to trend accident causes and prevent re-occurrence.

One issue associated with the current rate calculation is the Occupational Safety & Health Administration/Bureau of Labor Statistics (OSHA/BLS) conversion from OSHA-200 recordkeeping criteria to OSHA-300 recordkeeping criteria in January 2002. 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 cease to be an issue related to the PNNL 3-year average at the end of CY2004 when the recordkeeping requirements established under OSHA-300 will have a three year baseline. (Note that the average for the SIC code may lag another year or two after that). During the period of discontinuity, rates from OSHA-200 recordkeeping criteria and OSHA-300 recordkeeping criteria have been combined with no attempt to reconcile recordkeeping differences between the two criteria.

In early CY 2003 Craft Resources and the VPP Steering Committee commissioned a special analysis of an apparent upward trend in Craft Resources injuries and illnesses. That analysis identified that certain crafts (e.g., Teamsters and Janitors) were indeed experiencing substantially more soft tissue injuries and illnesses related to "body movement or position" and the trend for those types of injuries and illnesses seemed to be increasing. The VPP Steering Committee is working on an initiative to address the causes of that trend through manager and staff member education, engineered controls, and better administrative processes.

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OUTREACH

The VPP Steering Committee at PNNL continued to have strong outreach activities this year. In addition to participation in the Safety & Health Expo and the Region X & National VPPPA Conferences, PNNL provided counsel and direct support to several companies considering or seeking VPP status. Exhibit 3 is a summary of PNNL VPP outreach activities during the CY2003 (the performance period for this FY04 Program Evaluation).

Exhibit 3

 PNNL VPP Steering Committee Outreach Activities - CY2003			
Date(s)	Organization	Description of Outreach	Follow-up action/comments
3/26/2003	Boeing - Seattle	Interested in starting up a Porcelain Press newsletter within their company>	PNNL VPP Steering Committee sent past newsletters and a copy of a blank format document.
3/27/2003	Safety & Health consultant (Marsh & McClennan Insurance)	Has a client who is considering VPP and wants to do a gap analysis. Found our website and was wondering if we had a template that we use to support such an analysis.	Provided access to Program Evaluations and other materials at http://vpp.pnl.gov/vppinfo.htm and suggested that our Program Evaluation template might be helpful. Offered to talk to him or his client if they have any more questions.
7/7/2003	Lawrence Berkely National Laboratory	LBNL is going to start the VPP process and called for more ideas.	Provided information about PNNL VPP experience. Strongly recommended they attend the VPPA National Conference. Also advised them to make sure include R&D and support workers who would play a critical role in making VPP a success in the Lab.
7/8/2003	Boeing - Cape Canaveral Air Force Station	An email was sent to the VPP Inbox requesting some guidance on VPP since Boeing was currently tasked by the U.S. Air Force to submit a Statement of Work for VPP in regards to the new Boeing Delta IV Launch Vehicle.	VPP Steering Committee responded back via email with a detailed overview of our VPP process. Also provided the link to the most current VPP Program Evaluation as well as a link to our VPP website.
7/16/2003	DOE - HQ (NNSA/EH)	NNSA and EH are working to support LANL interest in VPP. They advised the LANL folks who are leading the VPP effort to contact PNNL's VPP Committee for advice and possible mentoring.	Discussed what PNNL has to offer with DOE-HQ contacts. No followup from LANL
9/16/2003 11/10/2003	Brookhaven National Laboratory	As part of an ongoing discussion about VPP with BNL, the PNNL VPP Steering Committee was contacted for more information regarding PNNL experience with VPP development and maintenance.	Provided cost and other program development information. Expect future contacts as BNL program develops.
9/22/2003	DOE - Richland Operations	DOE-RL contacted PNNL VPP Steering Committee for information about purchasing blood pressure monitors.	Provided information about the blood pressure machines that PNNL purchased from Screen America.
10/7/2003	Voluntary Protection Program Participants Association	VPPPA updated their Best Practices Directory for 2004 and again listed PNNL's electronic VPP application as a national best practice.	PNNL VPP Steering Committee contact information was verified.
11/11/2003	United Foundry Co.	United Foundry Co. contacted the PNNL VPP Steering Committee based on PNNL VPP website information. United Foundry is getting ready to prepare a VPP application and wanted to learn from PNNL's experience.	Provided an overview of our experience via a telephone discussion and also provided links to PNNL's VPP website (application, program evaluations, etc.) Offered additional discussion/information if they need it.
12/14/2003 - 12/19/2003	Oak Ridge Institute of Science and Education(ORISE)	DOE VPP (headquarters) requested a PNNL VPP Steering Committee representative to participate in the On-Site Review of ORISE.	A PNNL VPP Steering Committee representative participated on the DOE VPP On-Site Review of ORISE.
12/23/2003	Argonne National Laboratory	Manager, Safety Planning and Compliance Group contacted PNNL VPP Steering Committee to discuss ANL's plans to become a VPP Site.	The PNNL VPP Steering Committee responded and began a dialog that will extend into 2004.
Ongoing	Tri-Cities Schools	A PNNL VPP Steering Committee representative periodically attends elementary school health classes and provides information regarding general safety topics	This activity will continue.

STATUS OF ISSUES FROM PREVIOUS VPP PROGRAM EVALUATIONS

Issues identified in the previous PNNL VPP Program Evaluations are being tracked in the Assessment Tracking System (ATS). 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**
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**
[4248.2](#) - Not Always A Timely & Adequate Response to Employee Concerns **Due:** 6/30/2003 **Owner:** Madson Jr,Vernon J **Status:****Closed**
[4248.3](#) - Better Integ of Info Generated by Assmts, Incidnts & LL **Due:** 10/1/2004 **Owner:** Slate,Steven C **Status:**Accepted
[4248.3.1](#) - Develop/Implement the Lab Assurance Process **Due:** 9/30/2004 **Owner:** Sours,Mardell L **Status:** Accepted
[4248.3.2](#) - Dev Improved Methods of Distr Lessons Learned/Best Practices **Due:** 6/30/2003 **Owner:** Metcalf,Nancy W **Status:** **Closed**
[4248.4](#) - Recent Imprvmts in Sub-Cont Safety Pgrm Need to be Evluated **Due:** 11/1/2003 **Owner:** Dossett,Sharon D **Status:****Closed**
[4248.5](#) - Increased Use of IOPS Has Created Inefficiencies **Due:** 10/1/2003 **Owner:** Wright,Patrick A **Status:****Closed**
[4248.6](#) - Cont Imprvmt w/VPP Steering Com. Supporting ES&H pgrms **Due:** 10/1/2003 **Owner:** Madson Jr,Vernon J **Status:****Closed**
Good progress is being made toward implementation of the actions related to the 2002 PNNL VPP Program Evaluation. Several actions remain in progress.

2003 PNNL VPP Program Evaluation: [4786 - FY 2003 PNNL VPP Program Evaluation](#) **Owner:** Madson Jr,Vernon J **Status:** Submitted
[4786.1](#) - IOPS Reading Assignments **Due:** 9/30/2004 **Owner:** Kimmel,Larry V **Status:**Accepted
[4786.1.1](#) - Develop & Implement an IOPS Implement Plan **Due:** 9/29/2004 **Owner:** Wright,Patrick A **Status:** Accepted
[4786.2](#) - Monitoring/Continual Improvement in Implementation **Due:** 12/31/2003 **Owner:** Enge,Roby D **Status:** **Closed**
[4786.2.1](#) - Perform Assessment for Subcontract Worker Safety **Due:** 12/30/2003 **Owner:** Kimmel,Larry V **Status:** **Closed**
[4786.2.2](#) - Perform Assessment of PPE Use **Due:** 12/30/2003 **Owner:** Enge,Roby D **Status:** **Closed**
[4786.2.3](#) - Perform Assessment of Injury/Illnesses rates for F&O & Cont. **Due:** 12/30/2003 **Owner:** Enge,Roby D **Status:** **Closed**
[4786.3](#) - Mgmt. Implementation of Worker Safety & Health **Due:** 3/31/2004 **Owner:** Alvarez,Juan **Status:**Accepted
[4786.3.1](#) - Injury/Illness causal Analysis **Due:** 3/30/2004 **Owner:** Sadesky,Raymond A **Status:** Accepted
[4786.3.2](#) - NSD ES&H Training **Due:** 1/23/2004 **Owner:** Andersen,Cameron M **Status:** **Closed**
[4786.3.3](#) - Manager ES&H Training **Due:** 2/28/2004 **Owner:** Kimmel,Larry V **Status:** Accepted
[4786.4](#) - VPP Steering Committee Improvements **Due:** 9/30/2003 **Owner:** Madson Jr,Vernon J **Status:****Closed**
[4786.4.1](#) - Establish VPP Steering Committee Charter **Due:** 9/29/2003 **Owner:** Madson Jr,Vernon J **Status:** **Closed**
[4786.4.2](#) - Mgmt. Needs to Recognize Participation in Safety Comm. **Due:** 9/29/2003 **Owner:** Kimmel,Larry V **Status:** **Closed**
Good progress is being made toward implementation of the actions related to the 2003 PNNL VPP Program Evaluation. Several actions remain in progress.

ISSUES FOR IMPROVEMENT*(FY2004 PNNL VPP Program Evaluation)*

The following issues for improvement have been developed by the VPP Program Evaluation team based on observations and evaluation of PNNL's implementation of DOE-VPP tenets and elements.

The "Issue" identifies the topic to be improved. The "Primary Tenet/Element" referenced for each issue identifies the VPP tenet that needs to be addressed to resolve the issue, resulting in a performance rating that better meets PNNL VPP expectations. While formal root cause analyses were not performed, the identified weaknesses in the implementation of the primary VPP tenet/element are believed to be a significant factor in the low rating. The "Other Related VPP Tenets/Elements" provide additional insights into the full nature of the issue and are indicative of the need to address the primary issue. Incorporating these other aspects in the resolution of the issue will improve the overall robustness of the PNNL safety program.

1. **ISSUE: Accountability** – Some PNNL staff members and managers fail to rigorously execute their responsibilities in the performance of their work. This is exhibited in behaviors that include: 1) failure to accurately and completely document information in hazard analysis and work authorization documents (e.g., permits); 2) failure to perform work in accordance with established requirements and procedures; and 3) failure to establish and document processes that demonstrate that work is being controlled and hazards are being mitigated as required. Key areas where diligence needs to be improved include the following:
 - Product Line Managers need to verify that Project Managers prepare accurate and complete Risk Mitigation Permits for projects in their product lines before the permits are signed. They need to confirm that projects are executed within the operational risk boundaries identified by the Risk Mitigation Permits.
 - Cognizant Space Managers (CSM) need to make sure that all of the hazards active in their space are identified in the Hazard Awareness Summary. They need to make sure that the Hazard Awareness Summaries are appropriately annotated to communicate key hazard issues and special hazard mitigation considerations. CSMs need to verify on an on-going basis that workers in their spaces are properly "associated with hazards" related to the work they are performing and are assigned appropriate training and reading assignments, including high quality permits.
 - Construction Managers need to monitor and confirm that subcontractors are utilizing the required PPE, permits, procedures, and other hazard mitigation tools related to their work. Construction Managers also need to verify that hazards are properly identified and their mitigation is incorporated into subcontractor job planning packages.

- Safety & Health Representatives need to promptly complete injury and illness investigations as information related to each case develops. They need to perform high quality reviews of permits and verify that an appropriate level of detail and appropriate controls are implemented in the permits.
- Line Managers need to make sure that their staff members have the appropriate qualifications, tools, and resources for their work and that they are implementing required hazard mitigations. Line managers need to provide appropriate positive incentives and promptly and fairly apply disciplinary action when needed. This applies to all management levels and across organizations. It has been noted that there are perceived inconsistencies in implementation of requirements and expectations between some organizational components (e.g., R&D vs. F&O, PNNL vs. subcontractor) from the point of view of some staff members. To the extent that perceptions are incorrect, communication of the requirement that implementation must meet consistent standards needs to be improved. To the extent that there is inconsistent implementation of standards, incentives and disciplinary action needs to be focused on the appropriate management level responsible for ensuring that work is executed properly.
- Staff Members need to reliably comply with hazard mitigation requirements related to their work. Specific examples of failures that indicate this is a problem include staff members not reliably implementing radiological controls, staff members using inadequate PPE, and being unaware of specific hazard controls (e.g., permits) for their work.

PRIMARY VPP TENET/ELEMENT: *Management Leadership/Accountability*
(see [Datasheet-15](#))

OTHER RELATED VPP TENETS/ELEMENTS:

- *Management Leadership/Responsibility* (see [Datasheet-13](#))
- *Management Leadership/Contract Workers* (see [Datasheet-24](#))
- *Worksite Analysis/Routine Hazard Analysis* (see [Datasheet-55](#))
- *Worksite Analysis/Accident Investigations* (see [Datasheet-61](#))
- *Hazard Prevention & Control/Safety & Health Rules* (see [Datasheet-73](#))
- *Hazard Prevention & Control/Personal Protective Equipment* (see [Datasheet-77](#))
- *Hazard Prevention & Control/Radiation Protection Program* (see [Datasheet-84](#))

- 2. ISSUE: Employee Involvement** – A significant number of staff members continue to be dissatisfied with opportunities to be involved with PNNL's operational processes. Much of this dissatisfaction comes from craft workers and is related to concerns about involvement in safety committees. Some staff members are confused about appropriate avenues for involvement. Other staff members do not believe the opportunities for involvement are adequate, appropriate, and/or properly implemented. The institutional processes for engaging staff members and assuring the needed level and type of involvement lack clear and consistent implementation guidelines.

PRIMARY VPP TENET/ELEMENTS:

- Employee Involvement/Degree and Manner of Involvement (see [Datasheet-39](#))*
- Employee Involvement/Safety Committees (see [Datasheet-41](#))*

OTHER RELATED VPP TENET/ELEMENTS:

- *Management Leadership/Employee Notification (see [Datasheet-33](#))*
- *Worksite Analysis/Employee Reporting of Hazards (see [Datasheet-57](#))*
- *Hazard Prevention & Control/Radiation Protection Program (see [Datasheet-84](#))*

- 3. ISSUE: Manager Training** – The issue identified in previous VPP Program Evaluations related to manager training needs continuing attention. F&O has a Manager 101 training process, but some staff members believe that improvement in safety management skills within F&O needs more attention. Good progress has been made by the National Security Directorate to develop a pilot training program aimed primarily at new supervisors. Other R&D directorates are already adopting the pilot program, however the Laboratory has not embraced, owned, and sponsored the effort as a Laboratory-level value or priority. In order to attain full value from the initiative, senior management needs to accept ownership and sponsorship of this issue.

PRIMARY VPP TENET/ELEMENTS: *Safety & Health Training/Supervisors & Managers (see [Datasheet-99](#))*

OTHER RELATED VPP TENET/ELEMENTS:

- *Management Leadership/Accountability (see [Datasheet-16](#))*
- *Management Leadership/Planning (see [Datasheet-21](#))*
- *Management Leadership/Site Orientation (see [Datasheet-29](#))*
- *Worksite Analysis/Employee Reporting of Hazards (see [Datasheet-57](#))*
- *Hazard Prevention & Control/Professional Expertise (see [Datasheet-70](#))*
- *Hazard Prevention & Control/Safety & Health Rules (see [Datasheet-74](#))*

- 4. ISSUE: Continue to Improve IOPS** – Internal stakeholders and external assessors have found IOPS to be a valuable tool for implementing bench-level safety and health hazard controls. However, IOPS continues to have many opportunities for improvement, particularly in needing to more efficiently and effectively deliver needed information (currently in the form of reading assignments including work practices, permits, and hazard awareness summaries) in a timely manner.

PRIMARY VPP TENET/ELEMENT: *Management Leadership/Employee Notification* (see [Datasheet-32](#))

OTHER RELATED VPP TENET/ELEMENTS:

- *Management Leadership/Program Evaluation* (see [Datasheet-26](#))
- *Management Leadership/Site Orientation* (see [Datasheet-29](#))
- *Worksite Analysis/Routine Hazard Analysis* (see [Datasheet-55](#))

- 5. ISSUE: Trend Analysis** – The VPP Steering Committee has identified a lack of adequate trend information related to injury and illness accidents that prevents the prompt and clear identification of potentially adverse safety and health trends. For example, the recognition of an adverse trend in injuries and illnesses within F&O Craft Resources depended on the exceptional efforts of certain managers and support staff members in that organization. Even then, there was considerable additional expense and delay to identify the specific problem areas before corrective action could be initiated. Furthermore, the recent Integrated Safety Management Evaluation identified that many injury and illness investigations are not being properly completed.

It is strongly recommended that the Safety & Health Information Management System (SHIMS) and accident investigation process be improved to better identify accident causes in such a way that the data can be used to prevent recurrence. ESH&Q management needs to monitor injury and illness trend information to alert line management of potentially adverse trends. In addition, Laboratory management (supported by ESH&Q) should consider developing a process to capture near-miss or lower severity incidents that could provide trend information that would help prevent accidents.

PRIMARY VPP TENET/ELEMENT: *Worksite Analysis/Trend Analysis* (see [Datasheet-64](#))

OTHER RELATED VPP TENET/ELEMENTS:

- *Worksite Analysis/Self-Inspections* (see [Datasheet-51](#))
- *Worksite Analysis/Accident Investigations* (see [Datasheet-61](#))

These five issues will be entered into the Assessment Tracking System (ATS) as conditions under the FY2004 PNNL VPP Program Evaluation and condition owners will be assigned to determine what actions need to be taken based on the recommendations. The actions and conditions will be tracked to completion in ATS.

Other Improvement Opportunities

The following improvement opportunities were identified by the VPP Program Evaluation team and staff members who participated in the Employee Survey. These improvement opportunities were not associated with the significant programmatic improvements that are needed to achieve the desired level of performance under VPP tenets and elements identified as "Issues" in this report. These improvement opportunities are being reported to the appropriate Laboratory stakeholders for consideration. They will not be entered into ATS as conditions from this assessment.

