Voluntary Protection Program

Pacific Northwest National Laboratory

PNNL 13785 Rev. 6

FY-2007 PROGRAM EVALUATION

January

vpp.pnl.gov

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FY-2007 PNNL VPP Program Evaluation

January 2007

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_____
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PNNL VPP Program Evaluation Team

The FY2007 PNNL VPP Program Evaluation Team is a group of Battelle staff members from across the Laboratory who represent the PNNL VPP Steering Committee. 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 via an all-staff survey and individual interviews with members of the Program Evaluation team, 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

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PNNL FY 2007 VPP Program Evaluation
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Datasheets

ACRONYMS

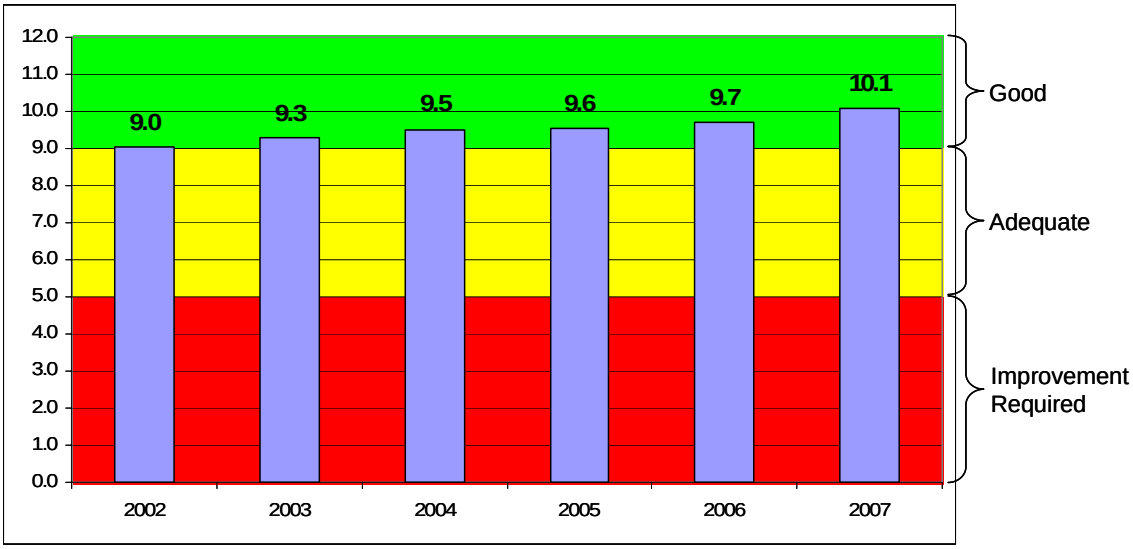
AED	Automated External Defibrillators
ALARA	As Low As Reasonably Achievable
ARACS	Automated Radiological Access Control System
ATS	Assessment Tracking System
BEP	Building Emergency Plan
CAMP	Capital Asset Management Program
CSM	Cognizant Space Managers
CY	Calendar Year
DART	Days Away and Restricted Time
DOE	Department of Energy
DZAC	Directorate Zero Accident Committee
EJTA	Employee Job Task Analysis
EMSL	Environmental and Molecular Sciences Laboratory
EPR	Electronic Preparation and Risk System
ESTD	Energy, Science and Technology Directorate
ETD	Environmental Technology Directorate
ES&H	Environmental Safety and Health
ESH&Q	Environment, Safety, Health and Quality
FSD	Fundamental Sciences Directorate
F&O	Facilities and Operations
FY	Fiscal Year
HAMTC	Hanford Atomic & Metal Trades Council
HAS	Hazard Awareness Summary
IOPS	Integrated Operation System
JETS	Job Evaluation Training System
MIT	Map Information Tool
NSD	National Security Directorate
OSHA	Occupational Safety and Health Administration
PHLSC	PNNL/HAMTC Laboratory Safety Committee
PNNL	Pacific Northwest National Laboratory
PNSO	Pacific Northwest Site Office (DOE)
POC	Point of Contact
PPE	Personal Protective Equipment
PZAC	President's Zero Accident Council
R&D	Research and Development
R2A2	Roles, Responsibilities, Accountabilities, and Authorities
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
SME	Subject Matter Expert
T&Q	Training and Qualification
VPP	Voluntary Protection Program
VPPPA	VPP Participants Association
WET	Worker Eligibility & Training system
WISHA	Washington Industrial Safety and Health Administration
WS&H	Worker Safety & Health

PNNL FY 2007 VPP Program Evaluation

Executive Summary

The Pacific Northwest National Laboratory (PNNL) Voluntary Protection Program (VPP) Steering Committee completed the FY 2007 VPP Program Evaluation in January 2007. The evaluation indicates ongoing improvement in the worker safety and health program at PNNL. The overall VPP Program Evaluation rating this year was 10.1 on a scale of 0-12, an improvement of 0.4 over last year. The trend of ratings over the past six years is indicated in the chart below. The improvements this year reflect the maturation of management initiatives undertaken beginning in FY04, employee perception of the improvement in safety culture, safety program implementation and performance resulting from those initiatives.

PNNL is doing well in terms of safety, but continuous improvement is a part of any best-in-class program, and improvement is needed to achieve truly best-in-class safety performance.



TREND IN OVERALL VPP PROGRAM EVALUATION RATING

The VPP quest for continuous improvement relies on past successes building the foundation for future efforts. Although there continue to be improvement opportunities in the development and implementation of some program elements, all of the basic tenets of VPP are firmly in place at PNNL, and the elements under each tenet are generally well-developed and implemented.

As our safety systems and processes mature, PNNL is seeking even greater improvements that will advance us toward truly excellent safety culture and best-in-class safety performance. Progress is being made on opportunities identified in previous VPP Program Evaluations. The issues identified in this year's VPP Program Evaluation are consistent with, and build upon, previously identified issues. No areas were found to be "deficient" this year, in terms of the minimum standards established by the

VPP Steering Committee. However, every program can be improved and the VPP Steering Committee identified several key improvement opportunities during the Program Evaluation this year that will help PNNL advance toward best-in-class safety performance. The primary areas for improvement identified in this Program Evaluation address the following issues:

1. Management **priorities** and **allocation of resources** for safety culture improvements is not adequate across much of the Laboratory.
2. **Staff participation** in the safety program is declining and **recognition of staff** contributions to safety at PNNL is less than desired.
3. Processes to assure **subcontractor/vendor safety and compliance** with safety requirements are not yet at the desired level.
4. The **values and beliefs** of some individuals (including managers) are not aligned with the safety values and standards of Battelle and PNNL, including the belief that "all accidents are preventable."

The VPP Steering Committee will work with PNNL senior management to address these issues as part of PNNL's safety performance improvement agenda.

PNNL VPP Program Evaluation Approach

A team of evaluators representing staff members involved with PNNL's VPP Steering Committee, including safety professionals from the Environment, Safety, Health, and Quality (ESH&Q) Directorate, assessed PNNL's programs and performance with respect to VPP criteria.

The overall performance of PNNL's program implementation for each element and its trend (e.g.; improving, stable, declining) was rated using the scales in the tables below and to the right. The "rating" (below) describes the current status of the program, and the "trend" (right) describes whether the program element is judged to be going the "right direction" (↗), "stable" (➔), or "not going the right direction" (↘).

TREND
↗
➔
↘

RATING
Good
Adequate
Improvement Required (IR)

The performance of the program was also quantitatively rated in accordance with the following values. The ratings were applied to each element and combined (averaged) for each tenet. The rating for each tenet is weighted as indicated below to achieve the overall program score.

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

The VPP Program Evaluation team used previously developed rating criteria based on work done by the Hanford VPP Champions group in order to define characteristics for each rating range and VPP element.

The FY07 PNNL VPP Program Evaluation team included the following members who represented the PNNL VPP Steering Committee:

Team Members

Julie Fisher
Steve Goheen
Nancy Isern
Vern Madson
Russell Meicenheimer
Theodore Pietrok (DOE-PNSO observer)
Ray Pugh
Keri Schneirla
Loretta Shockey
Mike Tinker
Pat Wright, Team Lead

This Program Evaluation report contains a summary of results related to the worker safety and health program evaluation as defined by the VPP tenets, and a data sheet for each element of the VPP tenets. The data sheets contain the strengths, weaknesses, improvement opportunities, recent/anticipated changes that will affect each element, and a rating for each element as described above.

Evaluation of the tenets and elements was based on a review of VPP documentation including the "VPP Program Description," previous Program Evaluations, interviews with staff members using questions based on the DOE-VPP "OnSite Review Guidelines," walkthroughs of PNNL-controlled work locations, an all-staff survey, 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, and safety and health support staff members. The tables below indicate the number of formal interviews and facilities visited as part of the VPP Program Evaluation this year.