Laboratory-Level Improvements (*Deputy Laboratory Director for Operations*)

- Operational Improvement Initiatives have provided great benefit to worker safety and health programs at PNNL. The greatest improvements have come from initiatives that are integrating existing excellent systems and reducing the difficulty of staff members in the conduct of their work. The Laboratory should continue to support important cross-cutting initiatives that will help PNNL achieve continuous improvement in ES&H performance. Past successes included IOPS and the Hazard Analysis Initiative. Current initiatives are the Radioactive Materials Management and Tracking system. Future opportunities include integration of EJTA & JETS, and continuous improvement in ubiquitous systems such as SBMS, IOPS, and EPR.
- Improvement in safety awareness and management commitment to safety will help the Laboratory achieve the cultural improvements that will help the Laboratory achieve the next level in safety excellence. One suggestion that merits consideration is the practice (already implemented by some other organizations) of starting every meeting with a "safety topic". Such a practice need not be time consuming. In many cases the safety topics is solicited from participants in the meeting and it is not required to be relevant to the main purpose of the meeting. This practice has been noted by managers and workers alike as emphasizing the importance of continuous focus on safety.
- PNNL utilizes a variety of "safety committees" to support its safety programs. Examples include the VPP Steering Committee, IOPS Facility Safety Committees, the Electrical Safety Committee, the Lock & Tag Committee, the ALARA Committee, etc. Other "committees" have important safety functions including the Chemical Management System Committee, the Operations Managers Forum, and other groups, some of which may even be ad hoc (operating without charter or formal institutional mandate). The existence and activities of these committees (for lack of a more universal word) can be confusing to staff members and are often not as well coordinated as would be optimum. Meetings of these groups are often productive, but they can also consume substantial labor hours. The Laboratory should consider how to institutionalize and coordinate committee activities to maximize value to the institution and minimize operational costs.

Line Management (Operations Managers and ALDs)

- Managers need to be more visible in the field. The VPP Employee Survey indicated that fewer than 70% of managers visit staff members' workplaces on a routine basis.
- There is a need to improve staff members' understanding of their roles responsibilities, accountabilities, and authorities. Many staff members (including managers, project managers, product line managers, etc.) do not have a clear understanding of the specific expectations and responsibilities of their role(s), and the authorities they can/must exercise. Some R2A2 are not always well communicated by immediate managers and in a few cases (e.g., Operations Managers) they are not documented or institutionalized at all. Responsibilities for safety need to be individually identified in position descriptions and performance with respect to those responsibilities needs to be evaluated in staff members' Staff Development Reviews and periodic performance evaluations.
- Managers need to continuously reinforce staff members' responsibilities with regard to safety. Specific issues that need attention include:
 - Staff members' rights and responsibilities to have their concerns addressed promptly and without fear of reprisal. Managers need to be supportive and proactive in addressing staff members' concerns.
 - Staff members need to understand the requirements they work under, including the specific details of permits and procedures that control mitigation of hazards. Managers must lead by example by diligently implementing requirements and demanding that staff members do the same. Specific examples of instances where improvement is needed include incident reporting, the use of PPE, and the implementation of procedures.
- Managers at all levels need to implement mechanisms to verify that expectations are being met (this may include assessments or other processes).
- Managers need to vigorously use incentives (both positive and negative) to reinforce behaviors.
- Some staff members believe that there needs to be more emphasis on office safety and that safety meetings would be helpful for both office as well as lab staff members.

VPP Steering Committee

- The VPP Steering Committee needs to continue increasing its focus on high-value worker safety and health issues such as the recent successes implementing blood pressure monitoring machines, Automated External Defibrillators (AEDs), and high value VPP Program Evaluations. Examples of activities the VPP Steering Committee should focus on include:
 - Prevention of injuries and illnesses
 - Communicating the value and benefits that VPP brings to the Laboratory
 - Support for staff members involved in accident critiques
 - Rewarding safety and health excellence
 - Supporting and encouraging healthy lifestyles

- Communicating aspects of the safety and health program such as voluntary medical examinations and basic program information that can benefit staff members in their work
- Promoting staff member involvement in PNNL safety and health programs
- Update VPP program documentation.
- Continue VPP outreach activities.
- Maintain the vigor of the VPP Steering Committee by recognizing the contribution of Steering Committee members and providing for rotation of membership to new members who want to be involved.
- Consider how to improve the process to identify, address, and provide consistent timely action and feedback for issues identified by staff members.
- Consider ways to avoid perceived overreaction to events, with the object of encouraging reporting, which will allow PNNL to address safety issues that are identified in reported events.

Integrated Operations System (IOPS) (Integrated Quality, ES&H Management System)

- Improve the delivery of information (e.g., reading assignments, especially Work Practice Documents and Hazard Awareness Summaries) so they are more relevant and timely, and less redundant.
- Consider making it a requirement that Hazard Awareness Summaries be posted at the entrance of each Laboratory.
- Improve the IOPS self-assessment process to efficiently and effectively identify hazards, correct problems, and report results for Lab-wide trending.
- Consider integrating emergency preparedness information (from building emergency plans) into IOPS.
- Consider implementing quizzes associated with the delivery of IOPS reading assignments to verify that staff have read and understood the important hazard mitigation information. This was an often-repeated recommendation from many types of staff members who use IOPS and question the value of the reading assignments.

Worker Safety & Health (Worker Safety & Health Management System)

- Improve the Safety & Health Management System so that it can support trend analysis and injury/illness recurrence prevention. Verify that investigations are performed rigorously and promptly, in accordance with established procedures.
- Improve the perception of Safety & Health Reps' expertise with those subsets of PNNL staff members who do not currently respect their advice.
- Improve follow-up on workplace exposure monitoring to assure that staff members affected by the monitoring receive prompt and accurate feedback of results.
- Consider how to improve case management and the suitability of previously injured staff members for a given job.

Radiological Control (*Radiological Control Management System*)

- Consider how to reduce the complexity of radiological work and whether additional RCTs are needed to support the work.

Training (*Training and Qualification Management System*)

- Consider how to provide training in face-to-face encounters when desired by staff members or when otherwise appropriate.
- Improve the training of staff about new or changed safety requirements.
- Provide periodic quizzes and refresher information to help staff members retain needed information.
- Provide training (e.g., radworker training) for new staff members that is geared toward their level of understanding of PNNL's environment. One new staff member indicated that their initial radworker training did not give them enough detail.
- Training needs to focus on understanding of risks as well as specific procedural compliance.
- Some staff members feel that training is overkill and does not focus on the specific issues needed for staff to perform their job.

Lessons Learned (*Integrated Planning & Assessment Management System*)

- Continue working to develop and disseminate Lessons Learned to help staff understand the hazards, hazard mitigations, and responsibilities of their job.
- Consider developing a Lessons Learned/Best Practice related to positive business opportunities and favorable responses from clients associated with VPP STAR status.

Self-Assessment (*Integrated Planning & Assessment Management System*)

- The Lab-level process description for self-assessment needs to be improved to provide greater clarity and an appropriate level of consistency, resulting in the roll-up and use of results, which will allow the Laboratory to adequately assess program performance.

Subcontractor Work (*Facility Management System*)

- Continuing attention needs to be given to the implementation of ES&H requirements by and for subcontractors.
- Verify that independent subcontractors are reporting injuries and illnesses as required.
- Subcontractor job planning needs improvement as exhibited by the recent asbestos incident.
- Offer a detailed briefing of the PNNL subcontractor safety program to subcontractors who adopt it.
- Middle and senior management need to pay more attention to the new construction safety program to verify that it is getting appropriate resources and that needed improvements are being made.

Miscellaneous F&O Issues (Facility Operations)

- Continue the improvements planned for the Preventive Maintenance Program.
- F&O management needs to continue working to improve feedback processes to incorporate lessons learned (including those identified by staff members) from previous job performance into future job planning.

Specific Facility Issues – from the employee survey (Facility Management Services)

- Remove moving boxes in a more timely manner
- Check corridors for burned out/flickering light bulbs.
- Monitor air quality in buildings with chemical laboratories.
- Clean up after maintenance work (ladders, equipment removed from service)
- An additional forklift is needed in the Richland North.
- A belt sander in the RPL shop has an electrical problem.
- Proper storage is needed for lifting equipment and forklifts
- Better traffic control (e.g., stop signs) is needed in PNNL parking lots
- There are concerns about safety during late night hours when staff members have to walk out to their cars.
- Lab doors in EMSL have no windows creating a hazard for those who work alone
- Hands free faucets are needed in the restrooms
- Motion detecting switches in restrooms create a hazard when the lights go out while staff members are in the stalls.
- Staff members need to drive more slowly in parking lots and be alert for pedestrians
- More sidewalks are needed and there needs to be better lighting for sidewalks and parking lots
- There is a problem in Lab 1521 (building unspecified) where the door must remain locked and staff members unlocking the door can be hit by those exiting the lab.

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**PNNL DOE-VPP
Annual Program Evaluation
FY-2004**

DATASHEETS

ORGANIZED BY:

**VPP
TENET & ELEMENT**

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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 the Region X VPPPA 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.
 4. Participation in the annual Hanford Safety & Health Expo.
 5. Hosting visits and dialog with

Weaknesses

- We continue to refer to the "Application" even though STAR status has been achieved. The on-line description of how PNNL meets VPP criteria needs to be transitioned into the Program Description.
- The on-line description of how PNNL meets VPP criteria (the "Application") is not being kept up-to-date and many links are broken.

various other organizations regarding the possibility of establishing a VPP program.

Recent/Expected Changes

- The change in OSHA/BLS recordkeeping criteria will continue to create a discontinuity in the comparison of accident rates for another year. This is not expected to have a significant impact on PNNL’s accident rate trends.
- The “Application” is being converted into a Program Description that will be more relevant and easier to keep current.

Conclusion

RATING	TREND
Good (12)	→

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 and health and meets DOE-VPP criteria. The “Application” (which will become the VPP Program Description) needs to 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 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 and health, following a template suggested by DOE-VPP guidelines. The labor assurance of commitment has been a letter from the bargaining unit council expressing support for PNNL's pursuit of VPP recognition. With the new VPP Steering Committee Charter and the HAMTC president's endorsement of it, the charter will replace the previous labor assurance of commitment

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.
- The VPP Steering Committee Charter strengthens the institutionalization of the VPP program at PNNL and it reflects the ongoing assurance of commitment by PNNL and HAMTC.

Weaknesses

- None

Recent/Expected Changes

- None

Conclusion

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

RATING	TREND
Good (11)	→

Opportunities for Improvement

- None

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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 (9*)	→
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 (9.6*)	→

SYNOPSIS

Management leadership at PNNL is strong. PNNL's VPP program has a strong element of staff member ownership, and it is clearly a partnering of management, labor and other staff members. The Laboratory continues to have issues with less-than-adequate accountability in some regards. PNNL needs to continue working to improve staff members' understanding of and involvement in 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 member R²A² through those tools and other processes (e.g., performance evaluation, reinforcement, etc.). Other areas of potential improvement are the implementation of safety requirements by subcontract workers, particularly the implementation of appropriate safety practices by some working level subcontract workers.

The rating for this tenet was administratively adjusted downward because of recently recognized changes in the Accountability element. A variety of long term issues have been identified and clarified during the past year related to the diligence that some staff members and managers apply to certain aspects of their jobs. Management has not always done a good job of identifying these deficiencies and addressing them. Accountability is still strong overall and the rating of 9 reflects that. The administrative adjustment will allow the VPP Steering Committee to better monitor needed improvements in this area. The administrative adjustments for this element does not imply that there has been a

decline in performance over the past year. Instead, it reflects the recognition that improvements are needed that were not previously recognized. Previous years' ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Ratings for certain elements under this tenet ("Accountability" and "Employee Notification") need to be improved to accomplish the following:

- Management needs to establish a clear expectation that staff members (including managers) will perform their jobs with due diligence and in accordance with established requirements. Management then needs to implement mechanisms to verify that expectations are being met (including assessments or other processes). Where deficiencies in performance are identified, management needs to fairly, consistently, and promptly hold the appropriate roles accountable.
- The primary issue related to IOPS from a VPP perspective is the inefficient, redundant, and potentially confusing delivery of electronic reading assignments to staff members. Other improvement opportunities have been identified related to the content and integration of information related to bench-level control of hazards.

Improvement of the Accountability element should drive needed changes to improve the rating of Contract Workers.

Tenet: Management Leadership
Element: Commitment

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

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

Strengths

- PNNL is committed to continuous improvement of its management systems and management approach to operations.
- The vast majority of line managers are clearly committed to preserving the safety of their staff members.
- PNNL’s implementation of an effective management approach is relatively mature.
- PNNL staff members and managers understand that the Standards-Based Management System (SBMS) is the set of requirements that they must work to.
- The PNNL Standards-Based Management System (SBMS) has been recognized, in a DOE

Weaknesses

- The Customer Service Model and the hierarchy of the Standards-Based Management System are not adequately understood by some PNNL staff members.
- Improvement opportunities in the design and implementation of PNNL’s management approach have been identified at the Lab-level and by various Management Systems.
- Specific safety and health goals and objectives are not clearly established and articulated for the Laboratory or organizational sub elements.
- Many staff members have limited interaction with their immediate manager because they are more closely aligned with a

Laboratory Operations Board report [Management Best Practices for the National Laboratories](#), as one of 13 Best Practices and one of 9 recommended for integration into the DOE Lab complex.

- Safety and health goals and objectives are being re-established through the assurance model and the Laboratory Dashboard.
- All managers have an open door policy regarding safety.
- Staff members generally perceive management to have strong commitment to 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 staff members that there may be a lack of commitment to hold all staff members (F&O, R&D, subcontractors) to the same standards.
- The survey revealed that there is doubt on the part of management and staff members that “all occupational injuries and illnesses can be prevented.”
- Survey results indicate that some managers do not “get into the field” and interface with their staff members very much.
- Many staff members believe that management is risk-averse and that there is an over reaction to incidents

Recent/Expected Changes

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

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 members.

RATING	TREND
Good (11)	➔

Note: the rating for Management Leadership – Commitment was administratively adjusted down one point to “11” last year, not because there had 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 members and management of the Laboratory. The benefits can 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 staff members.

- Continue to improve the utilization of lessons learned and promote staff member 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: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

Several personnel changes and reorganizations have occurred within PNNL’s organization in 2003 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 its involvement with PNNL’s already strong worker safety and health program is growing.

Weaknesses

- Some staff members do not understand the relationship between different organizational elements and the roles they perform in support of the effective execution of operations.
- 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 new Laboratory Director, Dr. Len Peters, has established a strong organizational emphasis on safety.

Conclusion

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.

RATING	TREND
Good (10)	→

Opportunities for Improvement

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

Tenet: *Management Leadership*
Element: *Responsibility*

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

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

Strengths

- Clear, effective responsibilities have been established for most roles important to safe operations.
- EPR, IOPS, and SBMS clearly and effectively reinforce and communicate roles and responsibilities.
- Roles and authorities are being enhanced through automated and other institutionalized processes at the Laboratory, which support important worker safety and health responsibilities.
- All staff members interviewed knew their responsibilities when it came to safety. Staff members stated safety starts with them, and it is important for them to be aware of their surroundings and potential hazards, and it is also important to share what you learn

Weaknesses

- The ISM Evaluation identified that the institutional responsibilities of Safety & Health Representatives needs to be more clearly articulated.

at home and work with fellow staff members in the line of health and safety.

Recent/Expected Changes

- Key roles for the Lab are now being managed through the Role Based Access Control (RBAC) system for certain electronic applications. This includes the role of Operations Manager. It is expected that other electronic applications will use RBAC in the future.

Conclusion

RATING	TREND
Good (10)	→

The Laboratory has a system of Roles, Responsibilities, Accountabilities, and Authorities that is mature and well implemented. Planned and ongoing Management System improvements will strengthen Lab-wide processes that define and communicate expectations, including those related to environment, safety and health. Implementation of EPR made a significant improvement in the implementation of the Product Line Manager role. IOPS continues to improve the way that roles and responsibilities are communicated and implemented at the Laboratory.

Opportunities for Improvement

- **Establish expectations that are clear and consistent for all aspects of operations. Each of the roles identified as needing improved diligence in the issue above need to have better expectations that are properly communicated and monitored. Safety and health related goals need to be an important part of the SDRs for all line managers and staff members with collateral safety responsibilities (e.g., CSMs, Technical Group Managers, Product Line Managers, Project Managers). (Issue #1: Accountability)**
- Formally recognize Operations Managers in PNNL's R²A².
- Continue improvement efforts to help all managers understand their accountability for safety and their responsibilities to properly support and properly respond to hazards, staff member concerns, and accidents.
- Continue efforts to reinforce staff members' responsibilities related to safety.

Tenet: *Management Leadership*
Element: *Accountability*

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

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

Strengths

- The process for implementing accountabilities is clearly established at PNNL.
- Human Resources Managers are assigned to each organization to help and support immediate managers’ implementation of accountabilities.
- Some organizations make safety performance a part of staff members’ annual performance evaluation.
- It is very clear to virtually all staff members that safety is important.

Weaknesses

- Accountabilities are not always consistently applied across the Laboratory.
- Some staff members with collateral safety responsibilities (e.g., Cognizant Space Managers) do not have safety addressed in their Staff Development Review.
- When implementation of accountabilities results in corrective action, most staff members 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 staff members 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).

- Interviews indicated that only one in twenty staff members diligently read their IOPS reading assignments.
- Self-assessments and the ISM Evaluation determined that PLMs sign inaccurate EPRs.

Recent/Expected Changes

- No significant changes with respect to accountabilities have been identified.

Conclusion

RATING	TREND
Good (9*)	→

The Laboratory has a mature accountability system, which has improved and continues to improve. However, there continue to be incidents of slow, inconsistent, and apparently unfair accountability actions.

The rating for this element was administratively adjusted down from a 10 to a 9. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it accounts for the developing recognition that important improvements have yet to be made in the process of holding all staff members and managers accountable for diligent execution of their responsibilities. Previous years' ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- **The rating for this element needs to be improved to a 10 or 11 by management establishing a clear expectation that staff members (including managers) must perform their jobs with due diligence and in accordance with established requirements. Management needs to establish a clear expectation that all staff members (including managers) will perform their jobs with due diligence in accordance with established requirements. Management needs to implement mechanisms to verify that expectations are being met (including assessments or other processes). Where deficiencies in performance are identified, management needs to fairly, consistently, and promptly hold staff members in the appropriate roles accountable. A process needs to be established so that all safety and health issues are identified and tracked to resolution. Where staff members identify issues, they need to be a part of the resolution process. (Issue #1: Accountability)**

- **Increasing management skills and knowledge of the processes and available resources will enhance and highlight the need for accountability. (Issue #3: Manager Training)**
- Continue improvement efforts to help all managers and staff members understand their accountability for safety and their responsibilities to properly support and respond to hazards, staff member concerns, and accidents.
- Continue working to disseminate 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:** Chub Bowers/Vern Madson**ASSESSMENT**

Evaluation of this tenet and element was based on a review of the "Application," interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL's programs with respect to the required information related to this tenet/element, changes that are needed to keep the "Application" current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL's program.

The "Resource" element examines whether staff members have the necessary resources to perform work. The element includes resources such as: personnel, space, training, equipment, budget, capital investments and other resources devoted to the safety and health program.

Strengths

- The vast majority of interviews indicate adequate staffing, equipment, training and supplies.
- More budget funds are 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

- Manpower loading on some (e.g., craft) jobs may not be adequate. Some staff members 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 provide management with important feedback regarding safety and health priorities and the allocation of resources to support worker safety and health.

Conclusion

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

RATING	TREND
Good (10)	→

Opportunities for Improvement

- Consider how to mentor and/or develop the expertise of subject matter experts and make sure that all staff members know who to contact for safety and health support.

Tenet: Management Leadership
Element: Planning

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 requiring all managers to budget for safety and health issues. This includes training staff members, field-deployed ES&H support, and operational resources related to maintenance of capabilities (i.e., facilities, equipment, work activities). Safety and health planning begins at the site level, with the first guiding principle of “environment, safety and health excellence.”

Strengths

- The Laboratory planning process is systematic and comprehensive. It stimulates accountability on the research side related to performance associated with Critical Outcomes and the developing concept of a “Laboratory Dashboard.” 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 and

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.
- Use of Lessons Learned in planning needs to be improved.
- Some safety concerns identified by staff members in the planning process take too long to be resolved. There is no formal documentation or tracking of safety issues brought up either in the field or in a safety meeting. There needs to be a process of accountability for status and resolution of all identified concerns.

health (notably self-assessment, training compliance, hazard identification and mitigation). Much of this improvement has been driven by IOPS and the development of other automated processes.

- The corporate ISM self-assessment and the DOE-OA ISM Evaluation identified strengths in PNNL's planning processes and a noteworthy practice in the use of Operational Improvement Initiatives to address ES&H issues.
- Critical Outcomes 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 members, facility/discipline SMEs, supervisory, and safety and health professionals.
- A comment sheet completed after each job indicating 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.

Recent/Expected Changes

- The expected formalization of a process for consistent Post-Job reviews, which will replace or supplement the comment sheets has not been implemented
- The new EPR has integrated and enhanced 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. The planning tool will help managers avoid project and overhead costs and continue to improve the marketability of PNNL operational tools.

Conclusion

Work planning at the Laboratory continues to be an evolving,

RATING	TREND
Good (10)	→

increasingly integrated and consistent process. Research and support work is planned with SBMS requirements for safety, health, and environmental considerations. 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

- **Increasing management skills and knowledge, and a more thorough understanding of the process and available resources, will support the need for planning. (Issue #3: Manager Training)**
- F&O management needs to continue working to improve feedback processes to incorporate lessons learned (including those identified by staff members) from previous job performance into future job planning.

Tenet: Management Leadership
Element: Contract Workers

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

The guiding principle for “Contract Workers” is that all contractors to PNNL (subcontractors) are expected to meet the same standards for safety as PNNL staff members. Those subcontractors or their workers who do not meet those standards may be barred from performing work at PNNL. The safety and health performance of all subcontractors 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 members expect subcontractors to conform to the same basic requirements as PNNL staff members. There is evidence that shows subcontractors have been stopped from unsafe work until the work was performed in the required safe manner. Some line staff members have taken an active role in reporting unsafe work by subcontractors.
- PNNL’s Acquisition Management System has established that subcontractors who do not meet PNNL’s ES&H standards will not be permitted to work at the Lab.
- The Web Req process does a good

Weaknesses

- The fact that PNNL wants all workers (including subcontractors) to work to the same safety and health standards is not fully recognized and accepted by all PNNL staff members. *Note that the distinction between subcontractors meeting basic standards and PNNL implementation of program requirements that may go above and beyond basic standards is contentious.*
- Safety requirements are not always well implemented by subcontractors.
- There is a lack of formal Post-Job reviews of subcontractor work to identify lessons learned.
- Subcontractors may tend to depend on PPE as a first choice for

job of establishing appropriate contract clauses for procurements of goods and services, including subcontractors.

hazard control before considering engineered or administrative controls.

- Job planning packages are well defined and completed with multiple inputs from stakeholders and the respective workforce.
- Past health and safety statistics are used to help determine contract awards.
- Subcontractors are required to work to PNNL requirements and/or job planning packages with procedures reviewed by PNNL.
- Subcontractor employees take the PNNL site orientation.
- There are good pre-job briefings for subcontractor workers.
- A dedicated Safety & Health Representative overviews construction subcontractors. This will strengthen the reinforcement of safety requirements for construction subcontractors.
- The ISM Evaluation determined that the process for managing subcontractors is a good one.

Recent/Expected Changes

- The new construction Safety & Health Representative is making a positive impact on subcontractor jobs.
- The change from Fluor Federal Services to independent subcontractors has reduced injury and illness rates

Conclusion

Work planning includes identifying and mitigating hazards. Continuous improvement measures related to the process for managing subcontractor work have been formally scheduled and tracked to completion on ATS. There is good implementation and flow-down of ES&H requirements to subcontractors through appropriate (graded) contract clauses. Communication of safety requirements is generally good but subcontractor implementation of requirements warrants continuous improvement. The reduction in subcontractor injury and illness rates needs to be monitored to verify that it does not reflect a decrease in reporting.

RATING	TREND
Adequate (8)	➔

Opportunities for Improvement

- **Continue improvements in the monitoring and implementation of subcontractor worker's compliance with safety and health requirements. Although process improvements have been made, failures are observed "on the ground" where subcontractor workers are not diligently following the requirements of the approved Job Planning Packages and where subcontractor work packages did not adequately address the hazards. PNNL Construction Management needs to monitor and promptly correct deficiencies in subcontractor work planning and subcontractor worker performance. (Issue #1: Accountability)**
- Offer a detailed briefing of the PNNL subcontractor safety program to subcontractors who adopt it.
- Middle and senior management need to pay more attention to the new construction safety program to verify that it is getting appropriate resources and that needed improvements are being made.
- Verify that independent subcontractors are reporting injuries and illnesses as required.
- Subcontractor job planning needs improvement as exhibited by the recent asbestos incident.

Tenet: Management Leadership
Element: Program Evaluation

Evaluator: Chub Bowers/Vern Madson

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 the Standards-Based Management System (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 continually improving.
- The IOPS self-assessment process is effective at involving and empowering staff members.
- 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 continually improving self-assessment that staff members 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)
- IOPS self-assessment results need to be more broadly used in support of directorate self-assessment programs
- The DOE-OA ISM Evaluation identified a number of improvement opportunities and at least one finding related to feedback and improvement.

Recent/Expected Changes

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

Conclusion

RATING	TREND
Good (11)	→

PNNL has long established itself as a leader in progressive, continuous improved processes to serve its mission. The Integrated Planning and Assessment Management System provides a good approach to continually review, test, and evaluate management control systems at PNNL. These elements are self-assessment and Independent Oversight activities. Integrated assessment results are utilized throughout the Lab and by the VPP Steering Committee to gain information that helps the Lab mature as a leader in VPP implementation 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 staff members and the public.

Opportunities for Improvement

- **IOPS provides a valuable self-assessment process, but the use of self-assessment results beyond the immediate time and place of their origin needs improvement. (Issue #4: Continue to Improve IOPS)**

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 members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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. New staff members are 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 formal site orientation training modules are Web-based, available remotely. They 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 members feel overloaded with reading assignments.
- Some staff members may be circumventing the Web-based training by simply visiting web pages without conscientiously reading them.
- Reliance on web information may not provide the same hazard communication as face-to-face interaction with a knowledgeable staff member.

- Access badging is incorporated as a control point to confirm that appropriately complete site orientation is provided for all personnel obtaining badges for access to the PNNL complex.
 - Formal site orientation training modules undergo regularly scheduled reviews and up-dates as do all other approved training to provide accurate, current information.
 - Some 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 are responsible for communicating training/orientation needs to those individuals and ensuring completion of that training/orientation.
 - Some staff members (particularly crafts staff members who infrequently enter individual spaces) appreciate the presence of IOPS Hazard Awareness Summaries at the door to some labs.
 - Interviews indicated that F&O IOPS has continued to be improved and streamlined.
 - The Electronic Service Request system is now linked to IOPS to inform crafts staff members of hazards in lab spaces.
- Some CSMs and line managers provide this kind of face-to-face interaction with staff members but others may not.
- IOPS is not well received by some R&D and Bargaining Unit staff members. It is seen as cumbersome and in need of streamlining.
 - Being current with IOPS training does not necessarily make you qualified or safe to work in the lab.
 - Both R&D and Bargaining Unit staff members reported that Web-based training is not sufficient for some staff members (e.g., new hires, summer students) and more hands-on training/mentoring is needed.
 - There are staff members working in spaces where they have not met the access requirements of IOPS.

Recent/Expected Changes

- The IOPS Improvement Plan is expected to reduce the redundancy and increase the specificity of some of the IOPS reading assignments.

Conclusion

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

RATING	TREND
Good (9)	→

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 members are frustrated with the volume and redundancy of information sent to them through 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 members 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

- **Although “Site Orientation” typically addresses the orientation needs of new staff members, managers need to receive orientation specific to their roles as managers. (Issue #3: Manager Training)**
- **IOPS provides a valuable hazard communication function, particularly to workers not familiar with the activities in a given space. The inefficiencies and potential lack of adequate communication of information to those workers needs to be improved as discussed under Employee Notification. (Issue #4: Continue to Improve IOPS)**
- 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.
- Consider developing and implementing more face-to-face orientation programs.

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 members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 staff members, including newly hired staff members, are aware of the following: participation in DOE-VPP, their right to express concerns related to occupational safety and health to DOE, and 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 staff members 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 staff member clarity on ES&H expectations, (e.g. medical exams, right to review safety-related monitoring, investigations reports, etc).
- Most staff members are knowledgeable of their safety

Weaknesses

- Some staff members weren’t as knowledgeable about their safety rights, the accident investigation process, and VPP as they needs to be (this area is improving, but the VPP Steering Committee would like to see it get much stronger).
- Interpretations, utilization, and understanding of Laboratory initiatives (e.g. VPP, EPR, IOPS, 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 staff members) 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

rights and responsibilities, including stop work authority, the right to contact DOE concerning safety and health, the rights to receive the results of inspections, and 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. The DOE-OA ISM Evaluation noted that Plan of the Day meetings are particularly well done. Safety and health requirements for R&D are typically communicated through IOPS, project planning documentation, internal operating procedures, and interaction with support staff members (e.g., during self-assessment).
- The VPP newsletter (the “Porcelain Press”) is updated and posted across the Laboratory monthly. It has become well accepted, as evidenced by staff members providing input for topics and complaining if their copy is not updated in a timely manner.
- A third VPP survey has just been completed. This survey will be used to improve the quality and effectiveness of the ES&H program. It will continue to provide the baseline to verify that VPP and the ES&H programs are continually improving and moving forward.
- IOPS provides a thorough process for notifying staff members 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

“over notification” trivializes the notification process. Staff members may not 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).

Improvements in this area have been made, but more are needed.

- Lessons Learned/Best Practices are getting considerable readership, but the process is not rigorous, institutionalized, or integrated with processes to support consistently utilizing Lessons Learned in work planning and control.

- related to a given space.
- Staff members have confirmed that safety is openly communicated in virtually all parts of the organization (i.e. meetings, the Lab web, Lessons Learned and Posters).
- Recent integration of IOPS with the ESR system is improving the timely hazard communication for maintenance staff members.

Recent/Expected Changes

- The IOPS Improvement plan is expected to improve the notification of staff members regarding safety issues relevant to their work.

Conclusion

Staff members are generally aware of their safety rights, 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 and Lessons Learned.

RATING	TREND
Adequate (8)	→

Opportunities for Improvement

The rating for this element needs to be improved to at least the “Good” range by accomplishing the following:

The primary issue related to IOPS from a VPP perspective is the inefficient, redundant, and potentially confusing delivery of electronic reading assignments to staff members. Other improvement opportunities have been identified regarding the content and integration of information related to bench-level control of hazards. There are currently over 75,000 reading assignments in IOPS that are delivered to staff members (typically on a one-time basis with refresher when the material changes).

- **Opportunities have been identified that will reduce or eliminate redundancy, improve the succinctness and clarity of information, improve the alignment and flow down of requirements with respect to SBMS, and eliminate low-value delivery of information by doing a better job of combining the information with other systems and delivering only the needed information at more appropriate times in the workflow process.**
- **Concerns have been identified related to the adequacy of information (e.g., the assurance that all staff members have been oriented to the basic expectations for “skill of the craft” related to safe operations in the laboratory).**

IOPS needs to consider how to enhance the face-to-face notification of employees regarding important bench-level requirements. Mentoring

has been identified as an approach that needs more emphasis within the IOPS operational model. (Issue #4: Continue to Improve IOPS)

- **Staff members need to receive clear information about how they can be involved as well as better guidance about the appropriate routes to raise and address issues. An issues management process needs to be developed to do a better job of providing prompt feedback to staff members and there needs to be a better process for resolving concerns related to management of specific issues. (Issue #2: Employee Involvement)**
- Continue efforts to improve hazard communication through IOPS.
- Improvements in the Lessons Learned/Best Practices process are needed.

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Tenet: *Employee Involvement*

SUMMARY

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

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Employee Involvement	Adequate (8)	↗

SYNOPSIS

The Laboratory has experienced an exceptional level of performance during the last six years, which can be attributed to the staff members' 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 six years of steadily improving safety and health performance indicators. The Integrated Safety Management Evaluation by DOE Office of Oversight and Assessment noted PNNL's staff member involvement as a noteworthy strength during closeout discussions in November, 2003. While there is evidence of a significant level of staff member involvement and empowerment, there is a perception that there could and needs to be much more. Processes such as IOPS and SBMS provide excellent vehicles for staff member involvement, and small R&D work teams practice excellent integration of safety into work processes. However, there are issues associated with staff member involvement at PNNL:

- Many R&D staff members resist participation in traditional forms of employee involvement such as safety committees, awareness campaigns, etc. They look for value-added, results-oriented programs and activities that benefit science and technology if they are to participate sincerely over the long term. The VPP Steering Committee has continued to have success in the past year reaching more staff members with the Porcelain Press, and leading the initiatives for blood pressure monitors and automated external defibrillators (AEDs). This year's comments in the site survey also contained kudos for VPP: "I appreciate the efforts the VPP program is taking in driving home the safety message to staff."
- There continues to be concern that too few bargaining unit staff members may not feel involved or empowered to address safety issues. Much progress has been made toward better involvement of the bargaining unit staff members and the great majority of staff members believe PNNL has an excellent safety and health program and feel safe at work. Some staff

members do not feel they have enough input, they are not listened to, the systems do not work fast enough, or feedback is not prompt or adequate.

No administrative adjustments were made to the Employee Involvement ratings.

Ratings for both elements under this tenet need to be improved to accomplish the following:

- Management needs to work with staff member representatives to clearly define the institutional processes by which staff members can become involved in operational issues. Processes for staff member involvement in SBMS and IOPS are well established. The Staff Concerns program and some safety committee activities are working reasonably well, but are not well understood by many staff members. In general, the processes by which staff members can and needs to be involved are not well communicated to, and understood by, staff members.
- The roles of some safety committees related to employee involvement and particularly the committees' relationship to each other needs to be better established. Management support of staff member involvement needs to be stronger (i.e., funding for participation and support for those who raise concerns).

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

Evaluators: Mike Tinker, Ron Oak, Pat Wright

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application”, interviews with staff members using questions based on the DOE-VPP “On-Site Review Guidelines”, and a review of PNNL documentation (primarily SBMS). A FY2003 survey of staff members 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 staff members’ 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 staff member involvement in the operation of the Laboratory and this is especially true in the area of safety and health. This element has been a beneficiary of that progress. The optimum level of employee involvement on any process or operation is still under debate at PNNL.

Strengths

- R&D staff members continue to believe “[There is a strong organizational and individual commitment to safety.](#)”
- Staff members have documented “stop-work” authority. “Stop Work” has become more clearly understood by staff members. Those interviewed said they have no fear of reprisal in using their “stop work” authority.
- PNNL has close-knit R&D workgroups
- There is strong staff member participation in safety committees, the F&O Job Planning Package process, SBMS and IOPS. Staff members believe their input is used and

Weaknesses

- There is still a legacy of concerns and injustices from the past with a few staff members, but this is decreasing. “[Still an us versus them mentality between management and bargaining unit members.](#)” (Said by a crafts/bargaining unit staff member).
- There is not a good process in place to identify, address, and utilize results of issues identified by staff members.
- 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, engaging staff

- that issues/concerns are resolved.
- Good relationship with immediate manager is common.
 - Bargaining unit staff members are involved in pre-job walkthroughs, safety committees, SBMS, IOPS, and critiques.
 - Staff members are aware of programs to resolve staff member concerns, including: Electrical Safety Committee, PNNL/HAMTC Lab Safety Committee, VPP Steering Committee, and the HAMTC Safety Rep program. Most staff members believe that issues are typically resolved/resolvable by raising an issue/concern with their immediate manager.
 - Most managers believe that staff members are highly skilled and have a lot to offer
 - The FY2004 VPP Survey indicates that over 70% of PNNL survey respondents (up from 67% last year) Agree or Strongly Agree that they are regularly involved in decisions that affect their safety and health.
 - The FY2004 VPP Survey indicates that over 87% of PNNL VPP Survey respondents (up from 85% last year) Agree or Strongly Agree that they are knowledgeable regarding the PNNL safety and health program.
 - Staff members felt that there was good interaction with management, making it a team effort, showing professionalism in the workplace.
 - The Staff Concerns program addressed six formal staff member concerns related to safety.
 - The VPP Steering Committee sponsors an annual VPP Picnic
- members to achieve good staff member involvement.
- IOPS reading assignments do not achieve good/effective staff member involvement when a large amount of what is perceived to be low value material is sent to staff members.
 - There are concerns about adequate resources to support involvement in safety activities: "It is not always understood how I will charge my time related to safety activities."
 - Many staff members are not yet convinced that there is value in being involved.

to increase staff member awareness of VPP and involvement.