Formal Interviews	
R&D Scientist/Engineer	24
R&D Manager/Project Manager	10
Bargaining Unit	20
Maintenance/Facility Manager	6
Administrative staff	2
Support staff	10
Support Manager	2
Safety & Health Representative	5
Senior Manager	3
	82
Informal interviews	19
Total staff interviewed	101

Facilities Visited

- 318	- 6652L	- Offsite/foreign
- 320	- Annex	- Process Development Laboratory East
- 323	- Applied Process Engineering Laboratory	- Process Development Laboratory West
- 326	- Battelle Receiving and Shipping Warehouse	- Port of Pasco
- 329	- Chemical Engineering Laboratory	- Physical Sciences Laboratory
- 331	- Environmental and Molecular Sciences Laboratory	- Research Operations Building

Facilities Visited (continued)

- 336	- Engineering Support Building	- Radiochemical Processing Laboratory
- 338	- Environmental Technology Building	- Research Technology Laboratory
- 350	- Grounds Equipment Storage Building	- Sigma 2
- 622	- Information Sciences Building #1	- Sigma 3
- 3730	- Laboratory Support Building	- Sigma 5
- 3760	- Life Sciences Laboratory #2	- Technical Support Warehouse
- 2400 Stevens Drive	- National Security Building	

An electronic survey of all PNNL staff members (more than 4100) was conducted during December 2006. Responses from 2362 respondents (>56%) were received. This response rate was even higher than previous VPP program evaluation surveys, which broke previous Laboratory records for response to all-staff surveys. The results of the survey provided insight regarding staff perception of PNNL's safety program with respect to VPP criteria, the value placed on safety by the staff member, their managers and co-workers, and a targeted question to determine staff attitudes about the use of Automated External Defibrillators purchased by VPP. The survery results will be shared with staff and management in conjunction with this evaluation, and were used to validate the conclusions of this Program Evaluation. Results of the survey can be viewed at http://vpp.pnl.gov/about/survey.asp.

This Program Evaluation identifies the current status of PNNL's programs with respect to the tenets/elements of VPP; including the strengths, weaknesses, and improvement opportunities.

A "report card" showing the rating of each element and tenet along with the trend of each is provided in Exhibit 1. In addition to the required annual Program Evaluation, VPP STAR sites must also maintain three-year injury and illness rates better than industry averages. As indicated by Exhibit 2, PNNL injury and illness rates are better than industry average.

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 VPP Program Evaluation Rating and Summary for FY 2007 (see following pages). The analysis from the Program Evaluation helped to identify four improvement opportunities that we believe will improve PNNL's safety culture. Those issues will be evaluated for corrective action and will be tracked to closure using PNNL's Assessment Tracking System (ATS).

This report is based on previous VPP Program Evaluation reports. Although there have been changes in some PNNL safety-related programs, many aspects of operation remain similar to previous VPP Program Evaluations. For that reason, there are strong similarities between this report and previous reports. Changes in the individual datasheets are highlighted as described in the introduction to the datasheets on page “Datasheet – i.”

Program Evaluation Summary

RATING
Good (10.1)

PNNL has excellent safety programs and is continuously improving implementation of programs that conform to VPP safety and health criteria. DOE-VPP's recognition of PNNL as a STAR site as well as several recent regional and national awards and recognition confirm PNNL's excellent worker safety and health programs and performance.

PNNL continues to implement improvement initiatives to address issues from internal and external assessments. Such initiatives reflect a healthy, growing program in a dynamic environment focused on continuous improvement. The most significant safety performance improvement initiative in the past year is the incorporation of the Safety Performance Improvement Plan (which is based in part on the recommendations from VPP Program Evaluations) into PNNL's Integrated ES&H Program.

The general health of each of the principal VPP tenets is indicated below:
*(using a **12-point scale**, with 9-12 being "Good" and 5-8 being "Adequate")*

TENET/ELEMENT (Weight)	**FY06 RATING** (Score)
Management Leadership (18%)	**Good (9.9)**
Employee Involvement (18%)	**Good (9.0)**
Worksite Analysis (18%)	**Good (10.1)**
Hazard Prevention & Control (18%)	**Good (10.6)**
Safety & Health Training (18%)	**Good (10.0)**

Exhibit 1 summarizes the ratings and trends associated with each VPP element.

Significant improvements and changes recognized during the FY07 VPP Program Evaluation include:

<u>Management Leadership</u>

- Safety and compliance related to subcontract work significantly improved. Construction subcontractors are rigorously managed and improvement opportunities for subcontractors have been implemented. However, the evaluation team noted that vendor safety continues to be a concern.
- Resources for some safety initiatives have improved resulting in the trend line moving from down to neutral. However, there are still concerns about the commitment of resources and priority for safety culture improvement as described in the issues for improvement.
- The trend line related to management commitment was changed from up to neutral, not because there has been a decline, but in recognition of the maturation of strong improvements made last year (no new improvements

beyond those initiated in FY06 are evident). Note that this element is rated 11 out of a possible 12.

- Improvements are being made in the areas of planning and site orientation.

Employee Involvement

- Employee involvement improved from adequate to good last year – a significant change. The VPP Steering Committee determined that safety committees have matured to the point where they are making major contributions to safety. However, survey results indicate that staff awareness of the value safety committees deliver to the safety program needs improvement.
- The degree and manner of involvement of staff in safety is substantial, particularly for work-related activities such as work planning, event critiques, etc. However, notwithstanding the improved rating, there are still indications that employee participation in safety culture improvement activities is not consistently valued by management and may be declining.

Worksite Analysis

- Improvements in worksite analysis have been made in our self-assessment processes and the use of surveys for key hazards such as beryllium.
- Employee reporting of hazards has improved significantly, thanks to initiatives such as F&O's DZAC, VPP's Safety Suggestion contest and the SafetyDiaLOG.

Hazard Prevention & Control

- The level of safety and health professional expertise improved with the addition of new staff and the professional certification attained by several existing staff.
- It is notable that Personal Protective Equipment has improved to a rating of 11, which is a substantial improvement over previous years.
- The rating for Occupational Safety & Health Programs was decreased, not because programs became less effective, but rather because expectations for worker safety and health programs increased substantially with the implementation of 10CFR851 broadening the scope and importance of PNNL's safey and health program. Note that this element is still rated 11 out of 12.

Safety & Health Training

- The rating for supervisor and manager training was increased due to increased training in safety management through the Safety, Operations, & Security (SOS) courses and the DuPont Safety Leadership training.

While manager training and related knowledge has improved, the Steering Committee emphasizes that management needs to adopt the principles of Human Performance Improvement, which will allow staff to achieve best-in-class safety performance.

The FY07 VPP Program Evaluation continues to be a significant contributor to the Laboratory's safety improvement agenda. Although PNNL performance related to all VPP tenets is now meeting PNNL VPP Steering Committee minimum expectations, improvements have been identified which will allow PNNL to move toward its objective of best-in-class safety performance through continuous improvement.

PNNL has a strong worker safety and health program. Oustanding areas for improvement focus largely on the "softer" areas of safey culture such as **management leadership** and **employee involvement**. Management leadership is key to achieving best-in-class safety performance. Improving employee involvement is also critical to achieving the kind of safety culture PNNL desires. This is especially critical as PNNL transitions to a new business environment and new facilities. Other areas for improvement highlighted by this year's Program Evaluation focus on improving the safety performance and compliance of **subcontractors and vendors**, and taking steps to assure that the **values and beliefs** of all workers are consistent with the Laboratory's stated policy and standards that establish the expectation that "all accidents are preventable."

The primary areas of improvement indicated by this Program Evaluation focus on the following issues:

1. Management **priorities** and **allocation of resources** for safety culture improvements is not adequate across much of the Laboratory.
2. **Staff participation** in the safety program is declining and **recognition of staff** contributions to safety at PNNL is less than desired.
3. Processes to assure **subcontractor/vendor safety and compliance** with safety requirements are not yet at the desired level.
4. The **values and beliefs** of some individuals (including managers) are not aligned with the safety values and standards of Battelle and PNNL, including the belief that "all accidents are preventable."

Improvement in these areas will allow PNNL to achieve the goal of best-in-class safety performance, with an ongoing commitment to continuous improvement of our safety culture.