Recent/Expected Changes

- Lessons Learned readership continues to improve. Safety committees (e.g., VPP and IOPS) are being perceived by many staff members to have greater impact than in previous years.

Conclusion

The Laboratory has developed excellent participation and involvement within most work groups. It must increase the level of participation by those groups that 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. Staff members are being asked for input into most of the important processes of the Lab that affect them, including hazard recognition and work planning. Staff member involvement and their satisfaction with their involvement is improving.

RATING	TREND
Adequate (8)	↗

Opportunities for Improvement

The rating for this element needs to be improved to the “Good” range (at least 9 or 10) by accomplishing the following:

Management needs to work with staff member representatives on safety committees to clearly define the institutional processes by which staff members can become involved in operational issues. Processes for staff member involvement in SBMS and IOPS are well established. The Staff Concerns program and some safety committee activities are working reasonably well, but are not well understood by many staff members. In general, the processes by which staff members can and should be involved (such as safety committees, SBMS subject area development, IOPS processes, etc.) are not always communicated and understood by all staff members. (Issue #2: Employee Involvement)

- Continue efforts to gain more staff member involvement in safety program activities. This staff member involvement needs to include R&D staff members located at the Richland Complex and staff members at other work locations, and it needs to include the administrative and support services staff members, managers, and bargaining unit staff members.
- Develop processes to better prepare managers to implement and take advantage of staff member involvement related to safety issues.
- Improve IOPS to achieve greater perceived value by staff members, thus gaining better staff member involvement.
- Improve the process to identify, address, and use results of issues (e.g., concerns) identified by staff members.
- Staff member involvement needs to be increased in the development of radiation protection program procedures to improve the relevance, applicability, implementability, and buy in of the procedures by staff members.

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

Evaluators: Mike Tinker, Ron Oak, Pat Wright

ASSESSMENT

Evaluation of this tenet and element was based on a review of the "Application," interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL's programs with respect to the required information related to this tenet/element, changes that are needed to keep the "Application" current and descriptive, and 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 members to be involved in the improvement of PNNL's safety programs. Users are typically involved in 98% of SBMS Subject Area revisions 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 staff members) become and stay involved in the safety program.
- Committees use the intranet to deliver information.
- The FY2004 VPP survey found that over 92% respondents were aware of some of the Safety

Weaknesses

- All staff members do not know what VPP is about, even though they know how to work safely.
- Committee processes could still be better formalized (e.g., IOPS).
- VPP Steering Committee members feel a lack of recognition for their VPP activities.
- There is confusion regarding the purpose of safety committees and the relationship between them.

- Committee activities (up from 88% last year.)
- Let’s Talk, the Staff Concerns Program, the PNNL VPP Steering Committee and the Porcelain Press all provide venues for staff members to raise safety concerns and discuss health and safety topics.
 - The VPP Steering Committee adopted a charter in CY03 to guide its activities.

Recent/Expected Changes

- The VPP Steering Committee charter was developed by Steering Committee members and approved by both the HAMTC President and the PNNL Laboratory Director
- The Porcelain Press is now well received across the Lab.
- More staff members are aware of safety committees and who to contact about concerns
- Weaknesses identified last year and above are being resolved.

Conclusion

RATING	TREND
Adequate (8)	↗

The use of safety committees for staff member involvement is improving at PNNL. Staff member 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 the use of safety committees is becoming more mature at the Laboratory. Progress has been made over the last year in terms of the effectiveness of the VPP Steering Committee, the IOPS Facility Safety Committees and the IOPS Administrators, the Chemical Management System Committee, the Biological Safety Committee, the ALARA committee, the Electrical Safety Committee, and the Lock & Tag Committee. Improvement is needed in the coordination of safety committees with the rest of the Laboratory.

Opportunities for Improvement

The rating for this element needs to be improved to at least the “Good” range by accomplishing the following:

The roles of some safety committees related to employee involvement and particularly the committees’ relationships to each other needs to be more clearly established. Management support of staff member involvement needs to be stronger in some respects (i.e., funding for participation and support for those who raise concerns). (Issue #2: Employee Involvement)

- The relationship between safety committees and their ultimate purpose(s) related to the safety program needs to be clearly defined.

- Safety committees need to be improved so there is more impact on safety. The committees need to be more aggressive in working tomorrow's issues today (i.e., aging workforce, trending in injuries, communicating policy, HEHF issues).
- Steering Committee members need to be recognized and rewarded for their participation.
- | • Consider involving safety committees in assessments of their areas of focus.

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 (10*)	→
Routine Hazard Analysis	Good (10*)	↗
Employee Reporting of Hazards	Good (9)	↗
Accident Investigations	Good (9*)	↗
Trend Analysis	Adequate (8)	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Worksite Analysis	Good (9.4*)	↗

SYNOPSIS

Workplace hazards are well analyzed both before work begins and periodically thereafter. Initiatives to improve workflow process support tools, and staff member/management empowerment and knowledge include improvements to 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 staff member 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.

Although worksite analysis is improving, there continue to be opportunities to improve the identification and analysis of hazards, and the way issues are identified and responded to. An example of poor identification of hazards and response to concerns was the recent incident in RPL involving asbestos hazards.

Several administrative adjustments to ratings were made for this tenet. The “Self Inspections” element was downgraded from an 11 to 10 to reflect the improvement opportunities that have been recognized related to the need for better self-assessment processes and use of results. “Routine Hazard Analysis” was downgraded from an 11 to 10 to reflect the need for better implementation of hazard identification/analysis/mitigation tools (e.g., permits), and the need to clearly define expectations for “skill of the craft” related to basic laboratory activities. “Accident Investigations” was downgraded from a 10 to 9 to reflect the

revelation that the injury and illness investigation process is not being performed as rigorously as needed to prevent future accidents. The administrative adjustments for these elements do not imply that there has been a decline in performance over the past year. Instead, it reflects the recognition that improvements are needed that were not previously recognized. Previous years' ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

The rating for the element "Trend Analysis" needs to be improved to accomplish the following:

The Safety & Health Department needs to consider what improvements to the Safety and Health Information Management System (SHIMS) are necessary to allow proper trend analysis of injury and illness causes and corrective action. After recommended improvements are evaluated by major stakeholders (primarily F&O and the research directorates) the necessary improvements need to be implemented.

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

Evaluators: Drue Collins

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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, analysis, and control of hazards.
- The new EPR provides a good tool for hazard identification for R&D projects. The upgraded tool provides strong links to SBMS, IOPS, and subject matter experts.
- IOPS provides excellent bench level controls including R²A², access control, and training to required practices, permits, and procedures.
- IOPS allows staff members to modify the work controls to meet their needs, within established bounds, using a flexible system of tools and information. The system also provides self-assessment requirements, hazard awareness summaries that are periodically updated.
- F&O work control process provides excellent planning and control for maintenance and construction work.
- There is a good process for

Weaknesses

- There are gaps in the processes to verify that staff members are fully cognizant of expectations to control all hazards, particularly lower risk hazards in a laboratory setting. (This was found by the DOE-OA team during the conduct of the ISM Evaluation).
- Additional improvements could be made to integrate existing tools that support worksite analysis.
- The process to communicate hazards to subcontractors and confirm that they work safely needs additional improvement (as reflected by the recent asbestos stop-work incident in RPL).

ensuring that safety is considered in the specifications for procurement of goods and services.

- The process of F&O pre-job briefings is very good and they are consistently conducted.

Recent/Expected Changes

- The rollout of the new EPR tool has provided a better means to recognize hazards associated with proposed work and to assist with determining the feasibility of performing work within appropriate controls and PNNL building infrastructure.

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. Various assessment have identified several opportunities for improvement, some of which are being addressed by current initiatives at the Lab level. Those ongoing initiatives will result in continuous improvement in the identification, analysis, and mitigation of hazards. Additional improvements are needed.

RATING	TREND
Good (10)	↗

Opportunities for Improvement

- Continued support for Operational Improvement Initiatives, including the JETS/EJTA Initiative.
- Continue initiatives to integrate worksite analysis tools such as EPR, IOPS, SBMS, CMS, BMS, RMT, RMMT, WET.

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 members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL's programs with respect to the required information related to this tenet/element, changes that are needed to keep the "Application" current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL's program.

Each ESH&Q 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 evaluation of related SBMS subject areas and program descriptions.

The individual responsible for work (i.e., line and project manager) are responsible to identify the potential hazards of their work. Those individuals have experience and qualifications relevant 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 staff members 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 members 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 members 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 members 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 subcontractor work begins with the preparation of the job planning package, reviewed, and the work monitored daily.

Strengths

- The introduction of the new EPR system provides a better tool to identify and control hazards associated with projects. Self-assessments of the tool are identifying improvement opportunities and management is being held accountable for the quality of review performed on the project prior to start up.
- 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) system 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 IOPS spaces and available information of other spaces.
- Integration of ES&H reps into the

Weaknesses

- There continues to be a need to link various program (IOPS, EPR, MIT) programs to assist with identifying and mitigating hazards.

R&D Directorate Operations Offices continues to provide a strong resource for staff members and management. ES&H staff members has strengthened the R&D Directorate operational self-assessment process.

Recent/Expected Changes

- IOPS was rolled out to the last major laboratory facility, the Marine Sciences Laboratory in Sequim, Washington.
- The Hazard Analysis Operational Improvement Initiative (OII) completed its objective to link EPR and IOPS.
- An Independent Oversight special study of IOPS confirmed its value for worksite analysis and hazard mitigation. It identified improvement opportunities to make the tool even better.
- FO has linked the Electronic Service Request tool to IOPS hazard identification data.
- The research Operations Managers and ES&H management have scheduled bi-weekly meetings to discuss ES&H issues. Included in the discussion are self-assessment findings.

Conclusion

Comprehensive surveys have been conducted and are continuously being performed in areas of safety and health, radiological control, and facilities and operations. Communications between ES&H management, the R&D Directorate Operations Offices, and F&O is improving. CSMs maintain hazard awareness summaries to reflect current work hazards in individual spaces. The integration of the Electronic Prep and Risk with the hazard awareness summaries generated by IOPS has strengthened the process to analyze worksite hazards.

RATING	TREND
Good (10)	↗

Opportunities for Improvement

- Continue improvement initiatives related to worksite analysis and improved use of self-assessment results.

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

Evaluators: Russ Meicenheimer/Pat Wright

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application”, interviews with staff members 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 members (more than 3800) 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

- Line organizations perform self-assessments in accordance with their approved "Division/Directorate or Management System assessment plan."
- Field deployed subject matter experts are well integrated into the organizations’ self-assessment program.
- Tailored self-assessment checklists are developed by qualified teams of staff members and safety professionals and used by staff members for self-assessments.
- There is a strong culture of “find it and fix it” in R&D Directorate self-assessment processes, empowering the staff members involved in self-assessments to take action to eliminate unsafe conditions.
- There is a nascent process for “activity-based” self-assessment developing at PNNL.
- ES&H staff members share information during a bi-weekly

Weaknesses

- The processes for capturing results of self-assessments and rolling those results up to provide meaningful information about program performance at the institutional level has gaps and is otherwise not well developed.
- Strong “lines of inquiry” or assessment plans are not always developed by assessors.
- Safety and health professionals are not always involved in self-assessments. Management needs to make sure safety and health representative involvement is appropriate.
- The process and performance of IOPS CSM self-assessments still need improvement.
- The VPP survey indicates that only 72% of staff members believe that “Worksite safety inspections are conducted in your work area”, down from 76.5% last year and 73.5% the previous year.
- The DOE-OA ISM Evaluation and the corporate ISM self-evaluation

staff members meeting. Matrixed ES&H staff members 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 IOPS self-assessments are performed by Cognizant Space Managers.
- RPL rewards Cognizant Space Managers for timely performance of self-assessments.

concluded that the Laboratory lacks a complete and effective process description for self-assessment expectations at the institutional level.

Recent/Expected Changes

- The IOPS Steering Committee is considering changes to improve the IOPS self-assessment process.

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 staff member 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.

RATING	TREND
Good (10*)	→

The rating for this element was administratively adjusted down from an 11 to a 10. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it accounts for the developing understanding of improvement opportunities that need to be made in the self-assessment process, at the Lab, directorate, management system, and IOPS levels. Previous years' ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- **While PNNL has effective means of identifying safety and health issues through IOPS and directorate self-assessments, not all of those processes are sufficiently directed at identifying and rolling-up**

information about performance that could be used for trend analysis. This use of self-assessment results for trend analysis needs improvement. (Issue #5:Trend Analysis)

- The Lab-level process description for self-assessment needs to be improved to provide greater clarity and an appropriate level of consistency, resulting in the roll-up and use of results, which will allow the Laboratory to adequately assess program performance.
- Continue efforts to improve the IOPS self-assessment process.

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

Evaluator: Russ Meicenheimer/Pat Wright

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application”, interviews with staff members 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 members (more than 3800) 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 links to SBMS and IOPS requirements associated with the project’s hazards.
- IOPS provides a process to control hazards (permits in place, access to space is controlled, training is complete and current).
- IOPS has been implemented in all major laboratory facilities.
- Cognizant Space Managers play a key role in routine hazard analysis. They are very knowledgeable of work in their assigned space, 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 members implement their hazard analysis responsibilities.

Weaknesses

- The implementation of routine hazard analysis for R&D work not covered by IOPS is dependent on the project team’s interpretation of SBMS, with relatively little Lab-level overview.
- Safety & Health Reps for some IOPS spaces are not as actively involved in overseeing hazards and hazard controls as would be desirable.
- Not all staff members and managers recognize their Safety & Health Reps and the value they can provide for routine hazard analysis.
- Concerns were expressed by some bargaining unit staff members that IOPS does not adequately support their needs for timely hazard identification associated with maintenance work.
- Some Chemical Process Permits, Risk Mitigation Permits, and other permits have been found to be deficient in terms of level of detail and/or adequacy of hazard

- Hazard Awareness Summaries (IOPS) are used to inform/train staff members entering space.
 - Permits, procedures, and practices are used to train/qualify staff members 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 walk downs greatly improve knowledge of hazards and actions being taken – staff members are involved in walk downs.
 - PM procedures get a lot of attention and work control procedures are always being improved.
 - F&O procedures are generally up to date and are typically very useful.
- mitigation requirements.

Recent/Expected Changes

- The Hazard Analysis OII completed the integration of EPR and IOPS.
- The IOPS Improvement Plan and expected response to the ISM Evaluation will improve the implementation of hazard control permits.

Conclusion

There is a strong process to assure that hazards are routinely analyzed and mitigated. IOPS is a key part of that process in PNNL-operated facilities. EPR is a key part of that process for R&D projects. 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 OII and other initiatives.

RATING	TREND
Good (10*)	↗

The rating for this element was administratively adjusted down from an 11 to a 10. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it accounts for the developing recognition that the level of detail and diligence with which routine hazard analysis processes are implemented needs to be improved. Previous years'

ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- **Staff members with roles in the analysis of hazards need to be more diligent in the identification, analysis, and mitigation of hazards. This includes the performance of “good faith inspections” to identify hazards, timely and complete communication of hazards, and timely and accurate preparation of permits, procedures, and other hazard mitigation documentation including F&O workplace exposure assessments (WEAs). Line management and management systems owners need to implement mechanisms to verify that hazard analysis is being performed as required. (Issue #1: Accountability)**
- **IOPS provides effective mechanisms for hazard analysis. Those mechanisms are not always implemented as needed (e.g., sufficiently detailed and accurate permits, and diligent use of permits). Additionally, other assessments have identified that the IOPS hazard analysis process (e.g., permit authoring tool and work practice documents) can be improved. (Issue #4: Continue to Improve IOPS)**
- Continue improvement initiatives that will integrate tools for routine worksite analysis.

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

Evaluator: Steve Maki

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application”, interviews with staff members 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 members (more than 3800) 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 has greatly improved.
- Stop work is much more clearly understood than in previous years.
- The need to report accidents and significant hazards is well established and was a common theme during staff member interviews. Reporting of hazards is allowed and encouraged – both in-house and with subcontractors.
- Staff members have documented stop-work authority.
- Communications between staff members and their immediate managers, and with support staff members (i.e., Building Managers, Safety & Health Representatives, etc.) is typically open and effective at identifying and resolving issues.
- Numerous avenues are available for staff members to report hazards, both formally and informally.
- Most staff members feel very comfortable bringing up safety

Weaknesses

- Hazards may not always be reported if they are fixed by staff members. This may lead to loss of trend and tracking information.
- It continues to be the case that some relationships between staff members and immediate managers or support staff members could be strengthened.
- There continue to be staff members who are not satisfied with the way their concerns about hazards are addressed. A specific example is the stop work incident involving asbestos in RPL.
- In some cases, staff members may not recognize the need to take action to report hazards that affect workers other than themselves (e.g., subcontractor employees).
- There is no formal process for capturing minor staff member reports of hazards.
- Some staff members received communication about specific safety/health concerns, but not

- issues.
- Most staff members indicated that problems and hazards are being fixed/resolved at the FPM level of management.

always in a timely manner, and felt that there needs to be a better way of communicating priority standards.

Recent/Expected Changes

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

Conclusion

RATING	TREND
Good (9)	↗

There is a good culture of staff members identifying and correcting hazards. IOPS is helping to strengthen that culture. Staff members typically have a good relationship with their immediate manager and support staff members who can help them properly address hazards. There is less focus on documenting staff member-reported hazards and analyzing the information for trends (both related to hazard as well as culture). Management response to staff member concerns and reports of hazards is improving with greater formality in operational processes (e.g. IOPS) and culture. F&O has improved the response to staff member reporting of hazards.