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Exhibit 1

PNNL VPP PROGRAM EVALUATION
VPP TENET/ELEMENT RATINGS & TRENDS – FY 2007

TENET/ELEMENT (Weight)	**FY07 RATING** (Score)	**2006**	2005	2004	2003	2002	**FY07 Trend**	**2006**	2005	2004	2003	2002
General Information (3%)	**Good (12)**	**12**	12	12	12	12	→	→	→	→	↗	↗
Assurance of Commitment (7%)	**Good (11)**	**11**	11	11	10	10	→	→	→	→	→	→
Management Leadership (18%)	**Good (9.9)**	**9.8**	9.6	9.6	9.6	9.4	→	→	→	→	↗	↗
Commitment	Good (11)	11	11	11	11	11	→	↗	→	→	↗	↗
Organization	Good (10)	10	10	10	10	10	→	→	→	→	→	→
Responsibility	Good (10)	10	10	10	10	10	→	→	→	→	↗	→
Accountability	Good (9)	9	9	9	9	9	→	→	→	→	→	→
Resources	Good (10)	10	10	10	10	10	→ ■	↘	↗	→	→	→
Planning	Good (10)	10	10	10	10	10	↗ ■	→	→	→	↗	↗
Contract Workers	Good (10) ■	9	8	8	8	7	↗	↗	→	→	↗	→
Program Evaluation	Good (11)	11	11	11	11	11	↗	↗	→	→	↗	↗
Site Orientation	Good (9)	9	9	9	9	9	↗ ■	→	→	→	↗	↗
Employee Notification	Good (9)	9	8	8	8	7	↗	↗	↗	→	↗	↗
Employee Involvement (18%)	**Good (9.0)**	**8**	**8**	**8**	**7.5**	**6.5**	↗ ■	→	↗	↗	↗	→
Degree and Manner of Involvement	Good (9) ■	8	8	8	8	7	↗	↗	↗	↗	↗	→
Safety Committees	Good (9) ■	8	8	8	7	6	→ ■	↘	↗	↗	↗	→
Worksite Analysis (18%)	**Good (10.1)**	**9.9**	**9.7**	**9.4**	**9.3**	**9**	↗	↗	↗	↗	↗	↗
Pre-Use/Pre-Startup Analysis	Good (10)	10	10	10	10	10	↗	↗	→	↗	↗	↗
Comprehensive Surveys	Good (11) ■	10	10	10	10	10	↗	↗	→	↗	↗	↗
Self-Inspections	Good (10)	10	10	10	10	10	↗ ■	→	→	→	→	→
Routine Hazard Analysis	Good (11)	11	11	10	10	10	↗	↗	↗	↗	↗	↗
Employee Reporting of Hazards	Good (10) ■	9	9	9	8	7	↗	↗	→	↗	↗	↗
Accident Investigations	Good (9)	9	9	9	9	9	↗	↗	↗	↗	↗	→
Trend Analysis	Good (10)	10	9	8	8	7	↗	↗	↗	↗	↗	→
Hazard Prevention & Control (18%)	**Good (10.6)**	**10.5**	**10.5**	**10.4**	**10.4**	**10.4**	↗	→	→	↗	↗	↗
Professional Expertise	Good (11) ■	10	10	10	10	10	↗	↗	→	→	↗	→
Safety & Health Rules	Good (10)	10	10	10	10	10	↗	↗	→	→	↗	↗
Personal Protective Equipment	Good (11) ■	10	10	9	9	9	↗	↗	↗	↗	↗	→
Preventive Maintenance	Good (10)	10	10	10	10	10	→	→	→	↗	→	→
Emergency Preparedness	Good (11)	11	11	11	11	11	→	→	→	→	→	→
Radiation Protection Program	Good (10)	10	10	10	10	10	↗ ■	→	→	→	↗	↗
Medical Programs	Good (11)	11	11	11	11	11	↗ ■	→	→	→	↗	↗
Occupational Safety & Health Programs	Good (11) ■	12	12	12	12	12	→	→	→	→	↗	↗
Safety & Health Training (18%)	**Good (10.0)**	**9.5**	**9**	**9**	**9**	**9**	↗	↗	↗	↗	↗	↗
Employees	Good (10)	10	10	10	10	10	↗ ■	→	→	→	→	→
Supervisors Managers	Good (10) ■	9	8	8	8	8	↗	↗	↗	↗	↗	↗

■ *Change in trend or rating since last year (green is positive, yellow is negative)*

Exhibit 2

Three-year Occupational Injury and Illness Data

PNNL Employees (Only)

Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Case Rate*	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) Case Rate*
2004	6,905,504	39	1.13	19	0.55
2005	7,083,350	40	1.13	15	0.42
2006	7,210,493	28	0.78	11	0.31
2004-2006	**21,199,347** *Total hours*	**107** *Total cases*	**1.01** *3-yr Average*	**45** *Total cases*	**0.42** *3-yr Average*

PNNL Subcontractors (Only)

Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Case Rate*	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) Case Rate*
2004	51,530	0	0.00	0	0.00
2005	53,951	0	0.00	0	0.00
2006	50,403	0	0.00	0	0.00
2004-2006	**155,884** *Total hours*	**0** *Total cases*	**0.00** *3-yr Average*	**0** *Total cases*	**0.00** *3-yr Average*

PNNL TOTAL (including subcontractors)

Calendar Year	Hours Worked	Total # Recordable Cases	Total Recordable Case Incidence Case Rate*	# of Cases w/ Days Away or Restricted Time	Days Away & Restricted Time (DART) Case Rate*
2004	6,957,034	39	1.12	19	0.55
2005	7,137,301	40	1.12	15	0.42
2006	7,260,896	28	0.77	11	0.30
2004-2006	**21,355,231** *Total hours*	**107** *Total cases*	**1.00** *3-yr Average*	**45** *Total cases*	**0.42** *3-yr Average*
CY2005 BLS rates for NAICS 5417		*>1000 empl*	***1.3***	*>1000 empl*	***0.5***
"Scientific research and development services"		*All employers*	***1.7***	*All employers*	***0.8***

** Rates are expressed as cases per 200,000 hours worked.*

INJURY AND ILLNESS PERFORMANCE

PNNL injury and illness performance in CY 2006 continued to improve toward best-in-class performance. PNNL encourages reporting of all injuries and illnesses, no matter how minor. It is important to note that, while PNNL is seeing a continuing decrease in the Total Recordable Case (TRC) rate, Days Away, Restricted, or Transferred (DART) rate, Days Away severity rate, and the total number of first aid cases; reports of incidents to PNNL's emergency reporting number continue to increase, indicating that there is not an injury reporting problem at the Laboratory. This is a sign of a healthy safety culture that will improve our ability to determine accident causes and trends, and prevent recurrence.

PNNL three-year average injury and illness performance is 1.00 recordable cases (TRC) per 200,000 hours and 0.42 DART cases per 200,000 hours. This is a substantial improvement over last year's rates and it is believed to reflect significant improvements in management leadership that began in FY04 following the Battelle Safety Summit and intensified management focus on safety performance improvement. There has been a consistent downward trend in incident and severity rates for occupational injuries and illnesses at PNNL. Current year performance is approaching best-in-class levels.

Note that prior year case counts increased slightly because our program continues to monitor worker compensation claims and other inputs to verify that all cases are recorded and attributed to the appropriate year.

PNNL safety and health performance continues to exceed the VPP STAR performance requirements based on achieving TRC and DART rates which are better than the average in our industry,

ISSUES FOR IMPROVEMENT

(FY2007 PNNL VPP Program Evaluation)

The FY07 PNNL VPP Program Evaluation confirms a high degree of maturity in PNNL safety systems and processes, and it reflects the ongoing continuous improvement efforts related to advancing toward a best-in-class safety culture. As with any healthy organization, there are opportunities for improvement for even higher performance. Although some of these issues address key elements of VPP and Integrated Safety Management principles, the conclusion of this Program Evaluation is that PNNL is well along the road toward achieving a best-in-class safety culture. Most of the remaining improvements needed to achieve our goals focus on the more subtle cultural aspects of leading and implementing our excellent safety programs and processes.

The following key issues for improvement have been determined by the VPP Program Evaluation team to have the greatest impact on safety culture and greatest potential for substantial safety improvement at PNNL based on observations and evaluation of PNNL's implementation of VPP tenets and elements. While performance of the PNNL worker safety and health program is meeting VPP standards in all areas (in the judgement of the PNNL VPP Steering Committee), PNNL's objective of best-in-class safety performance requires continuing improvement in the development of safety culture and program areas related to the issues described below. There is substantial inter-relatedness between Issues #1, #2, and #4, which focus on management and staff safety culture (i.e., choices about priorities and

resources, staff involvement in safety activities and recognition for staff contributions to safety, and the values and beliefs about safety held and expressed by managers and staff). Issue #3 is a continuing program improvement issue related to safety for subcontractors and vendors.

The "Issue" below 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. The datasheets often provide recommended improvement opportunities to be considered when addressing the issue. Incorporating these other aspects in the resolution of the issue will improve the overall robustness of the PNNL safety program.

1. **ISSUE:** Management **priorities** and **allocation of resources** for safety culture improvements is not adequate across much of the Laboratory.

   This issue is similar to the #1 issue from last year. PNNL continues to be challenged by balancing investments in capability replacement, business growth and operational infrastructure. Outstanding safety performance is an important aspect of operational performance. PNNL managers have consistently identified safety risks that can impact short term safety performance. Over the past decade, PNNL has also invested in long term safety culture improvements – some of these have been recommendations of previous VPP annual evaluations. Safety culture is much more difficult to build and measure than simply eliminating short-term safety risks. The PNNL VPP Program Evaluations performed over the past two years have identified concerns related to management priorities and allocation of resources to promote a long term safety culture. These investments include strong management support for employee participation in safety-related activities (such as safety committees), management leading and supporting safety communications, and emphasis initiatives (such as starting each meeting with a safety topic). An additional improvement opportunity management regularly visiting the workplace and performing activity assessments. Management must visibly create a "just" culture that values reporting of safety issues. This concern is principally associated with research and support organizations, other than F&O, which has established itself as an excellent role model deomonstrating the value of a strong and consistent investment in safety culture.

   PRIMARY VPP TENET/ELEMENT:
   Management Leadership – Resources *(see Datasheet - 9)*
   OTHER RELATED VPP TENETS/ELEMENTS:
   - Employee Involvement – Safety Committees *(see Datasheet - 18)*

2. **ISSUE:** **Staff participation** in the safety program is declining **and recognition of staff** contributions to safety at PNNL is less than desired.

   This is related to, but distinct from issue #1. There is a diminished or more reluctant level of support for employee involvement in safety-related activities in some directorates within the Laboratory. While there is strong upper management commitment to safety-related activities (as evidenced by F&O and ESH&Q continuing support of the VPP Steering Committee, and support of the annual VPP Program Evaluation by the Deputy Laboratory Director for Operations), **there is evidence that some managers do not value employee participation in activities related to improving safety culture** (such

as the VPP Steering Committee, VPP Program Evaluation interviews, IOPS building safety committees, and SBMS subject area development). The importance of these activities and their importance to the entire safety program infrastructure is not recognized, understood, or appreciated by some PNNL management, and many staff. As a result of less than desired management support for staff involvement in activities related to improving safety culture, many employees are becoming reluctant or unable to contribute their time and energy to safety-related efforts that are not related to their day-to-day work activities. Lack of employee involvement will erode the ability of the Laboratory to improve safety culture.

Another related issue is that staff who have collateral safety responsibilities (e.g., CSMs) or who take initiative to improve safety are often not acknowledged by their immediate managers. Staff who contribute their creative energy, their personal (often un-funded) efforts, and their commitment to improving safety at PNNL need to be recognized and the value of their efforts need to be explicitly acknowledged. Managers should be encouraged to improve their recognition, support, and rewards for such behavior.

PRIMARY VPP TENET/ELEMENT:
Employee Involvement – Degree and Manner of Involvement *(see Datasheet - 17)*
OTHER RELATED VPP TENETS/ELEMENTS:

- Employee Involvement – Safety Committees *(see Datasheet - 18)*
- Management Leadership – Accountability *(see Datasheet - 8)*

3. **ISSUE:** Processes to assure **<u>subcontractor/vendor safety and compliance</u>** with safety requirements are not yet at the desired level.

   PNNL has made considerable improvement over the past several years managing construction subcontractors. However, processes for non-construction contractors, and especially vendor work planning and monitoring, have not improved to a commensurate level. Triggers, that identify warranty and maintenance work that may not go through a specific contracting process at the point in time when work is needed, are not in place to assure appropriate safety reviews. Improvement activities are underway to identify, analyze, and monitor of subcontractor and vendor work, but those activities have not yet reached the level of maturity that is needed.

   PRIMARY VPP TENET/ELEMENT:
   Management Leadership – Contract Workers *(see Datasheet - 11)*

4. **ISSUE:** The **<u>values and beliefs</u>** of some individuals (including managers) are not aligned with the safety values and standards of Battelle and PNNL, including the belief that “all accidents are preventable.” Such shared values and beliefs are necessary to improve safety culture to best-in-class standards. Some managers give the impression to staff that they only value technical/productive achievements and efforts in other areas (e.g., safety) are not as highly valued. Many staff and managers do not see the value of reporting and investigating minor incidents. Some staff believe that management will blame them for errors, especially errors that result in undesired consequences such as injuries or reportable incidents. Values and beliefs that are not consistent with Battelle and PNNL’s stated beliefs for safety excellence inhibit PNNL’s ability to advance the safety culture in support of best-in-class safety performance.

PRIMARY VPP TENET/ELEMENT:
Management Leadership – Commitment *(see Datasheet - 5)*
OTHER RELATED VPP TENETS/ELEMENTS:

- Management Leadership – Responsibility *(see Datasheet - 7)*
- Management Leadership – Employee Notification *(see Datasheet - 14)*
- Employee Involvement – Degree & Manner of Involvement *(see Datasheet - 17)*
- Worksite Analysis – Accident Investigations *(see Datasheet - 26)*

These issues will be entered into the Assessment Tracking System (ATS) as conditions under the FY2007 PNNL VPP Program Evaluation. The VPP Steering Committee will work with PNNL senior management to incorporate these issues into the PNNL Commitments for Safety Performance Improvement that are institutionalized in the Integrated ES&H Program Description.

STATUS OF ISSUES FROM PREVIOUS VPP PROGRAM EVALUATIONS

Issues (conditions) and actions from PNNL VPP Program Evaluations are tracked in the Assessment Tracking System (ATS). Most actions and conditions from previous VPP Program Evaluations have been closed, but some actions remain ongoing and are available for review under ATS #18226.

AWARDS FOR SAFETY PROGRAM/PERFORMANCE

- **Better Workplace Award for Safety** – PNNL was one of three employers to receive a Better Workplace Award for Safety in early 2006 from the Association of Washington Business. The annual award honors Washington state companies that are leaders in creating a better workplace for their employees. PNNL received a "Better Workplace Award for Safety" in the more than 250 employee category.

  PNNL was selected based on its approach to safety and innovation in the workplace in terms of the Lab's work planning and management systems, recognition by established national programs, its desire to meet staff needs and to be family friendly, and continual improvement in overall safety performance over the last two to three years.

- **America's Safest Companies** – In 2006, PNNL was named one of America's Safest Companies by Occupational Hazards magazine. The honor is given to a select group of companies each year, small and large, that can demonstrate their safety processes include support from management, involvement from staff, and innovative solutions to safety challenges.

  PNNL is the first Battelle-affiliated laboratory and multi-program national laboratory to win this respected award.

- **DOE-VPP Superior STAR** – PNNL was awarded the "Superior Star" award for safety performance at a special DOE recognition ceremony held in conjunction with the 2006 VPPPA National Conference in Orlando, Florida.

PNNL is considering an initiative to pursue VPP recognition from the Washington State Division of Occupational Safety & Health (formerly WISHA) because PNNL work is performed in facilities that fall under Washington State jurisdiction. This initiative, if successful, would supplement DOE-VPP recognition.

OUTREACH

The VPP Steering Committee at PNNL continued to have strong outreach activities this year.

- The PNNL VPP website (http://vpp.pnl.gov) continues to be a source of significant outreach activity. Some highlights of CY 2006 outreach (the performance period for this FY07 Program Evaluation) include:
- Several contacts were made via the PNNL VPP website from people seeking assistance in starting a VPP program at other companies (see Exhibit 3).
- PNNL's VPP Program Description is online at http://sbms.pnl.gov/program/pd27d010.htm
- The Porcelain Press - available both electronically and in each bathroom stall on campus - continues to receive a 98% readership response when putting payroll numbers in each issue (staff contact the VPP Porcelain Press editor if their payroll number is in the newsletter to receive a recognition award and provide feedback and suggestions for future articles).
- Many non-PNNL domains hosted a significant number of visits to the PNNL VPP website:
    - Hanford
    - Lawrence Livermore National Laboratory
    - Los Alamos National Laboratory
    - NASA
    - Accelovation – a software company that helps businesses with online market and technical insights.
    - Integro – IBM business partner A Premier IBM Business Partner that helps companies design and deploy enterprise content management solutions for email, records, and document management.