Opportunities for Improvement

- **Managers need to make sure that staff members’ concerns are responded to and fully addressed. The Laboratory needs to consider implementing a stronger and more detailed process for capturing and addressing concerns (not only formal Staff Concerns), and providing feedback to staff members. Staff members need a way to express their satisfaction with how concerns were addressed after they receive feedback regarding resolution of their concern. (Issue #2: Employee Involvement)**
- **Some managers need to improve their skills in order to adequately address staff member concerns as well as support the staff members who raise concerns. (Issue #3: Manager Training)**
- Continue to address the issue of consistent timely action and feedback regarding staff member concerns.
- Continue programs and efforts to confirm that immediate managers encourage staff member reporting of hazards and respond properly to such reports.
- Continue to improve operational processes such as IOPS, which empower staff members to identify and address hazards.
- Consider ways to improve how staff member reports of hazards are captured, and use the results for trend analysis.
- Tracking and trending opportunities exist which are not being captured. The VPP Steering Committee suggests developing a year-end review – for example, document how many issues were reported, and how many issues

were resolved. This will create ownership and buy-in from staff members and recognition that VPP really does work!

Tenet: *Worksite Analysis*
Element: *Accident Investigations*

Evaluators: Steve Maki, Nancy Isern

Assessment

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 Event Reporting subject area in SBMS and the Off-Normal Event program description.
- Accident investigations relating to injury/illness are well defined in the Injury or Illness subject area in SBMS. The subject area incorporates the Safety and Health Management System (SHIMS). The SHIMS program enables a variety of reports and trending analysis.
- Work related injuries and illnesses, no matter how minor, are required to be reported using the SHIMS program.
- PNNL investigates all off-normal events and evaluates their causes. As a result, corrective actions for

Weaknesses

- Improvement opportunities exist regarding the level of understanding that some (typically R&D) managers and staff members 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.
- Management and staff members are not always adequately incorporated into the injury and illness investigation process.
- The F&O Accident and Injury Report indicates that the reporting process may not always include complete information, and that abstracting trends from the reported information is problematic.

- 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.
 - Staff members 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.
 - Staff members 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 staff members 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 members
- (The ISM Evaluation had similar findings.)
- An in-depth VPP-sponsored study of the accident investigation process at PNNL finds that it can be intimidating for the affected staff member. The result of this seems to make staff members less likely to report an incident for fear of the time-consuming process that will be initiated, and the necessary in-depth scrutiny of the event. One staff member reports that the process "feels like the inquisition", but the staff member also believes that the detailed investigative process is necessary to improve safety. The study identified that use of an ombudsman for the staff member might be helpful in preparing the staff member for the investigative process.
 - In interviews, some managers feel that "the incident reporting system has gone overboard", with calls to 375-2400 required for everything, and that "there is too much interest from too many sources", with premature communications before confirmation of events. In addition, the opinion was expressed that there is a "knee-jerk negative overreaction" to isolated events.

has accessed the web site. Staff members in safety meetings and for general safety information often uses the Lessons Learned and Best Practices information.

- 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

- The Office of Science expects a drastic reduction in PNNL accident and injury rates, for PNNL to be “best in class.”

Conclusion

Accident investigations are well defined and incorporate a rigorous reporting, investigating, analysis, tracking, and distribution process.

RATING	TREND
Good (9*)	↗

General knowledge regarding staff members’ reporting requirements could be enhanced. The special study of Craft Resources identified that, while injuries and illnesses are being reported and recorded properly, better information is needed to identify trends and prevent recurrence of accidents. PNNL is seeing an increase in injuries and illnesses reported thanks in part to the emphasis VPP is putting on improved safety culture including the reporting of accidents no matter how minor. It is important to note that, even though more accidents are being reported, the recordable and DART rates are not going up. This is a sign of a health safety culture that will improve our ability to trend accident causes and prevent re-occurrence.

The rating for this element was administratively adjusted down from a 10 to a 9. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it reflects recent revelations that some injury and illness investigations are not being performed as rigorously as expected. There is also a need to define program requirements consistently with practices and to increase line management involvement in the process to support line management responsibility for safety. Previous years’ ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- **Safety & Health staff members and line managers need to be more diligent in the preparation and completion of injury and illness accident investigations. The Safety & Health Management System Owner needs to implement and monitor metrics that will verify that accident investigations are being properly performed and are delivering results that will prevent recurrence of accidents. (Issue #1: Accountability and Issue #5: Trend Analysis)**

- Provide staff members with brief reminders of Occurrence reporting responsibilities.
- Examine ways to verify complete and accurate reporting in SHIMS.
- Ascertain if the information collected in SHIMS is sufficient for accurate trending, and consider ways to modify SHIMS to assure that root causes of accidents can be discovered, and that trending can be done easily.
- Consider ways to avoid perceived overreaction to events, with the object of encouraging reporting, which will allow PNNL to address safety issues that are identified in reported events.

The VPP Subcommittee on accident investigations recommends that PNNL:

1. Establish written procedure/s/guidance for the investigation process in SBMS, with this written guidance to be directly provided to staff member(s) involved in an accident investigation.
2. Create a VPP single Point of Contact (POC) who could act as an ombudsman to staff member(s) involved in accident investigations. The POC would be familiar with all aspects of the accident investigation process and be proficient in conflict resolution. Involvement with affected staff member(s) would be only at staff member(s) request.
(Note: The VPP committee is comprised of many representatives from Craft Services, Research Organizations and Management.)
3. Apply resolution of issue with lessons learned to similar situations.
(Note: This is a current practice within organizations at PNNL, but there is room for improvement across the Laboratory.)

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

Evaluators: Pat Wright, Nancy Isern

ASSESSMENT

Evaluation of this tenet and element was based on a review of the "Application," interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL's programs with respect to the required information related to this tenet/element, changes that are needed to keep the "Application" current and descriptive, and 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 members through a SHIMS Reporting Tool. Occupational injury and illness trends are reported quarterly to management.

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

- Occurrence Reports – The Off-Normal Event Coordinator monitors the results of occurrence reports and makes the trending information available to management and others.
- Radiological Problem Reports – Radiological Control staff members 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 member 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. Training completion rate for the Laboratory in FY-03 was 100%.

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 captures trends of staff member 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 for:
 - Injury/illness cause
 - Self-assessment data
 - Staff member reporting of hazards
- A VPP-commissioned study of an upward trend in reported accidents/injuries among crafts staff members encountered some difficulties in analyzing factors contributing to trends. The VPP Steering Committee only became aware of the upward trend after being notified by F&O management.

Recent/Expected Changes

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

Conclusion

The ALARA program provides good trending of radiological dose data. The ATS system and IOPS provide good systems to capture data. However, trend analysis processes across the Lab (particularly related to self-assessment results and hazard analysis information) could be improved. The VPP Employee Survey has two data points (FY-2002 and FY-2003) as indicated in the employee survey section at the end. 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.

RATING	TREND
Adequate (8)	↗

Opportunities for Improvement

The rating for this element needs to be improved to at least the “Good” range by accomplishing the following:

The Safety & Health Department needs to consider what Safety and Health Information Management System (SHIMS) improvements are necessary to produce proper trend analysis of injury and illness causes and corrective action. After recommended improvements are evaluated

by major stakeholders (primarily F&O and the research directorates) the necessary improvements need to be implemented. (Issue #5: Trend Analysis)

- Improve trend analysis processes across the Lab (e.g., self-assessment results and hazard analysis information).
- Examine SHIMS to ascertain if necessary information to identify trends is available in the database, and that trending information can be extracted with ease from the database.
- Consider methods of regularly evaluating and reporting S&H trends to responsible parties and to the VPP Steering Committee.

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Tenet: Hazard Prevention & Control

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control		
Professional Expertise	Good (10)	→
Safety & Health Rules	Good (10*)	→
Personal Protective Equipment	Good (9)	↗
Preventive Maintenance	Good (10)	↗
Emergency Preparedness	Good (11)	→
Radiation Protection Program	Good (10*)	→
Medical Programs	Good (11)	→
Occupational Safety & Health Programs	Good (12)	→

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control	Good (10.4*)	↗

SYNOPSIS

There is very good prevention and control of hazards at PNNL. The availability of excellent workflow support tools (SBMS and IOPS) and highly knowledgeable support staff members assure that significant hazards are properly addressed. There is a need to more efficiently and effectively communicate safety and health principles and requirements to staff members, and to assure that everyone recognizes and implements the common standards that all staff members must comply with at the Laboratory. There is a need to more consistently implement positive and negative incentives to reinforce expectations for hazard prevention and control. 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.

While hazard prevention and control is typically performed very well and is generally improving, recent events and assessments have identified improvement opportunities in the implementation of some hazard mitigation activities. Specifically, a few isolated cases were identified during the ISM Evaluation where staff members were not using the correct protective gloves, a recent DOE facility representative surveillance identified several instances where radiation protection program requirements were violated, and a recent facility modification by an outside subcontractor resulted in staff member concerns related to asbestos hazard mitigation. These deficiencies are considered to be exceptions in an otherwise good program, but highlight the need for continual improvement related to hazard prevention and control.

Several administrative adjustments to ratings were made for this tenet. The

“Safety & Health Rules” element was downgraded from an 11 to 10 to reflect the improvement opportunities that have been recognized related to the need for better use of incentives, particularly performance evaluation goals, and use of safety-related rewards and recognition . The “Radiation Protection Program” element was downgraded from an 11 to 10 to reflect the recognition of implementation deficiencies that require attention. The administrative adjustments for these elements do not imply that there has been a decline in performance over the past year. Instead, it reflects the recognition that improvements are needed that were not previously recognized. Previous years’ ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

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 members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 members 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 staffing has not changed significantly with approximately 75 staff members averaging 10 years experience at PNNL (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 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.
- The SBMS subject area dealing with biological safety has been significantly revised.
- IOPS has replaced a single biological hazard designation with four specific levels of biological hazards. IOPS has also introduced a new electronic

Weaknesses

- Records from various safety and health-related activities are not stored in a central location for use by all safety and health staff members.
- Some field deployed safety and health staff members are better in the field than others. It is important to have strong field-deployed safety and health professionals helping staff members and management implement safety and health

- version of a biological work permit for work conducted under biosafety levels; 1, 2, & 3.
- 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.
- Worker Safety & Health has strengthened technical qualifications through key hires during the last year.
- programs
- The ISM Evaluation identified that the institutional responsibilities of Safety & Health Representatives need to be more clearly articulated.

Recent/Expected Changes

- A safety training for new managers is being beta tested (NSD) in FY04.

Conclusion

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

RATING	TREND
Good (10)	→

Opportunities for Improvement

- **The improvement of management skills related to safety and health and the introduction of managers to their safety and health resources (e.g., Operations Managers, Safety & Health Representatives, Environmental Compliance Representatives, etc.) will improve the overall level and utilization of professional expertise within the organization. (Issue #3: Manager Training)**
- Consider how to mentor and/or develop the expertise of subject matter experts and make sure that all staff members know who to go to for safety and health support.

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

Evaluator: Ed Beck/Steve Maki

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

The “Safety and Health Rules” element evaluates principle aspects of PNNL’s hazard prevention and control compliance and training approaches 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 members participated on the various teams that developed and updated the SBMS subject areas. The Roles, Responsibilities, Accountabilities, and Authorities (R²A²s) necessary to implement hazard prevention and control at PNNL are also described in the Standards-Based Management System (SBMS).

Strengths

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

Weaknesses

- SBMS is somewhat complex and though improved upon can be difficult to navigate.
- As a “repository”, SBMS is written for a general audience and covers a very broad range of information, sometimes making it difficult for an individual to extract relevant information in a timely fashion. In addition, the wealth of information presented may interfere with the assimilation of information that is most urgently needed.
- The flow-down of safety and health rules from SBMS to IOPS

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 (however, see Management Leadership/Accountability).
- There is a clear, consistent process for accountability articulated by the Human Resources Management System and SBMS. This includes the establishment of expectations and goal-setting, annual performance evaluations, and disciplinary action.
- There are good processes 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 members.
- The availability of a responsible and responsive ES&H staff members assists researchers to develop and conduct world-class research programs in compliance with safety and health rules.
- The excellent relationship between ES&H staff members and researchers, and their attention to safety and health that

is somewhat inconsistent between facilities and may not adequately represent the appropriate set of requirements that staff members need to know to fully mitigate some hazards in some of those facilities. (This is being evaluated for improvement in FY04).

- There are concerns that some groups (e.g., crafts staff members and subcontractors) are not held to the same standards of accountability.
- IOPS requirements and changes are communicated to staff members through e-mails and the requirement that they promptly review the information. For staff members (such as craft staff members) who have broad access to spaces, this can result in information overload and lack of timely, useful information. (Recent change in delivery method of new hazard information to crafts staff members has brought some improvement to this situation.)
- Laser Safety Officer would like to have Lessons learned regarding Laser Safety incidents to be distributed through direct e-mail messages to all staff members who have completed Laser Safety Training within the last two years.
- Lessons learned needs to be better communicated within the Crafts Resources organization.
- Many staff members are not aware of the positive incentives available through the rewards and recognition program.
- There is a lack of recognition for staff members who do a good job with collateral safety

- may often exceed minimum requirements.
- Some of the staff members interviewed felt that the Health and Safety program has high visibility and it was introduced in a way where staff members have the opportunity to be informed and proactive in their own safety and health without fear of reprisal.

responsibilities (such as CSMs). Note that there are exceptions such as the RPL recognition for CSMs who do good self-assessments and NSD and ETD directorates' safety awards program.

Recent/Expected Changes

- SBMS web pages (home page and subject area pages) have been redesigned to make information easier for users to access and understand where they are in the system or subject area. This is an area of ongoing continuing improvement.

Conclusion

RATING	TREND
Good (10*)	→

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 members 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 (i.e., 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.

The rating for this element was administratively adjusted down from an 11 to a 10. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it reflects the recognition that improved incentive processes are needed in support of better accountability and performance related to hazard prevention and control. Although there are processes in place for rewards/recognition, disciplinary action, and performance evaluation; recent events and assessments have indicated that they are not being implemented as well as we would like. Previous years' ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- A key way to improve conformance to expectations is to provide appropriate positive and negative incentives for staff member behavior. This applies to all of the roles mentioned above. Better awareness and**

use of existing rewards and recognition programs is needed including compensation, SDRs, OPA/OTPA awards, and frequent immediate manager feedback. (Issue #1: Accountability)

- **Improved manager skills will facilitate the proper implementation of safety and health rules, including the application of prompt, consistent, and appropriate incentives for their implementation. (Issue #3: Manager Training)**
- 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, timely, and relevant format.
- The current positive reinforcement program is under utilized and requires improvement in its delivery mechanism.
- Consider allowing safety committees make safety awards and recognition.

Tenet: Hazard Prevention and Control
Element: Personal Protective Equipment

Evaluator: Russ Meicenheimer/Steve Maki

ASSESSMENT

Evaluation of this tenet and element was based on a review of the "Application," interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL's programs with respect to the required information related to this tenet/element, changes that are needed to keep the "Application" current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL's program.

The "Personal Protective Equipment" element evaluates PNNL's requirements to obtain and use 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 members are always involved in the selection of respiratory protection.

Strengths

- Generally, PNNL staff members feel that they always have access to the appropriate PPE for the job.
- Some PNNL staff members report that use of PPE during on-the-job activities has made them more likely to use appropriate PPE at home.
- PNNL staff members are aware of the need to inspect PPE and replace it as 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

- The ISM Evaluation identified several cases where R&D staff members were using the wrong PPE (gloves) or were working using PPE that they did not have a clear analysis and authorization to use for protection from the hazards of their work.

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 driven by training, permits, and postings based on analysis of the hazards of the activity.
- 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 two years, and there have been significant efforts on the part of management to support these improvements.
- A supervisor in the 350 shop reliably reminds visitors to put on required PPE before entering the shop. Staff members 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

There is a written program that specifies appropriate PPE and

RATING	TREND
Good (9)	↗

provides protection for staff members using PPE. Staff members and other staff members 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 has been improved implementation of PPE requirements across the Laboratory. Additional rigor is needed in the selection and authorization basis for use of PPE in some situations.

Opportunities for Improvement

- **Although there have been significant improvements in the use of PPE over the past few years, staff members need to continue improvements in the diligent use of the correct PPE for their activities. Managers and safety and health staff members need to continue working to verify that proper PPE is specified for each job. Managers need to do a better job of monitoring the use of PPE. In particular, better use of Chemical Process Permits by staff members and activity-based self-assessments to verify their use could support needed improvements in this area. (Issue #1: Accountability)**
- Managers (particularly in R&D directorates) need 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 members.
- Continue ways to monitor and improve the awareness of appropriate use of PPE.
- Consider how to recognize/reward proper use of PPE, and assure 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 members 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 members (more than 3800) 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 staff members have an opportunity to provide comments and request changes during the PM development process. Craft staff members 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.

Weaknesses

- The reformatting of PMs has been completed, but the rewriting of all PMs is not being maintained as current as desirable.
- There are disagreements between F&O management and craft staff members regarding the performance of PMs (e.g., the "run to failure" issue).
- The process for addressing facility modifications with new/needed PMs is not being consistently applied.

- Normally a pre-job planning meeting is conducted with craft staff members before the PM is performed to confirm that they understand the requirements and to address any concerns they have with the PM.
- Interviews with staff members indicated that PM procedures get a lot of attention.

Recent/Expected Changes

- None

RATING	TREND
Good (10)	↗

Conclusion

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

Opportunities for Improvement

- Continue improvements planned for the PM program.

Tenet: Hazard Prevention and Control
Element: Emergency Preparedness

Evaluator: Russ Meicenheimer

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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

- The *Emergency Preparedness* subject area serves Laboratory needs
- Building Emergency Plans (BEPs) are addressed by the Map Information Tool.
- All Building Emergency

Weaknesses

- There have been a couple of isolated cases where Richland Fire Department did not respond promptly to the correct building (because RFD did not adequately understand our facilities layout).

Response personnel receive an annual table top emergency drill evaluation or are provided 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 members after the September 11 tragedy.
- Homeland security issues are being incorporated into building emergency plans.
- The FY2004 VPP Survey indicates that over 91% of the respondents agree or strongly agree that they are confident their coworkers know the action to take and where to go if there is an emergency at work.

Recent/Expected Changes

- The revised Electronic Prep and Risk process has been modified to add additional criteria that will assist in the identification of hazardous material requiring planning. It will assist in identifying requirements and processes for Emergency Preparedness that need to be completed prior to the initiation of work.