- Many countries continue to visit our site throughout the year:
    - Switzerland
    - Canada
    - Great Britain
    - Germany
    - China
    - India
    - Japan
    - Australia
    - Indonesia
    - Italy
    - France
    - Denmark
    - Hong Kong
    - Egypt
    - South Korea
- Several pages consistently ranked among the "top 10" pages which were viewed each month:
    - Porcelain Press (http://vpp.pnl.gov/resources/pp.asp)
    - VPP's Wellness program and activities http://vpp.pnl.gov/initiatives/wellness.asp

- VPP Events http://vpp.pnl.gov/events/
- VPP Resources http://vpp.pnl.gov/resources/
    - The AED page, specifically the video, received a significant amount of interest and viewing http://vpp.pnl.gov/resources/aed.asp

- VPP's Program Evaluation http://vpp.pnl.gov/about/evaluation.asp
- Dr. Larry Jecha, Director of the Benton Franklin Health District, was broght to the PNNL campus in order to raise staff and community awareness on the importance of individual preparation in response to a potential pandemic outbreak. VPP posted his streaming video presentation "Avian Flu, Pandemic and Tri-cities Preparedness"
- PNNL's Safety Suggestion contest and results http://vpp.pnl.gov/initiatives/suggestions.asp
- Move Safe label templates http://vpp.pnl.gov/docs/move_labels1.dot http://vpp.pnl.gov/docs/move_labels2.dot - easy-to-use templates availabe for staff use when moving offices. Templates contain the "move safe" logo as part of a larger "move safe" campaign designed to raise awareness of hazards associated when moving and move staging areas.
- Safety Topics http://vpp.pnl.gov/initiatives/safetytopics.asp - a list of resources and topics for staff to assist staff in promoting the best practice of starting each meeting with a safety topic
- VPP Committee http://vpp.pnl.gov/committee/

CY 2006 Web site metrics :

VPP external website - http://vpp.pnl.gov

- Total unique visitors: 10,034
- Total visits: 12,816
- Total hits: 287,483

Other Outreach

- In February, 2005 PNNL's VPP Steering Committee published a paper for the U.S. DOE-VPP regarding the value of VPP (featured on the DOE-EH 'TIS' website). That paper ("Changing Safety Culture, One Step at a Time" PNNL-15097) was published as a case study on the value PNNL has realized in implementing VPP. It has been valuable in communicating why PNNL believes VPP is a valuable proposition for both management and employees.

  In 2006, this paper formed the basis for a very well-received lecture on "Star Quest and Beyond - The Value of VPP" at the 2006 VPP Participants Association National Conference in Orlando, Florida which was presented by 3 members of PNNL's VPP Steering Committee.

- PNNL provided counsel and direct support to a number of specific institutions interested in VPP. Exhibit 3 is a summary of PNNL VPP outreach activities during CY 2006.

Exhibit 3

VPP Steering Committee Outreach Activities

Date	Contact	Description of Outreach
1/1/2006	DOE Headquarters	PNNL was asked to be part of the DOE-VPP On-site Review Team for the CH2M Hill Waste Feed Operations DOE-VPP in March
1/24/2006	Mark Nakata, City of Los Angeles Bureau of Engineering	Request for Move Safety Campaign reminders that are emailed to staff
1/24/2006	SEGO Refinery	Request for Move Safety Campaign reminders that are emailed to staff
2/28/2006	Robert McCook, ANL	Request for Website to VPP
2/28/2006	Paula Whitehead, Los Alamos	Discussion about initiating VPP
4/1/2006	American Electric and George Grant	Presentation about VPP and the Integrated Safety Management System
4/24/2006-4/28/2006	Subir Sen, Office of Quality, U.S. Department of Energy	PNNL was asked to be part of the DOE-VPP on-site Review Team for the Fluor, Waste Stabilitization & Disposition Project
5/31/2006	DOT and DOD	Presentation to United States Air Force and Railroad Department on Safety in the Research Environment with special emphasis on on electronic tools.
6/1/2006	Community members and small business owners in the Tri-City area	An article titled "For a saferworkplace, tap into the power of suggestions" was featured in the Tri-city Area of Business Journal. It refers to PNNL's VPP program and ways we solicit employee suggestions.
7/7/2006	Ames Laboratory	Ames is pursuing VPP Star Status. Ames is interested to learn more about the resources (financial, time) required to submit a successful application.
7/12/2006	Marilyn Peabody, LANL	LANL is implementing the VPP program and requesting the Charter of our Safety committees, in particular the executive council safety committee. This would be the committee that takes the safety issues that were brought up to the Directorate level.
7/19/2006	Paula Whitehead, Los Alamos	Paula is responsible for initiating VPP at LANL.
8/29/2006	VPPPA National Conference	Presented a review of the paper "Star Quest and Beyond - the Value of VPP" for the workshop titled ""Changing Safety Culture, One Step at a Time – The Value of VPP."
9/8/2006	Jaanaa Myllyluoma, Battelle Corporate	Jaanaa is working with Battelle Corporate on Safety Culture survey instrument
10/16/2006	Barbara Hargis, LANL	LANL has made a commitment to achieve VPP Star Status by June 2009.
11/1/2006	Conni Allen, CH2MHill	CHG Waste Feed Operations Annual VPP Program Evaluation
11/3/2006	Grant Eager, DOT, Georgia	Request for information on green custodial products/alternatives etc in response to having to breath the harsh chemicals used to mop our building routinely
11/10/2006	Lisa Smith CH2MHill	Requested information on Porcelain Press Holders
11/16/2006	Jack Anderson, PPPL	Applying for VPP status, requested information on approaching bargaining units for their support.
12/4/2006	Labelle Hicks, State of Maine	Green Custodial Products - The State of Maine is in the process of adopting similar criteria (modeled after the PNNL program) and would like to know what sucesses or pitfalls have you run into.

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PNNL VPP
Annual Program Evaluation
FY-2007

DATASHEETS

ORGANIZED BY:

VPP
TENET & ELEMENT

PNNL VPP PROGRAM EVALUATION DATA SHEETS

Data sheets capture the significant observations and conclusions of the PNNL VPP Program Evaluation team based on their interviews, walkthroughs, document reviews, and native understanding of PNNL operations. The data sheets are organized to simplify the documentation and reflect the team approach which was used to generate information for the evaluation.

The format of the data sheets is indicated below:

PNNL VPP Program Evaluation **<Tenet/Element> -**		FY-2007
Strengths •	**Weaknesses** •	
Recent/Expected Changes •	**Improvement Opportunities** •	
Conclusion	**Trend:**	**Rating:**

Changes in the text of the datasheets since last year are indicated in *indigo-colored italics*.

Two administrative elements "General Information" and "Assurance of Commitment" begin the datasheet section. The remaining elements are organized by each of the VPP tenets:

- Management Leadership
- Employee Involvement
- Worksite Analysis
- Hazard Prevention & Control
- Safety & Health Training.

There is a certain amount of redundancy between some of the datasheets because of the structure of the VPP tenet elements.

A summary of PNNL's performance for each tenet is provided at the beginning of the relevant set of data sheets.

PNNL VPP Program Evaluation

General Information *This section captures the basic descriptive information about PNNL related to the VPP program.*

FY-2007

Strengths

- PNNL's safety performance (Total Recordable Case (TRC) rate and Days Away, Restricted, or Transferred (DART) rate) continued to maintain the improvements made last year.
- The on-line VPP Program Description is maintained to describe how PNNL currently meets the VPP tenets and elements. It is a valuable tool to aid in the understanding PNNL worker safety and health programs.
- The original VPP Application is maintained as an example of the first DOE-VPP electronic application. While it is no longer fully descriptive of the current program, it provides a model for how the first electronic application was created. A "watermark" on each page indicates it is no longer the current program description.
- PNNL continues to be involved in many outreach activities as described in the Outreach section.

Weaknesses

- *No weaknesses are evident in the General Information related to the PNNL Voluntary Protection Program.*

Recent/Expected Changes

- There are no recent or expected changes in this section.

Improvement Opportunities

- *Continue to keep the VPP Program Description up-to-date as a valid description of how PNNL achieves excellent worker safety and health in the context of the VPP tenets and elements.*

Conclusion

Trend: ➔ **Rating: Good (12)**

PNNL's General Information about VPP (i.e., the VPP Program Evaluation, the VPP Website, and the Annual VPP Program Evaluation) are very good products that fully meet VPP requirements and provide valuable insight and information for continued safety improvement at PNNL.

PNNL VPP Program Evaluation

Assurance of Commitment *This section evaluates how PNNL management and HAMTC support VPP at PNNL.*

FY-2007

Strengths	Weaknesses
• The VPP Steering Committee Charter documents and demonstrates the commitment to VPP from PNNL management and HAMTC leadership. • *PNNL VPP Steering Committee bylaws are in place and being used.*	• The approved charter does not contain the signature of the current *PNNL Interim Laboratory Director*.
Recent / Expected Changes	**Improvement Opportunities**
• There are no recent or expected changes in the Assurance of Commitment from either PNNL management or HAMTC leadership. • *After being used for over a year, the PNNL VPP Steering Committee bylaws will be reviewed and updated with lessons learned.*	• Obtain the signature of the *PNNL Interim Laboratory Director* for the PNNL VPP Charter.

Conclusion | **Trend: ➔** | **Rating: Good (11)**

The PNNL VPP Steering Committee Charter clearly and strongly demonstrates PNNL management and HAMTC commitment to VPP.

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	**Good (10)**	↗
Program Evaluation	**Good (11)**	↗
Site Orientation	**Good (9)**	↗
Employee Notification	**Good (9)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Management Leadership	**Good (9.9)**	→

SYNOPSIS

Management leadership at PNNL is strong. PNNL's VPP has strong staff ownership and partnership with management, labor and other staff members. *While accountability (through management commitment to safety and a" just" culture) is improving, t*he Laboratory continues to have *occasional* issues with less-than-adequate accountability. PNNL needs to continue working to improve staff members' understanding of and involvement in worker safety and health processes, including VPP. *Management needs to provide strong and consistent support for staff participation in safety related activities (F&O has done a good job of improving in this area).* 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 R^2A^2 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 *(and vendors)* who are not managed under the construction safety program.

Although it is recognized that further improvement needs to be made in how some contract workers implement safety for PNNL work, noteworthy improvements *continue to be made by F&O* in how construction subcontractor *safety is managed* (which include*s the* vast majority of PNNL contract workers).

The VPP Steering Committee also recognized improvements being made in the delivery of requirements through SBMS and IOPS. The breadth and complexity of PNNL operations continues to make access to needed requirements an issue of concern for many PNNL staff, but the SBMS and IOPS systems continue to make improvements to address that concern.

Resources *continue to be a concern* because many staff and managers report strong pressure to reduce spending on indirect activities (FTE count and overhead budgets) *including safety-related activities not directly applicable to direct project work*. While it is recognized that business realities are putting pressure on PNNL resources, the VPP Steering Committee is concerned that resource constraints related to safety and health (in both management systems and line organizations) are impacting the ability of the Laboratory to sustain and improve the safety culture. **The Laboratory needs to ensure there is an appropriate balance between business needs (to grow the Lab and hold-down overhead costs) and the resources necessary to achieve and maintain a best-in-class safety culture.**

PNNL VPP Program Evaluation

Management Leadership – Commitment *This element describes how management demonstrates commitment to eadership of worker safety and health through effective policies, standards, requirements, and communication.*

PNNL VPP FY-2007

Strengths

- PNNL has a well-constructed process for requirements management (SBMS), which clearly describe how the Lab intends to achieve operational excellence, including worker safety.
- Managers and staff understand that SBMS is the set of requirements they must work to.
- *Significant navigational improvements were made in SBMS.*
- M*ost m*anagers believe all *or most* injuries and illnesses are preventable.
- *Most staff believe PNNL and their immediate manager's commitment to safety is very good.*
- *Staff understand that safety is a basic expectation.*
- *There is a strong and recently refreshed ES&H policy promulgated by BMI and PNNL senior management.*
- *Safety programs go above and beyond minimum policy (e.g., the initiativse for safety 24 hours/day-7days/week, wellness).*
- *Several organizations have made strong statements in support of safety. Virtually all managers demonstrate strong commitment to safety and m*ost managers clearly articulate and demonstrate their commitment to the safety and health of their workers. Senior managers do an especially good job of expressing this commitment.

Weaknesses

- Some staff *still* have difficulty finding specific requirements they need in SBMS.
- Some staff state they don't believe it is realistic to have a goal of "zero" accidents. This indicates confusion about the message that "all injuries and illnesses are preventable."
- *Some staff and managers continue to have the perception that many of our safety requirements are "overkill." This issue has been brought up in the past and came up again this year. (For example, one staff was told he couldn't have an x-acto knife in his desk drawer.)*
- Some managers still perceive staff input about concerns and improvement opportunities as "problems" indicating failure, rather than valuable indications of a just, reporting, and learning safety culture (consistent with Human Performance Improvement principles).
- Some managers and staff do not recognize that VPP is adding value at PNNL. VPP *is often not recognized* for its initiatives.
- *Some staff perceive a mixed message from management about the priority/value of safety in terms of rewards and resource allocation.*

Recent / Expected Changes

- The Safety Performance Improvement Plan has *been retired and the actions and intiatives have been institutionalized in the Integrated ES&H program*.
- *HPI fundamentals training was provided for all F&O staff*

Improvement Opportunities

- Management needs to "hold the course" in their current emphasis on safety and avoid "knee jerk" response to incidents.
- Management should show their commitment by becoming even more present in the workplace and talking about safety when things are going well.

Conclusion

Trend: ➔ **Rating: Good (11)**

PNNL has a strong worker safety and health management system that is founded on an excellent business model. Managers are clearly committed to safety. Staff members have not yet universally embraced the idea that all injuries and illnesses are preventable. *There are* managers and staff who do not understand the foundation of a good safety culture in the context of Human Performance Improvement principles.

PNNL VPP Program Evaluation

Management Leadership – Organization *This element describes the organization used by PNNL to implement worker safety and health programs and processes.*

FY-2007

Strengths

- PNNL's organization provides strong support for the principles of line management responsibility for safety.
- The ESH&Q organization provides good support for operating organizations (particularly the research organizations). Safety & Health support in the field has improved in recent years.
- The F&O organization provides very good management leadership with safety as a core value.
- R&D organizations feel that the matrix organization approach *for providing safety and health services is a strength.*
- *The S&H Department continues to hire additional qualified staff as necessary.*

Weaknesses

- The matrix organization approach *can result in* confusion about who is responsible for what *(e.g., should the Safety & Health rep for the Project Manager, Product Line, line manager of staff or CSM, or the facility be called in to help with a research project issue?)*.
- Some support staff *(e.g., BSS) don't* know how to identify their safety support staff.

Recent / Expected Changes

- *Reorganizations in the R&D and F&O can create uncertainties among staff regarding safety priorities.*

Improvement Opportunities

- Improve the identification of and access to safety & health support staff for workers in some organizations (particularly support staff and R&D staff in highly matrixed programs).

Conclusion

Trend: ➔ **Rating: Good (10)**

PNNL has a strong organization that supports worker safety and health. Line organizations are responsible for safety and the ESH&Q organization provides good support. *Although reorganizations continue to occur, the impact on safety is expected to be minor.*

PNNL VPP Program Evaluation

Management Leadership – Responsibility *This element describes how responsibilities for worker safety and health are described and implemented at PNNL.*

PNNL VPP FY-2007

Strengths

- Clear, effective safety responsibilities have been established in SBMS for most roles.
- Electronic Prep & Risk (EPR), Integrated Operations System (IOPS), and SBMS clearly and effectively reinforce and communicate roles and responsibilities.
- *Most* managers are taking their safety responsibilities more seriously, as evidenced by measures of safety in SDRs, involvement in IOPS, and greater/better self-assessment.
- Training and reading assignments have been provided to all immediate managers to improve their knowledge of safety management.
- All staff members interviewed knew their responsibilities when it came to safety. Staff members stated safety starts with them, it is important for them to be aware of their surroundings and potential hazards, and it is also important to share what you learn at home and work with fellow staff members regarding health and safety.

Weaknesses

- New managers are sometimes put into position before they are fully aware of their responsibilities. Experience is needed for them to be fully effective.

Recent / Expected Changes

- There continues to be a strong emphasis on improving management responsibility for safety.

Improvement Opportunities

- Continuing communications emphasizing safety responsibilities is needed.
- Communication of responsibilities needs to be clear and succinct (i.e., reading assignments *may sometimes be less effective than clear expectations from management*).
- Mentoring is needed for new staff *(including managers) and* those with new *safety* responsibilities.

Conclusion

Trend: ➔ **Rating: Good (10)**

Clear and appropriate responsibilities for safety have been documented and communicated at PNNL. Key roles (e.g., immediate managers, Product Line Managers, and CSMs) are trained to understand their responsibilities for safety and the resources available to help them execute these responsibilities.

PNNL VPP Program Evaluation

Management Leadership – Accountability *This element describes the processes for accountability at PNNL including SDRs, disciplinary action, reward and recognition, etc.*

FY-2007

Strengths

- The process for implementing accountabilities is clearly established at PNNL.
- There *are documented processes for discipline,* reward and recognition *and* incentive compensation for *non-bargaining staff intended* to promote *safety performance*.
- Managers are evaluated on their safety performance (safety performance accounts for 30% of the performance evaluation for F&O managers).
- Most managers report they have safety goals in their SDR. Some staff with safety responsibilities have *safety* responsibilities and/or goals reflected in their SDR.
- *In recent years, there have been a number of examples where accountability for safety incidents focuses on latent organizational weaknesses rather than blaming the person who made an error.*
- *Training and standardization of the process for critiques has improved in terms of directing the analysis toward root causes and formulating more effective corrective actions.*

Weaknesses

- Bargaining unit workers get no performance evaluation and feedback in an annual process that reinforces accountability.
- There are concerns about how "zero accident" goals will be implemented at the individual level.
- Feecback and awards for safety performance and accomplishment of safety goals is variable across the Laboratory.
- Many immediate managers don't have a clear understanding of their staff's safety performance (since the performance is done in the context of projects that many managers aren't associated with).
- The reward and recognition process has been eroded by DOE contract restrictions as well as staff confusion about the process.
- *Many staff reported that safety performance (except for significant incidents) have little impact on their performance evaluation. Safety is a basic expectation that is often not recognized if there is not a problem.*

Recent/Expected Changes

- Changes in the reward and recognition process have limited options and its use by many staff members.
- The Human Performance Improvement initiative is expected to achieve improvements in the accountability process.