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 will identify deficiencies and make corrections to maintain an effective emergency response

RATING	TREND
Good (11)	➔

capability for anticipated emergencies. Staff members understand their responsibility in the event of an emergency in their Facility.

Opportunities for Improvement

- The integration of the BEP with IOPS could be improved to be more consistent and provide the most recent BEP information available.

Tenet: Hazard Prevention and Control
Element: Radiation Protection Program

Evaluator: Mike Tinker

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application”, interviews with staff members 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 members (more than 3800) 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 members are well qualified and well trained.
- Focus Groups within the RadCon organization facilitate good staff member involvement, concentrating on continuous improvement (e.g. communications, procedures, etc.). The PNNL ALARA safety committee is proactive and well utilized.
- There is a strong culture of RadCon compliance throughout the Lab. Staff members understand the need for radiological safety and work well with SMEs.
- Improvements in the RadCon program related to low-risk work have enhanced the credibility of the radiation protection program.
- The automated radiological access control system (ARACS) and the computerized rad worksheet has improved

Weaknesses

- ARACS is viewed as a good tool by frequent users of the system, but can be intimidating and confusing to those who infrequently use the system.
- Some staff members interviewed felt there are too many procedures and an uncertainty of where exactly to find proper guidance to perform radiological work. (RadCon is already aware of problem and is proactively planning to work on this problem in CY04).

perceptions regarding the consistency and ease of use of RadCon requirements.

Recent/Expected Changes

- The web-based Radioactive Material Tool has been developed and deployed to staff members.

Conclusion

RATING	TREND
Good (10*)	→

The Radiological Control program has been rated “Outstanding” by DOE in PNNL’s prior year performance evaluations. DOE-OA, OSHA and NRC were complimentary of PNNL’s radiation protection program in their recent evaluations. However, a recent surveillance by DOE facility representatives found significant performance problems related to some radiological workers in PNNL’s nuclear facility. This program element is considered to be very good and holding steady, but an administrative adjustment to the rating was made from a 12 to a 10 to reflect the need for improvement in program implementation by at least some radiological workers. This administrative adjustment does not imply that there has been a decline in performance over the past year. Instead, it reflects the recognition that improved implementation of the excellent radiological control programs that PNNL has put in place is needed by some staff members. Previous years’ ratings were deemed to be higher than appropriate, so the administrative adjustment corrects that error and improves the validity of the rating of this element.

Opportunities for Improvement

- **Staff members need to do a better job of implementing basic radiological protection requirements such as surveys and diligent observation of radiation protection boundaries. Line management needs to reinforce (using positive and negative incentives) the need for strict diligence in this area. The managers and staff members of the Radiological Control Management System need to continue emphasis on the strict conformance to radiological control procedures and monitoring requirements. Staff member involvement needs to be increased in the development of radiation protection program procedures to improve the relevance, applicability, implementability, and buy in of the procedures by staff members. (Issue #1: Accountability)**
- **Staff member involvement needs to be increased in the development of radiation protection program procedures to improve the relevance, applicability, implementability, and buy in of the procedures by staff members. (Issue #2: Employee Involvement)**
- Continue current improvement initiatives such as the focus groups. Verify that they are properly chartered.

Tenet: Hazard Prevention and Control
Element: Medical Programs

Evaluator: Ed Beck

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 members, 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 staff members 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 members 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

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, better management, and greater staff member involvement.
- Minimal preventive health risk programs for staff members.
- Staff members are unaware that periodic voluntary medical examinations are available from the site medical provider.

implemented in 1998, staff members who 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. Many of the first aid responders in Richland North facilities have “First Aid and CPR Certified” signs posted outside of their offices.
- The Voluntary Employee Assistance Program continues to be available to support improvement of staff members’ health and well being on and off the job. A high percentage of bargaining unit staff members 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 members 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 nine blood pressure units to encourage worker health by allowing staff members 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 EJTA’s for subcontractor workers has been improved.

- The laser eye exam has been improved and simplified with the use of electronic scanning without dilation of pupils. This has been met with positive approval from laser workers.
- The VPP Steering Committee has purchased (soon to be deployed throughout PNNL facilities) twenty-five Automatic External Defibrillators (AEDs). AEDs have already been deployed for high risk groups (divers and electricians).

Conclusion

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

determination that hazards are identified and controlled and that the electronic tools are available to assist management, staff members 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 members with hazard recognition.

RATING	TREND
Good (11)	→

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.
- Establish proactive healthy lifestyle programs enabling staff members to prevent health issues.
- Communicate the availability of periodic voluntary medical examinations.

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

Evaluator: Chub Bowers

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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 members to perform their work within the relevant occupational safety and health requirement reside. PNNL uses the Standards-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.
- Field deployed subject matter experts help with the communication and interpretation of safety and health programs.
- The SBMS continuous improvement initiative is streamlining subject areas and implementation of search engines are making it less difficult to navigate while searching for specific safety requirements. The SBMS screen redesign enhancements undertaken this fiscal year were designed to address most of the reported problems staff members have with their inability to easily find

Weaknesses

- SBMS is somewhat complex and difficult to navigate.
- Staff members often rely on past experience/ knowledge rather than current information/ requirements.
- There needs to be greater emphasis on occupational ergonomics.
- The ISM Evaluation identified that some Workplace Exposure Assessments are out of date and do not address current conditions.

information within the system. Unsolicited feedback on these enhancements has been very positive in regard to staff member's improved ability to find the information they were seeking.

- PNNL continues to seek expert guidance for the assessment of ES&H programs.
- IOPS is enhancing the flow of ES&H requirements down to the bench top. Staff members are not as likely to rely on past experience/ knowledge when requirements are more easily identifiable and accessible.
- The Hazard Analysis Initiative completed its objective to link the EPR project hazard identification process with SBMS and IOPS.
- 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 members that responded to the survey agrees that they are knowledgeable regarding the PNNL safety and health program. Only 3% disagree.

Recent/Expected Changes

- IOPS continues to improve customer satisfaction through staff member involvement. ES&H staff members have become more integrated into the self assessment process.
- The Worker Safety & Health Management System is developing improvements to address deficiencies in workplace exposure assessments

that were identified by the ISM Evaluation and recent incidents such as the asbestos concern

Conclusion

PNNL occupational safety and health

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

RATING	TREND
Good (12)	→

Opportunities for Improvement

- Continue benchmarking, self-assessment, and expert guidance activities.
- Continue to promote staff member involvement in occupational safety and health programs.

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 staff members and other 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 staff members. It needs to be noted that the excellent support network provided to managers by professional safety and health staff members compensates to some extent for their limited training in those areas.

The initiative by the National Security Directorate to develop and pilot training for new managers is a noteworthy step forward and needs to result in significant improvement of Supervisor/Manager training.

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

The rating for the elements "Manager & Supervisor Safety & Health Training" need to be improved to accomplish the following:

The VPP Steering Committee recommends that the manager training initiative led by NSD needs to be institutionalized and extended across the Laboratory. It should also be considered as a model for training of other management roles (e.g., middle and senior managers) and managers at later stages in their management careers when additional skill/knowledge development is desired/needed.

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Tenet: Safety & Health Training
Element: Employees

Evaluator: Vern Madson, Janice Haney and Nancy Isern

ASSESSMENT

Evaluation of this tenet and element was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and the strengths, weaknesses, and improvement opportunities related to this tenet/element that exist in PNNL’s program.

The “Employees” element contains the principle aspects of PNNL’s safety and health training program as described in the “Application.” The required procedures and suggested guidelines for identifying, planning and completing training are described in the Standards-Based Management System (SBMS) subject area, Training and Qualifications. Individual staff members’ 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 Integrated Operations System (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. According to one comment in the FY2004 VPP Survey
 - “On-line and classroom training has become better and better over the last three

Weaknesses

- Some staff members 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 members interpret information specific to their needs.)
- Some staff members feel that there is considerable redundancy in

years. Improvements in particular have happened in the training with a greater emphasis on training that is related to my job at PNNL rather than standardized or inclusive of all Hanford activities.”

- Most staff members feel they receive adequate hazard training.
- Most staff members feel they have a safe workplace.
- Most staff members feel they have proper PPE to do work safely.
- In the FY2004 VPP Survey, over 90% of staff members report that they are able to recognize and protect themselves and others against hazards in the work place, and over 91% feel confident that coworkers know how to respond in emergencies.
- 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 members.
- 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 2004 VPP Survey shows that over 87% of the staff members completing the survey either
 - training material.
 - Some CSMs find it difficult to set training and reading requirements for large numbers of diverse staff members with access to a laboratory space.
 - IOPS is still perceived as a problem. Staff members feel that it is hard to stay current and that the value of the system is being lost.
 - Post jobs are not written upon completion of planned work. No feedback is provided on lessons learned and safety concerns.
 - Inadequate manpower loading for some jobs is leading to unsafe practices.
 - No recognition is provided for working safely.
 - Staff members report problems reading or using the on-line system.
 - There are presently are no good classes to integrate safety into line management responsibilities
 - Many staff members 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 members report that

strongly agree or agree that they are knowledgeable regarding the PNNL safety and health program. Only 2% disagreed.

- The 2004 VPP Survey indicates that over 91% of the staff members completing the survey either strongly agree or agree that the safety and health training they receive is appropriate for their jobs. Less than 0.5 % disagree. One new hire reported that receiving more safety training here than any other place of previous employment, and feels that PNNL is extremely conscientious about safety.

- web based training is less effective for them and that they would appreciate more personal training.
- The FY2004 VPP Survey indicates that 6% of Craft/Bargaining Unit staff members disagree that the safety and health training they receive is appropriate for their jobs. This, however, is an improvement over last year's 14% and the previous year's 21%.

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.
- Improvements have been made to the service request system which list IOPS hazards applicable for work on each space or service request.
- A majority of training for Craft Resources staff members is being completed during an individual's first month of employment to streamline training and improve staff member qualifications.

Conclusion

Safety & health training processes for PNNL staff members and on-site non-staff members are well-established, well-received, and continuously improving. Integrated Operations provides a formal process for identifying staff member training needs based on their interaction with hazards which is now integrated with the service request system. Improvements to the IOPS tool to provide useful information in a timely manner still remains an improvement opportunity.

RATING	TREND
Good (10)	→

Opportunities for Improvement

- Consider methods to improve IOPS training verification prior to work in IOPS spaces.
- 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).
- Consider ways to reduce redundancy in training. For instance, if the same new hazard is introduced simultaneously in several lab spaces, propagate credit for one reading relevant to the new hazard to the hazard awareness summaries across the multiple work spaces.
- Consider implementation of interactive quizzes to test comprehension of IOPS reading material.
- Consider methods that enable CSM's to sort staff members with access to a space, so that generic training and reading requirements can be set separately for R&D staff members and facilities staff members, who have different roles in the space.

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

Evaluator: Vern Madson

ASSESSMENT

PNNL's management approach makes little distinction between Managers and Supervisors. This is reflected in the VPP application and the FY2004 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: Supervisors & Managers

Evaluators: Vern Madson

ASSESSMENT

Evaluation of this tenet and combined element (“Managers” and “Supervisors”) was based on a review of the “Application,” interviews with staff members 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 members (more than 3800) was conducted and responses from more than 1500 respondents also provided insight into the status of this tenet. The evaluation is intended to identify the current status of PNNL’s programs with respect to the required information related to this tenet/element, changes that are needed to keep the “Application” current and descriptive, and 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

- The Job Evaluation Training System (JETS) provides an annual review of required training based on staff member input.
- Subject Matter Experts (SME) are now scattered across core teams and facilities. This has allowed immediate response to health and safety issues.
- Worker Eligibility Training (WET) software has been implemented. This new software program shows an individual’s training certifications. These are reviewed prior to the jobs, to make sure that staff members have correct and appropriate training for the job task.
- The 2004 VPP Survey indicated that 95% of the managers that completed the survey responded that they received safety and health training appropriate for

Weaknesses

- Most training consists of reading assignments rather than classroom or face-to-face situations that may be more helpful for some staff members.
- Safety does an excellent job of handling the front end of the job. Improvement is needed on job completion – documentation for history and tracking, lessons learned, etc.
- Health & Safety is not a big part of management SDR.
- Confusion in IOPS have some staff members working in spaces where they don’t have IOPS training.
- 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

- their job. Only 1% disagreed.
- The Facility Management qualification card system provides good verification that basic technical skills are learned by key roles.
- NSD has developed a good pilot program for training first line supervisors.

supervisors and those responsible for planning. This applies to basic safety management and personnel management skills as well as hazard identification and mitigation.

Recent/Expected Changes

- Worker Eligibility Training (WET) program – Software showing individual training certification of staff members is available to FPMs online.
- Next generation Job Planning Package – these JPPs will have more rigor thereby reducing mistakes.

Conclusion

RATING	TREND
Adequate (8)	↗

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, managers have operational support services available, including field deployed safety and health staff members. Manager/Supervisor orientation classes will be rolled out to the National Security Directorate next year. This class will address worker safety and health along with other management responsibilities.

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 members.

Opportunities for Improvement

The rating for “Manager & Supervisor Safety & Health Training” needs to be improved to at least the “Good” range by accomplishing the following:

The manager training initiative led by NSD be institutionalized and extended across the Laboratory. It should also be considered as a model for training of other management roles (e.g., middle and senior managers) and managers at later stages in their management careers when additional skill/knowledge development is desired/needed. The model of face-to-face orientation established by the NSD manager training initiative needs to become a common attribute of manager and support staff member interactions with staff members at all levels. (Issue #3: Manager Training)

- Continue efforts to implement a safety and health training program for managers.
- Emphasize safety and health in managers’ SDRs.

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**PNNL DOE-VPP
Annual Program Evaluation
FY-2004**

EMPLOYEE SURVEY

**EXECUTIVE SUMMARY
QUESTIONNAIRE RESULTS
SUMMARY OF COMMENTS**

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Employee Survey Results

Executive Summary

The Employee Survey consisted of 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 1520 staff members (comparable to last year, and 39% of PNNL's 3832 total staff members). Not all respondents answered every question, but many (145) staff members provided additional comments. The fact that 39% of PNNL staff members 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.

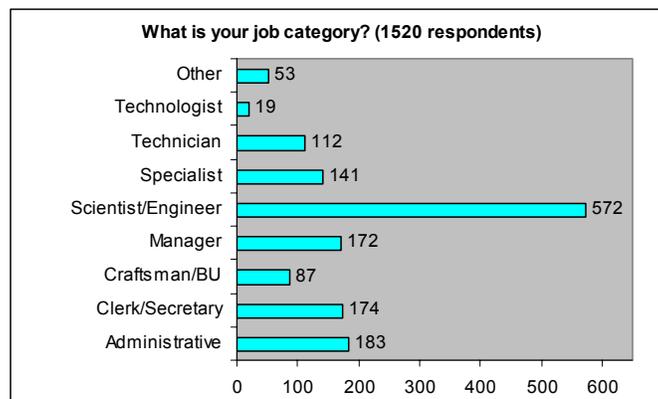
Responses to the Employee Survey questions were relatively positive. The results are evaluated in more detail by tenet below. Additional comments that were received tended to be relatively negative, but that is to be expected since comments are optional and tend to reflect issues that the staff members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

This is the third year this survey has been administered in its current form by the PNNL VPP Steering Committee. The results are consistent from year-to-year and they are showing trends that support the more subjective and qualitative VPP Steering Committee Program Evaluation results gleaned from interviews, document reviews, and facility walkthroughs.

Questionnaire Results

Job Classification of Respondents

In the FY2003 survey, several negative comments were received on the choice of job classifications presented, related to the terminology used ("bargaining unit" vs. "Crafts", "Technician", and "Administrative"). For that reason, the job classification choices were modified in the most recent survey. Responses from the various job classifications are indicated in the chart below.



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 occupational injuries and illnesses 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, although at 67%, the level of management presence in the workplace could be improved. In particular, a significant number of crafts staff members disagree that management has an adequate presence in the workplace, although other job categories share the concern as well.

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 87% of staff members agreed with the statement that "you are knowledgeable regarding PNNL's safety & health program." Ten to fifteen percent of hourly staff members disagreed with the statement "you are regularly involved in decisions that affect your safety and health."

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. Some comments indicated that the questions for this tenet are not applicable to their low-risk work. An analysis of the data by job classification indicated that some bargaining unit staff members (and to a lesser extent others) aren't aware of safety inspections (~23% for bargaining unit), do not get good response to concerns (~12% for bargaining unit), and do not get involved with safety analysis (~23% for bargaining unit). However, it is encouraging that these metrics are improving over past years.

Hazard Prevention and Control (Questions 10-12)

Most respondents believe that equipment that they use is properly maintained for safe operation. They also believe that safety controls support their work and they have seen safe work procedures fairly and consistently enforced. However, an analysis of the data by job classification indicated that there are issues with hourly staff members - noticeably higher levels of "disagreement" (~32% for bargaining unit and 26% for technologists) for the question related to fair and consistent 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. Improvements in this area have been fairly consistent over the past several years.

Comments

The number of comments received this year (145) was very similar to the number of comments received in past years (149 last year and 151 the previous year). While many of the comments received were judged by the evaluation team to be “negative” (approximately 37 or 25%, – as compared to 73 last year and 90 the previous year), about 70 were neutral and about 38 were positive. The comments primarily addressed the following issues:

- Voluntary Protection Program
- Line Management
- Staff Member
- Safety Programs
- Safety & Health Department/Radiation Protection Program
- Training
- Facility conditions
- Concerns/Rewards
- Other safety and health issues

The bargaining unit staff members had some particularly negative comments. Scientists and engineers had many 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 objectives and value of the VPP program. The survey provided a venue for some staff members 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.