Improvement Opportunities

- Rewards and recognition need to be consistently applied to safety performance.
- Accountability for safety needs to *continue to focus on improvement in developing* a "just culture" (related to Human Performance Improvement principles).

Conclusion

Trend: ➔ **Rating: Good (9)**

There is clear accountability for safety in the sense that every manager and staff understand that they will be held accountable for diligent execution of their safety responsibilities. The SDR and disciplinary action processes provide an effective means of evaluating and providing feedback on performance. There needs to be a better balance of negative and positive accountability actions, and the processes of accountability need to be more consistently applied across the Laboratory through just processes founded on the principles of Human Performance Improvement.

PNNL VPP Program Evaluation

Management Leadership – Resources *This element describes the resources available to support worker safety and health programs at PNNL.*

FY-2007

Strengths

- F&O has done an excellent job of committing resources to safety priorities.
- Most interviews indicate adequate staffing, equipment, training and supplies, and there is a feeling by most of those interviewed that PNNL is a very safe place to work.
- Resources for S&H upgrades are available for significant safety priorities in the majority of organizations.
- ESH&Q and F&O management continue to support VPP with adequate funding.
- VPP helps management focus resources on important safety initiatives.
- *CSMs are provided with a work package number to perform their responsibilities.*
- *Management has committed significant resources to safety improvement (e.g., DuPont Safety Leadership training, safety communications, F&O DZAC, facilities maintenance).*
- *The S&H Department has added staff in critical areas (e.g., electrical safety).*

Weaknesses

- Resource constraints and priorities are impacting safety issues. Space constraints and reluctance to provide ergonomic upgrades in some organizations are examples from some interviews. Another example is reluctance to involve workers in development of SBMS Subject Areas.
- CSM funding is *sometimes* small compared to increasing expectations.
- Some of those interviewed reported that Safety & Health Representatives seem overloaded and less accessible than desired because of constrained numbers and increasing management system demands. The expectation to charge S&H support directly to projects is reducing the use of S&H reps by some projects.
- *One R&D organization eliminated its funding for VPP representation.*
- *Desired inititiatives (e.g., wellness, 24-7, HPI) are not always provided with adequate funding.*
- Some safety issues still don't get fixed as fast as would be desirable. *There are reports by some staff that resource constraints are preventing implementation of needed safety improvements (e.g., lighting in the Warehouse and noise abatement in the EMSL central plant).*
- *Funding was cut for several key safety programs this year (e.g., IOPS, VPP).*

Recent/Expected Changes

- The VPP safety suggestion program and SafetyDiaLOG is helping identify and resolve issues.
- Continued pressure on indirect FTE and overhead budgets are expected to create problems for safety and health resources.
- Some staff interviewed for the VPP Program Evaluation indicated that they did not have resources to support their time being interviewed.

Improvement Opportunities

- The Laboratory needs to ensure there is an appropriate balance between business needs (to grow the Lab and hold-down overhead costs) and the resources necessary to achieve and maintain an *excellent* safety culture.

Conclusion

Trend: ➔ **Rating: Good (10)**

Although the rating of this element did not decrease, the VPP Steering Committee *continues to* perceive a significant negative pressure on resources available for safety performance improvement. While it is recognized that business realities are putting pressure on PNNL resources, the VPP Steering Committee is concerned that resource constraints related to safety and health (in both management systems and line organizations) are impacting the ability of the Laboratory to achieve and maintain an *excellent* safety culture. The Laboratory needs to ensure there is an appropriate balance between business needs (to grow the Lab and hold-down overhead costs) and the resources necessary to achieve and maintain an improving *excellent* safety culture.

PNNL VPP Program Evaluation

Management Leadership – Planning *This element describes the processes for planning at the strategic and tactical (project and working) levels at PNNL.*

FY-2007

Strengths

- The business planning process is systematic and comprehensive.
- Long term planning related to safety is addressed by the Worker Safety & Health Management System, which works in concert with the business planning process.
- The Capital Asset Management Planning (CAMP) process provides an effective means for facility planning.
- Directorates and Management Systems work together for continuous safety improvement through Operations Managers and the Deputy Laboratory Director for Operations.
- Significant improvements have been made in worker safety and health (notably self-assessment, training compliance, hazard identification and mitigation). Much of this improvement has been driven by automated processes.
- R&D staff are more aware of the need for better hazard recognition and procedural adherence.
- There is great rigor in the development and deployment of maintenance work plans.
- The F&O Plan of the Day process is very good.
- *Safety needs are addressed in the project/work planning process (e.g., IOPS, 300 Area D&D).*
- *Safety was addressed in Level 1 strategic planning.*

Weaknesses

- *Planning for key safety functions is not consistent across the Lab (e.g., resources for CSMs and direct-charging criteria for S&H Reps).*

Recent/Expected Changes

- Improvements in safety planning for offsite projects are expected in response to the PNSO assessment.
- *R*ecent *program/requirement changes related to* offsite work *are* improv*ing* work planning and control processes for *R&D* work *not controlled by* IOPS.
- *Safety planning related to acquisition of goods and services (through subcontract) is improving through new process and tool development.*
- *There has been considerable planning related to implementation of 10CFR 851 and release of property to the public.*

Improvement Opportunities

- As efforts are made to improve planning processes, consideration needs to be given to keeping the processes simple and understandable by those involved.

Conclusion

Trend: ↗ **Rating: Good (10)**

Work planning at the Laboratory continues to be an evolving, increasingly integrated and consistent process. Research and support work is planned based on SBMS requirements for safety, health, and environmental considerations. 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. Improvement is also needed in F&O maintenance work planning so jobs are efficiently executed, utilizing the capabilities of skilled workers.

PNNL VPP Program Evaluation

Management Leadership – Contract Workers *This element describes how contract workers are protected from worker safety and health risks at PNNL.*

PNNL VPP FY-2007

Strengths

- Worksite Exposure Assessments are developed for all construction work. The contractor generates a JSA, which is reviewed and accepted/rejected by PNNL. Construction contractor training is monitored. Documented field inspections are regularly constructed for construction contractor work (the Construction safety engineer is in the field 75% of time and visits jobsites daily).
- There is pre/post performance evaluation of construction contractor safety (EMR, OSHA/WISHA violations)
- Subs of construction contractors are also evaluated/monitored
- IOPS provides an effective system to communicate hazards and train contract workers supporting research.
- *R&D staff are reporting that there is* strong*er* oversight of vendors.
- *Construction Contractor Safety Forum was held for the second year. Two construction contractors were recognized for excellent performance. Construction contractor performance in general has improved dramatically over the past several years*. There have been zero recordable/DART cases for construction contractors for *three* years running (one first aid case this year) – Over *50,000* hours of work/year
- *Construction contractors are aggressively mentored by the Construction Managers and Construction Safety Specialist regarding safety expectations. Training and qualification of subcontract workers is closely monitored.*

Weaknesses

- *There were several reports in interviews with F&O staff that vendors are not always following all safety requirements.*

Recent / Expected Changes

- Construction contractors and some subcontractors clearly understand new, more stringent expectations.
- Some craft/bargaining unit workers reported that contractor work performance has *continued to* improve *(particularly construction)*.
- A task force has been established to address contractor work controls.

Improvement Opportunities

- *Continue to* implement improved processes for non-construction contractor work planning and monitoring – especially triggers for warranty and maintenance work that may not go through a specific contracting process at the point in time when work is needed.

Conclusion

Trend: ↗ **Rating: Good (10)**

Considerable progress over the past 2-3 years in construction safety. The Laboratory needs to implement improved processes for non-construction contractor work planning and monitoring – especially triggers for warranty and maintenance work that may not go through a specific contracting process at the point in time when work is needed. A task force is *continuing to improve safety for* other (non-construction) subcontract work, including F&O maintenance subcontractors and vendors of R&D warranty/maintenance services.