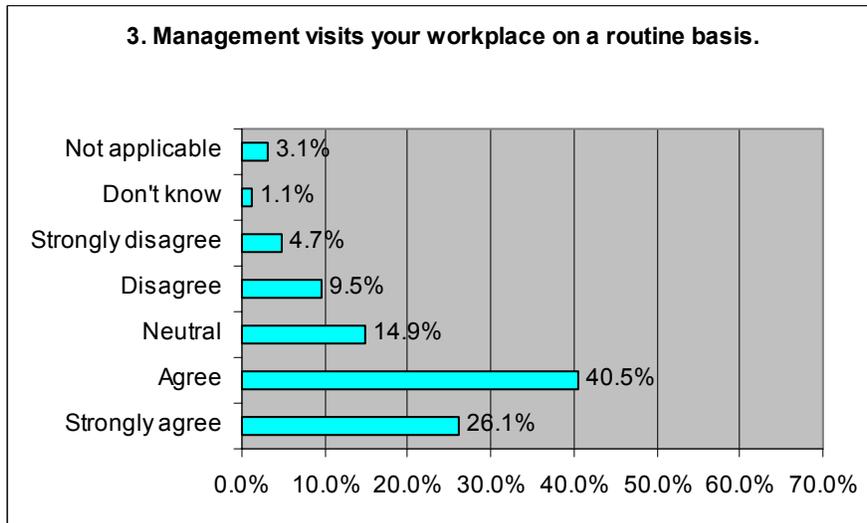
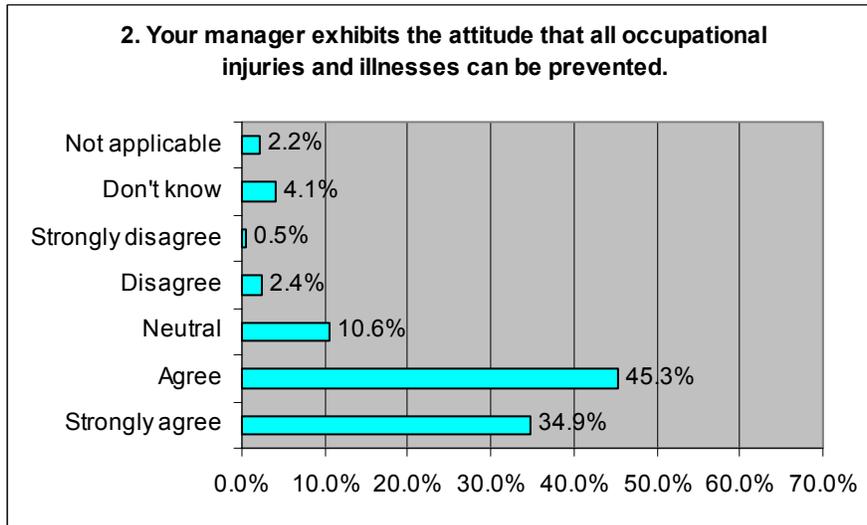
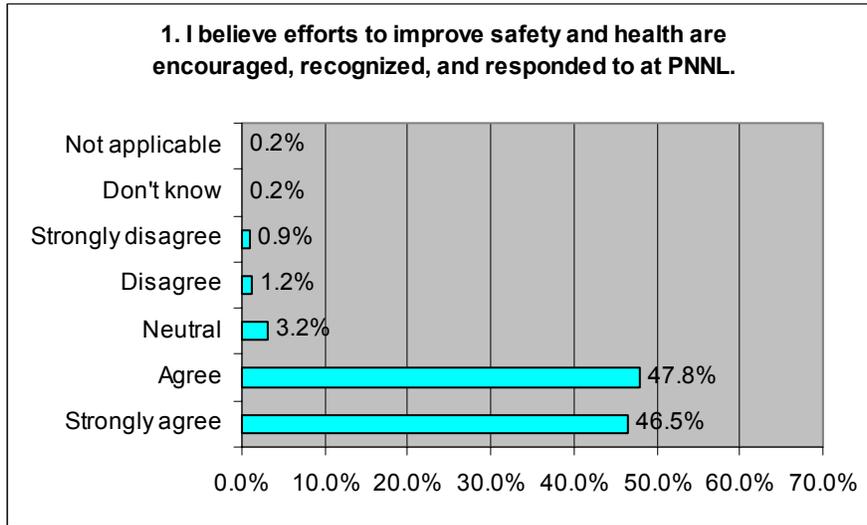
Results – by question

The following charts depict the aggregate responses to each question. The results are based on the percentage of respondents selecting each of the levels of agreement in response to the question. Levels of agreement available included:

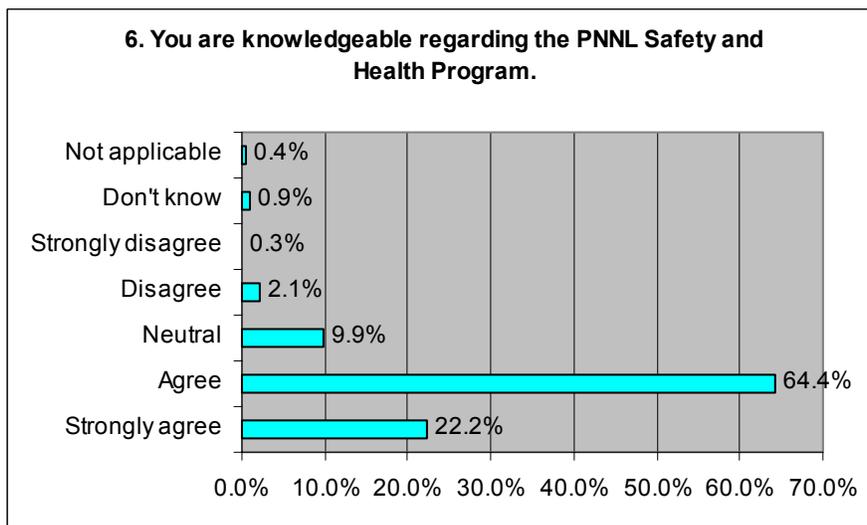
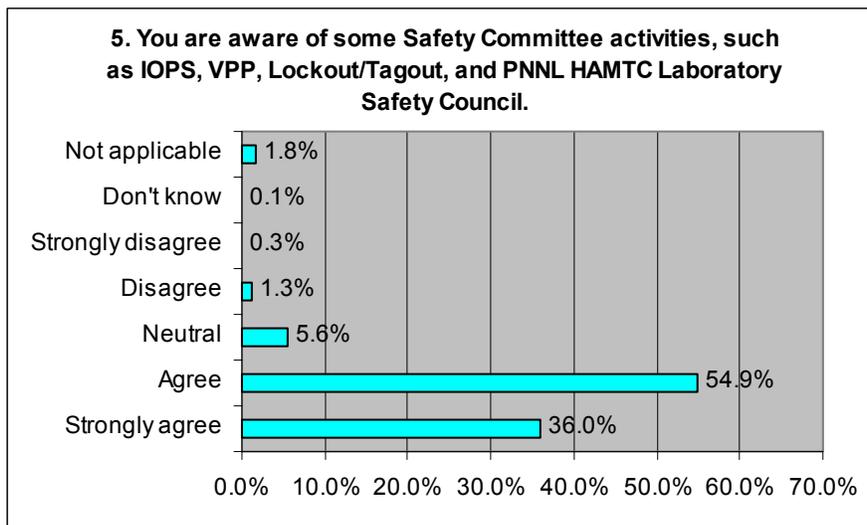
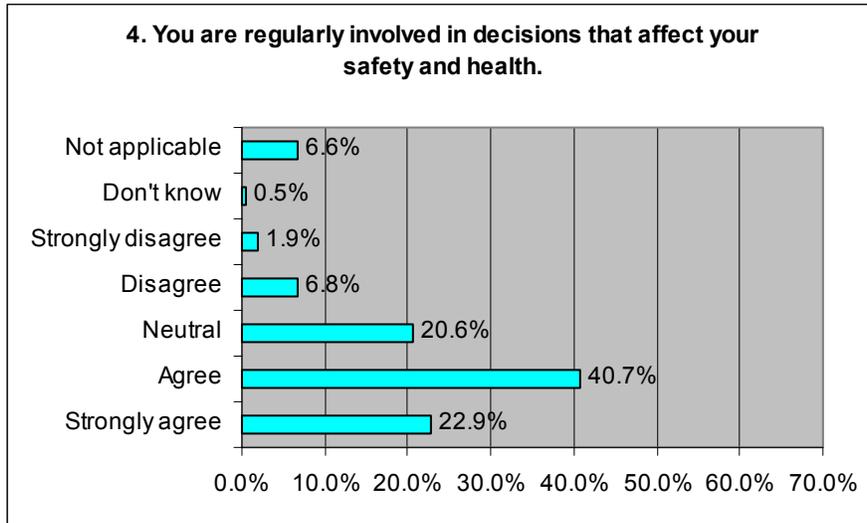
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- Don't Know
- Not Applicable

Results of Questions

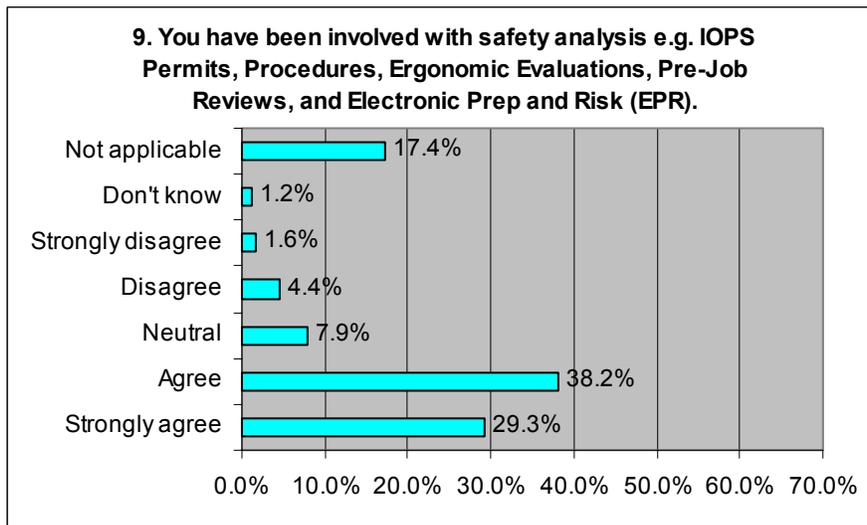
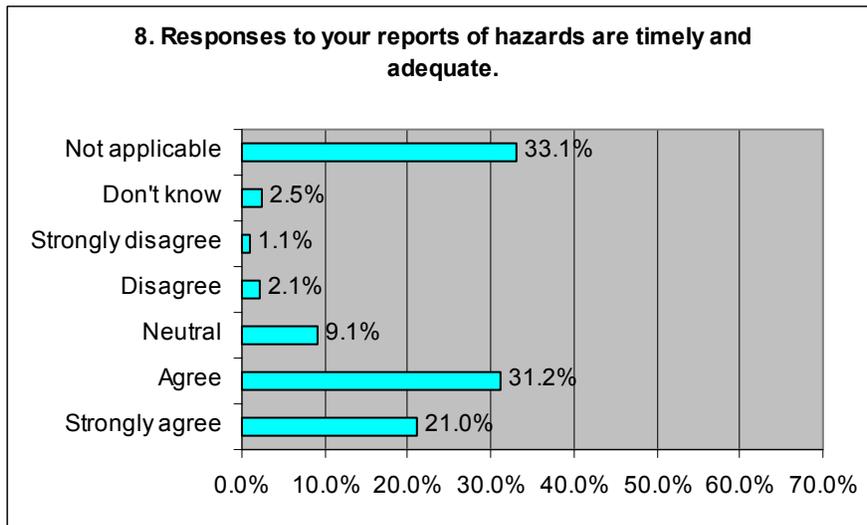
Management Leadership



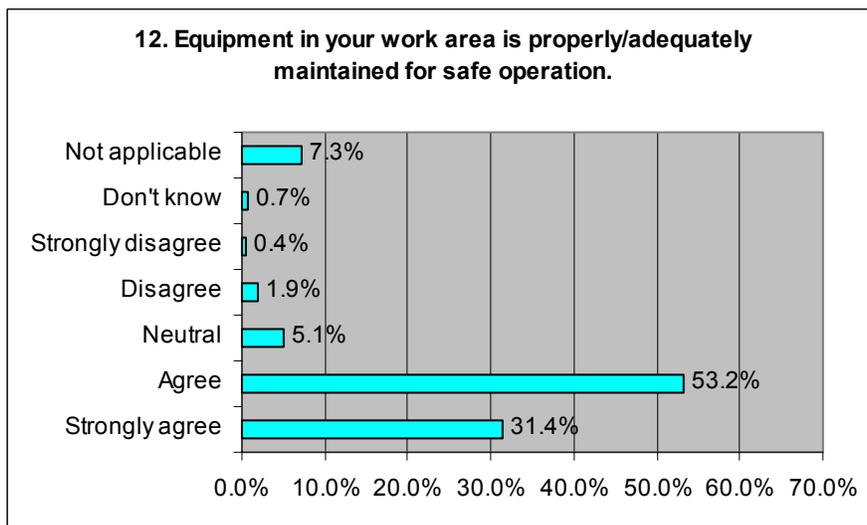
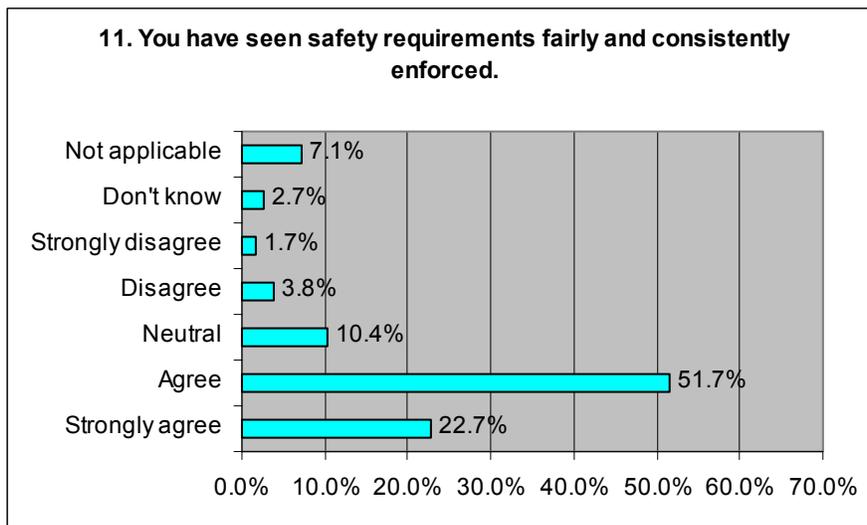
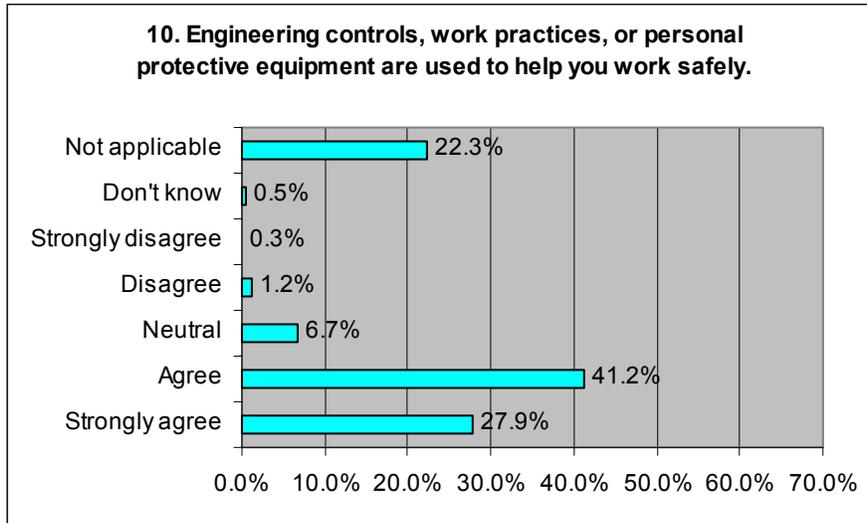
Employee Involvement



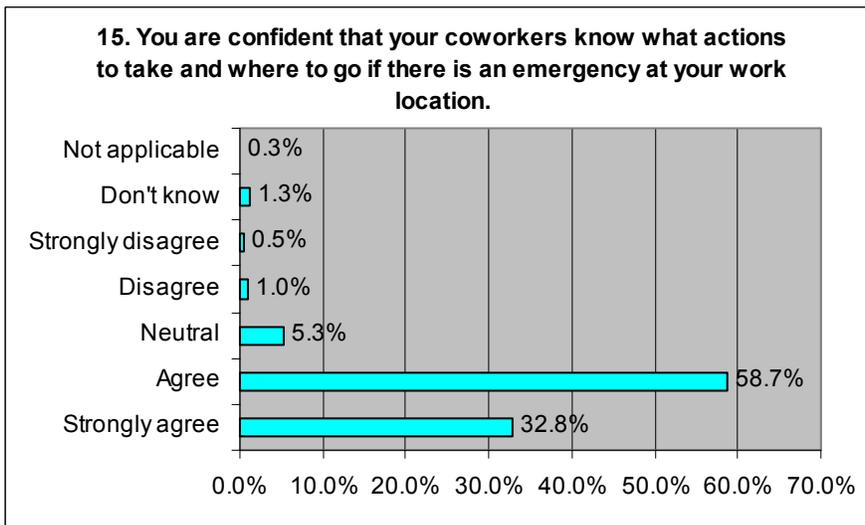
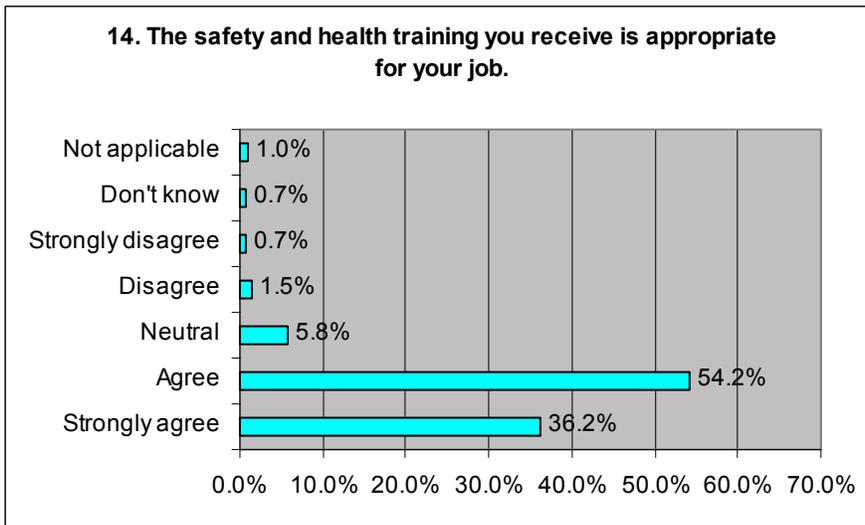
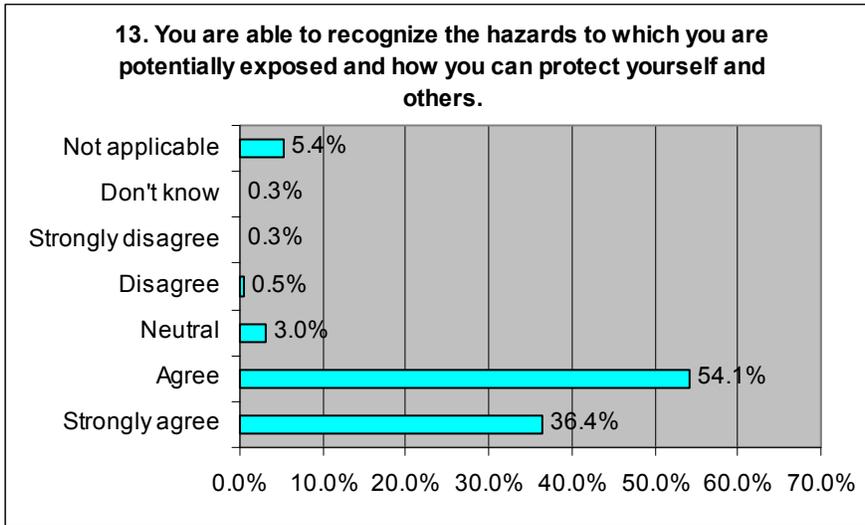
Worksite Analysis



Hazard Prevention and Control



Safety & Health Training



Analysis of Responses

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

The responses to questions from this year’s survey are compared to the results of the past two surveys in the table below.

	Agree			Disagree			
	FY04	FY03	FY02	FY04	FY03	FY02	
Management Leadership	1. I believe efforts to improve safety and health are encouraged, recognized, and responded to at PNNL.	94.5%	93.9%	92.7%	2.0%	2.7%	2.7%
	2. Your manager exhibits the attitude that all occupational injuries and illnesses can be prevented.	82.4%	85.9%	81.2%	2.9%	2.1%	3.1%
	3. Management visits your workplace on a routine basis.	69.7%	69.4%	67.5%	14.2%	15.4%	15.4%
Employee Involvement	4. You are regularly involved in decisions that affect your safety and health.	70.1%	66.8%	65.1%	8.7%	11.9%	12.8%
	5. You are aware of some Safety Committee activities, such as IOPS, VPP, Lockout/Tagout, and PNNL HAMTC Laboratory Safety Council.	92.7%	90.2%	88.3%	1.6%	2.6%	3.2%
	6. You are knowledgeable regarding the PNNL Safety and Health Program.	87.0%	85.1%	83.2%	2.3%	3.0%	2.5%
Worksite Analysis	7. Worksite safety inspections are conducted in your work area.	71.9%	76.5%	73.5%	6.7%	9.8%	9.1%
	8. Responses to your reports of hazards are timely and adequate.	85.3%	85.0%	80.9%	3.1%	2.7%	3.8%
	9. You have been involved with safety analysis e.g. IOPS Permits, Procedures, Ergonomic Evaluations, Pre-Job Reviews, and Electronic Prep and Risk (EPR).	84.9%	81.1%	80.3%	6.0%	9.0%	8.9%
Hazard Prevention & Control	10. Engineering controls, work practices, or personal protective equipment are used to help you work safely.	91.3%	89.3%	87.0%	1.5%	2.9%	2.8%
	11. You have seen safety requirements fairly and consistently enforced.	81.4%	84.6%	85.1%	5.5%	3.1%	3.7%
	12. Equipment in your work area is properly/adequately maintained for safe operation.	91.8%	91.3%	90.5%	2.3%	2.0%	1.9%
Safety & Health Training	13. You are able to recognize the hazards to which you are potentially exposed and how you can protect yourself and others.	96.0%	92.2%	91.5%	0.7%	2.3%	1.8%
	14. The safety and health training you receive is appropriate for your job.	91.4%	90.6%	91.9%	2.2%	2.8%	2.2%
	15. You are confident that your coworkers know what actions to take and where to go if there is an emergency at your work location.	91.9%	90.6%	89.1%	1.5%	2.7%	3.0%

negative trends (action needed)
potentially negative trends (monitor)
trend data that is not of concern

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.
- Staff member involvement in decisions affecting their safety, and feedback regarding reports of hazards may be less than desired.

A newly emerging area of potential concern is that a declining fraction of staff members believe that they “have seen safety requirements fairly and consistently enforced.”

Another metric from the survey results that could be of concern is the fraction of staff members who believe that their “manager exhibits the attitude that all occupational injuries and illnesses can be prevented.” This question has presented some difficulty with PNNL staff members who have a hard time accepting the idea that all accidents are preventable. Many staff members have written clarifying comments that indicate that they and their managers believe that most accidents are preventable, but certain accident causes (such as ice or random equipment failures) can result in accidents that are not reasonably preventable.

Analysis of Results by Job Classification

Respondents were asked to classify themselves according to standard job classifications. Most respondents placed themselves into one of the categories provided. Significant differences between job classifications were generally not apparent, but for the two questions above indicated as having a trend requiring action, craft/bargaining unit staff member responses contributed heavily to the negative trend. Those questions were:

7. Worksite safety inspections are conducted in your work area.
11. You have seen safety requirements fairly and consistently enforced.

Review of Comments

Additional comments were provided by 145 respondents. At least 38 comments were judged by the evaluation team to be positive, about 36 comments were at least somewhat negative, and around 71 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 38 positive comments (~26%) is considered to be a very good sign.

The responses were grouped into the following categories:

- Voluntary Protection Program
- Line Management
- Staff Member
- Safety Programs
- Safety & Health Department/Radiation Protection Program
- Training
- Facility conditions
- Concerns/Rewards
- Other safety and health issues

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

Voluntary Protection Program

Positive comments

"The VPP process (along with IOPS and ISM) have set a standard for work that staff members have integrated into how they do work - it has become a condition of work. It is not a totally flawless process, but it has good recognition and staff are willing to accept it."

"I appreciate the efforts the VPP program is taking in driving home the safety message to staff."

"The VPP program has made a big difference in getting the message out that all at PNNL need to be serious about working safely. Thanks!!"

"The VPP is clearly making staff more aware of worker safety issues and their role. The Porcelain Press is a very good source of information."

"The Porcelain Press is a great newsletter. VPP Committee does an outstanding job of representing PNNL in the Safety Expo."

"I enjoy the VPP newsletter and the annual picnic. Great job!"

A number of other positive comments about the VPP Porcelain Press were received.

At least one staff member thought the VPP survey had "good questions"

Suggestions

One respondent recommended that the VPP Steering Committee members needs to allow rotation of membership to other staff members who want to be involved. (That comment came from a crafts/bargaining unit staff member).

"The VPP steering committee should focus on reducing the unacceptably high days away and restricted (DART) rate among a small group of bargaining unit craftsmen that tend to be repeat offenders. ... The VPP steering committee should be working with this group to help them improve."

"My perception is that the PNNL work environment stressed safety before VPP certification, and stresses Safety just as much with VPP certification. What has not been communicated is the value of the VPP certification and VPP committee ..."

Negative comments

"It appears that VPP has turned a corner - it is no longer important to correct a person's perceived unsafe behavior. The goal is now to gain punishment for the "offender" from management. We've been there before and it appears everything goes full circle."

"The VPP program is a paper tiger. When workers have a concern the VPP is uninvolved and inactive."

One respondent felt VPP was not helping safety, that VPP leadership was not working for the benefit of the staff members and that at least one manager "uses intimidation and lab safety...with threats of job jeopardy if you question his decisions."

A scientist reported that: "Worker buy-in for safety programs is still very poor in my opinion and indicates that VPP is not working very well especially with the bargaining unit staff. They need to take a higher level of ownership in this area as well."

Line Management

Positive comments

There were several positive comments regarding management support for safety.

"My management has been very visable and vocal about the importance of each individule in supporting the safe conduct of all of his (or her) business and life."

Questions #2 and #3 caused confusion for some respondents. Their clarification made positive statements about line management.

"If you mean my manager passes by my office frequently with the opportunity to speak as needed or observe my work, yes."

"If the question were worded to ask whether my manager takes risk control very seriously, I would "strongly agree"."

Suggestions

"Institute a system of job suitability. If a staff member is repeatably getting hurt, (and it's not prevalent in other in that job function) then they should not being performing those tasks, or job functions."

Negative comments

"It is not always understood how I will charge my time related to safety activities."

"I don't believe the PNNL management holds people accountable for their actions regarding safety. Too, often people get off when they were the cause of an incident."

"Management does not provide basic safety equipment such as safety glasses, lab coats, and lab gloves. Safety and health rules are promulgated without sufficient resources from management to comply with the rules."

"Safety is only important to Battelle if management doesn't have to do anything or it does not cost money..."

"On the day that Battelle actually deals with the issue of overuse of colognes/perfumes in the workplace ... I will believe that safety and health actually matters.... When Battelle cares more, I will do the same."

"Absolute no confidence in the management philosophy that PNNL has place now."

Staff Members

Positive comments

"There is a strong organizational and individual commitment to safety."

"PNNL staff seem to be very safety conscious."

"I believe that Battelle is a very safe place and I do not feel as if I am in any danger whatsoever. The safety is very high and I know that it is a good place to work."

Negative comments

"The changes in staffing from exempt to hourly have affected everyone's ability to get their work done safely. People have been physically sick from the changes and there is still a lot of disparaging remarks being made."

"Worker buy-in for safety programs is still very poor in my opinion and indicates that VPP is not working very well especially with the bargaining unit staff. They need to take a higher level of ownership in this area as well." (Said by a scientist).

"Still an us versus them mentality between management and bargaining unit members." (Said by a craft/bargaining unit staff member).

"Union representatives and craft management have sold out and do not really accomplish anything that is not politically correct for their agenda!!! Manager ... has broken promises of proper training and tools to safely perform my work and when asked about it he becomes angry and defensive and my VPP/ union steward will not address the issue. VPP has cost me my sense of safety as no one is willing to address an issue out of apparent fear of rocking the boat and jeopardizing their comfort zone and the personal perks that they achieve at the expense of the hands on people. I'm ostracized for bringing concerns forward."

Safety Programs

Positive comments

Many positive comments were made regarding the safety at PNNL.
Comments included:

"It's a pleasure working in PNNL."

"PNNL has a strong safety effort. To maintain it we need enough support and feedback to keep the goals in view but not so much that we feel that the effort is routine and not worth paying attention to. This balance is a challenge. In the end we need support and help, but each staff member needs to take a large share of responsibility in working safely - for themselves and others."

"I hope PNNL will continue to emphasize the importance of ESH excellence."

"I'm very satisfied with the safety program as a project manager."

"The key is to make sure that everyone from the top to the bottom understands their R2A2s, buys in to them, and is held accountable to them. They also need to be trained properly. Communication is key!"

Suggestions

"The Office of Science has stated PNNL MUST achieve major improvements in TRC and DART safety statistics moving from the 50% level to the 10% best in class level. How can we get all the staff at the Lab to understand this goal?"

"I believe that safety meetings should be held office & lab staff as well as for craft."

"Fluor Hanford begins every meeting with a five minute safety talk. This is very useful in that it re-enforces a safety culture throughout Fluor (i.e, managers are reminded, vs. just operators). A similar requirement at PNNL should be given consideration."

"Quiz on Safety measures can be conducted once a while to test the awareness and knowledge of safety measures."

"Communication about new safety regulations could be improved rather than waiting for inspections to hear about new rules."

Negative comments

One staff member reports that hazard analysis documentation was inappropriately changed and alleges that a signature was forged. Contact information was left by that respondent and this item will be evaluated.

"In total the program is administratively burden and overly costly. The question I have is how much of this is required by our client and how much is self inflicted?"

"As with most other places where I have been employed, safety and health programs are designed to be highly visible while causing as little impact as possible on production. In some instances workers are over-protected to the point of putting them at risk of injury from some unrelated hazard. Again, highly visible, but hardly effective."

"PNNL is a totally risk avoidance based institution. This limits innovation, increases costs and has a negative impact on morale."

"Recently I have seen a return to the old "policeman" attitude that is based on a "gotcha" approach with subsequent threats and/or punishment."

Safety & Health Department

Positive comments

"I've always enjoyed working with ... ES&H staff. They have a positive attitude and want to get work done, but only if it can be done safely."
Also, there is a comment later in the report about a Safety & Health Representative's excellent support related to an ergonomic issue.

Suggestions

"More emphasis on office safety would probably be warranted."
"More walk throughs from ES&H to identify deficiencies."
"One area that I work in was judged to have high noise levels. I was required to complete the hearing hazard training but there has been no follow through with a hearing evaluation."

Negative comments

"There are too many management levels in ESH&Q who second guess any decision made in the field which destroys confidence and any common sense approach of the field staff who are excellent and customer oriented."
"Battelle has not complied with Worker Right to Know requirements since I've worked here."
One staff member was unhappy that PNNL took "MY ONLY DIAGNOSTIC TOOL AWAY FROM ME (VOLT METER) AND GIVE ME A WORTHLESS PLUG IN CIRCUIT TESTER."
Our Industrial Hygiene Department either lacks knowledge of current health and safety regulations or exists solely to deny the workers this protection. The violations are numerous and complaints by workers are ignored, not answered in a timely manner, or when pressed, met with an endless "meeting" process with people who should be most knowledgeable claiming no knowledge of regulations. OSHA requirements and DOE mandates are implemented at the bare minimum and in such a manner as to monitor the least likely areas of hazard. Crafts and other hands on workers are being denied the health and safety coverage PNL claims in their own written documents.
"PNNL safety staff have gone much too far to be overly conservative in interpreting regulations. Subject matter experts are not necessarily well schooled. A more pragmatic approach is needed as work is suffering from over conservatism and management lack of support."
"Office workers (secretaries/clerks) rarely have safety issues and it is difficult to figure out WHO the safety rep is so you can go to them."
"SME support has been questioned and often found lacking in technical basis, resulting in redirection or suspension of planned activities. The integrity of PNNL's VPP has to rely on knowledge based and well defined safety practices to instill confidence in staff that the actions they are advised and trained to take are appropriate to the risk. The lack of consistency in application of PPE or reversals to approved safety plans during work execution does not instill employee confidence that our safety programs are well founded. The safety organization should exhibit the necessary leadership to correct this negative perception."

Radiation Protection Program

Suggestions

"We need more common sense; particularly in the RadCon area. The biggest danger of working radiation areas is that the pile of RWPs required to do work will fall on the staff causing injury. Much of the RWP data is so complex and of such little value that workers do not respect them. Make it simple. Make it excutable."

"Provide more RCT coverage for radiological work."

Training

Positive comments

On-line and classroom training has become better and better over the last three years. Improvements in particular have happened in the training with a greater emphasis on training that is related to my job at PNNL rather than standardized or inclusive of all Hanford activities.

Negative comments/improvement opportunities

Contrary to what we know to be true, one staff member reported that there is "No method of documenting 24 hour onsite hazardous material worker training."

"The radworker training that I took last year as a new employee was geared more toward refresher training than new employee with very little rad experience."

"We tend to "train" a lot on procedures and applying safety equipment, but I have never seen anything on "training" to understand the risks, the pathways, and perhaps symptoms. There is a huge tendency that everything is "hazardous", but there are huge degrees of hazard that are not communicated understood or appreciated."

"I believe that the training often is overkill in an attempt to cover as much as possible with one training. For example, having someone required to be trained on disposing of Hazardous Materials because they use methanol alcohol on a tissue and have to throw it away, but deal with no other chemicals. ... Knowledge is good, but when people skim through the material because it isn't relevant to their job, they may miss the information that they really do need."

Facility Conditions

A variety of facility-related complaints were raised such as housekeeping in common spaces, air quality monitoring and feedback about results, lack of desired tools and equipment, lack of money to address improvement opportunities, parking lot safety and stop signs, solid doors on labs and the concern that it could impact safety of those working alone, etc. These issues will be shared with F&O for consideration.

Concerns/Rewards

"When I brought up a safety concern I was promptly (less than a week) responded to with a statement that the concern was noted and on the list of things to do, but no funding was available."

"F&O's desire to cut costs reduces their responsiveness to safety and health concerns."

"I suggest you take a look at the rewards-based approach being used at ORNL on the Spallation Neutron Source construction project. It is far more effective."

"My spouse used to work for Exxon and an element of their safety program was awarding home safety related equipment (fire extinguishers, fire alarms, escape ladders, auto emergency kits, etc) recognizing outstanding safety performance."

Other safety and health issues

Medical

"In the past, Battelle required annual medical exams at HEHF. That seemed to me to be a good practice. It's no longer done. The exams may still be available, but they certainly aren't encouraged. Staff should be encouraged to practice "wellness." Efforts at the Lab to encourage and provide opportunities for fitness training are laudable."

"The former practice of having each employee have a physical at HEHF was good. Now that we have these physicals covered through insurance wouldn't the Lab save money by moving that outside of insurance and paying for it directly. It could make insurance cheaper and increase the number of staff that have this important exam."

Ergo

"I had some hand numbness problems earlier this year and was very impressed by the efficient and thorough response from all those involved with ergonomic conditions and repetitive stress injuries including {*Safety & Health Representative*} and all the HEHF staff. I have truly felt a difference in my hands and feel grateful that there were so many knowledgeable people around to help me work through these issues."

"What I haven't seen and I would like to see is an annual training for IS&E staff that teaches them about ergonomics, stretching hands, etc ... I think that everyone at the Lab, not just IS&E could benefit from this."

LL/BP

"The "Lessons Learned" website is particularly informative with regard to pointing out less-than-routine safety hazards. It helps keep the idea of "defensive health and safety" alive!"

IOPS

"There needs to be better coordination between IOPS and some of the chemical management requirements. we need more common sense in areas such as these."

AED

"What about defibrillators in the workplace and training on how to use them?"

"Having recently had a CPR refresher course, I learned of the remarkable effectiveness of automatic external defibrillators (AEDs)--and the importance of their use within 4-8 minutes of an emergency. The only significant criticism I have of PNNL with respect to workplace safety and health is that the lab has not installed these devices."

End of Report