PNNL VPP Program Evaluation

Management Leadership – Program Evaluation *This element describes the processes for evaluating worker safety and health program performance including VPP.*

FY-2007

Strengths

- The Annual VPP Program Evaluation is a rigorous and continually improving self-assessment of PNNL worker safety and health conducted by employees.
- PNNL senior management greatly values the annual VPP Program Evaluation and uses the results and recommendations to guide safety performance improvement initiatives.
- Other safety program evaluations are conducted by the Worker Safety & Health Management System.
- The Independent Oversight organization performs investigations of special worker safety and health issues when requested by management.
- When improvement opportunities are identified by the annual VPP program evaluation, they are promptly acted on by PNNL management.
- *The participation in the FY07 VPP Survey set a new record (2362 staff resonded).*

Weaknesses

- *It continues to be difficult to get the number of interviews we are seeking for the VPP Program Evaluation. While the survey gets good participation, the commitment of staff to participate in interviews is less than desired (only about half of scheduled inteviews were conducted as planned).*

Recent / Expected Changes

- The SafetyDiaLOG will provide additional employee inputs to the program evaluation process.
- *Battelle Corporate is considering implementing a Battelle-wide Safety Culture survey.*

Improvement Opportunities

- *Continue to improve the VPP Program Evaluation interview scheduling process by providing pre-interview information before the interview is scheduled. Target specific job categories to be interviewed (e.g., need to include RCTs and CSMs, and we need to consider the mix of scheduled interviews). Consider providing rewards (and funding) to interview participants.*
- *Improve the rating criteria used by the VPP Program Evaluation so that it clearly and comprehensively defines the characteristics for "Good," "Adequate," and "Improvement Required" performance levels under each VPP element.*

Conclusion

Trend: ↗ **Rating: Good (11)**

The high rating primarily acknowledges the very good VPP Program Evaluation (as endorsed by PNNL management and DOE-VPP). Each year improvements are implemented to improve the processd.

PNNL VPP Program Evaluation

Management Leadership – Site Orientation *This element describes how new employees (or employees in new jobs) are oriented to the worker safety and health issues of their work.*

FY-2007

Strengths

- IOPS provides information about the hazards and controls tailored to specific workspaces. This is particularly effective in getting visiting scientists oriented to PNNL work control processes.
- IOPS now requires all workspace CSMs to post their Hazard Awareness Summaries, which is of benefit to occasional visitors to the workspace.
- Training & Qualification associated with the badging process provide basic orientation to new employees and visitors. The PNNL formal site orientation training modules are Web-based, and available remotely. They provide a broad range of information including environment, emergency, safety, and health provisions of the Laboratory.
- Some managers conduct one-on-one orientations with new staff members, during which they address applicable safety issues.

Weaknesses

- Reliance on web information may not provide the same hazard communication as face-to-face interaction with a knowledgeable staff member.
- Being current with IOPS training does not necessarily make you qualified or safe to work in the lab.

Recent / Expected Changes

- IOPS Work Practice Documents are being revised to be less redundant and more useful.
- *Maintenance and RadCon staff no longer have to maintain electronic reading of HAS for all IOPS workspaces.*
- *10CFR851 is expected to drive changes in basic safety and health training for all staff.*

Improvement Opportunities

- Continue to improve IOPS Work Practice Documents so staff are more succinct and less redundant.
- *Include information about VPP, SafeyDiaLOG, and other key ES&H programs (e.g., EMS and DZAC) in visitor/new-hire orientation and training for managers.*

Conclusion

Trend: ↗ **Rating: Good (9)**

PNNL Site Orientation is a well-designed, formalized, and effective process. Unique hazards of work are addressed as appropriate by utilizing hazards-based modules and general information modules. The web-based options are good resources for personnel who visit or work in a given work area. Many staff believe that exclusive reliance on web-based training is not appropriate.

PNNL VPP Program Evaluation

Management Leadership – Employee Notification *This element describes how employees are notified of critical worker safety and health information related to their work.*

FY-2007

Strengths

- PNNL has a good written safety and health program.
- IOPS provides information about the hazards and controls tailored to specific workspaces.
- Management and VPP tend to be good at generating timely response to questions.
- New staff in F&O and some other organizations get a good face-to-face orientation about safety expectations from their managers.
- Union Stewards and CSMs *typically* do a good job of reinforcing safety culture.
- Communications about worker safety and health initiatives continued to improve this year.
- *Safety & Health Reps and other SMEs are often included in pre-job planning.*

Weaknesses

- SBMS presents a large and complicated set of requirements. Staff report problems getting safety and health information when they need it.
- Many communications about safety are complex and not easily understood (too philosophical, too detailed). Improvements to IOPS Work Practice Documents are still needed.
- There are concerns on the part of some staff that much employee notification and program documentation is focused on compliance rather than helping staff get work done.
- *Many staff do not read all of the communications (including safety related communications) that are sent to them.*

Recent / Expected Changes

- There has been considerable improvement in safety culture exhibited by senior management.
- *Safety communications have become more extensive and integrated (SafetyNet, Porcelain Press, VPP website).*

Improvement Opportunities

- Workers need quicker access to the concise information they need.
- *New staff and managers need to be made aware of the value of VPP and other ES&H programs.*

Conclusion

Trend: ↗ **Rating: Good (9)**

Staff members are generally aware of their safety rights, responsibilities, and of PNNL's VPP program. SBMS, IOPS, MIT, and other electronic tools provide a good approach to hazard communication and employee notification. The tools could be improved and many staff are not familiar enough with them so they can get the information when they need it. The safety culture *promoted by management has continued to improve*. However, some staff members do not yet exhibit the same level of culture and commitment to safety as a value. This indicates that further improvements need to be made in the notification of employees about management leadership of safety.

Tenet: *Employee Involvement*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Employee Involvement		
Degree and Manner of Involvement	**Good (9)**	↗
Safety Committees	**Good (9)**	→

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Employee Involvement	**Good (9)**	→

SYNOPSIS

The Laboratory has experienced *excellent safety* performance in the recent past, which can be attributed to staff members' involvement and focused commitment to attaining high standards. While there is evidence of *reasonably good* staff member involvement and empowerment, *recognition and resources for involvement in the safety program continue to be limiting factors*. 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 *do not see the value* 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*, SafetyNet, VPP website, wellness activities, and the annual VPP picnic. TheSteering Committee continues to promote funding* for *additional* blood pressure monitors and *other equipment that enhances health and safety. The Steering Committee continues to* solicit input from staff to improve safety at PNNL through *the safety* suggestion campaign, *SafetyDiaLOG, and the annual all-staff survey*.
- 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 are listened to, *and they do not believe* the systems work fast enough. *F*eedback *is sometimes* not prompt or adequate.

Lack of resources and management support for employee participation in safety committee activities *continues to be a concern*. Demands that staff focus on direct-funded activities and limitations on overhead budgets are reportedly impacting staff participation in safety committee activities, including *interviews for* this year's VPP Program Evaluation. The longer term implications of sustained negative pressure on staff participation in safety committees is a decline in safety culture improvements and loss of quality staff member input into the safety program.

PNNL VPP Program Evaluation

Employee Involvement – Degree and Manner of Involvement *This element describes how employees are involved in aspects of worker safety and health programs at PNNL.*

PNNL VPP FY-2007

Strengths

- Staff are involved in many aspects of the safety and health program (e.g., IOPS and development of Operating Procedures)
- VPP provides numerous opportunities for staff involvement in safety: safety suggestion contest, VPP survey, wellness/fitness challenge, VPP picnic.
- The 300 Area D&D communications/website has good employee involvement.
- R&D work groups are close knit and involve an inherent level of employee involvement in work planning and worker safety. Many permits and procedures are written by employees.
- A good relationship between workers and their immediate manager is common.
- F&O maintenance workers have the opportunity to provide input to job planning.
- *Many staff and managers value the safety improvement efforts of the VPP Steering Committee.*
- *There was a record-setting response to the VPP survey (2362 responses).*
- *There was considerable employee involvement in the safety suggestions contest and the wellness challenge.*
- *Safety DiaLOG provides a mechanism for employee involvement.*
- *Many staff have contributed personal stories, articles, and photographs to SafetyNet.*
- *Some organizations have regular meetings with safety as a topic (see corresponding weakness).*

Weaknesses

- Staff involvement in SBMS subject area development is lower than in the past.
- There is *sometimes* still too much delay between a staff concern/suggestion and remediation or effective communication about the issue *(although this is improving through DZAC, PHLSC, and Safety DiaLOG)*.
- *One manager said he did not see a value in employee participation in the VPP Steering Committee.*
- *Some organizations do not have an apparent high degree of staff involvement.*

Recent/Expected Changes

- F&O implemented a Directorate Zero Accident Council (DZAC) process. *DZAC has bargaining unit rank-and-file involvement.*
- *Safety DiaLOG has been implemented and is being used by staff.*

Improvement Opportunities

- *Immediate* managers need to continue to work on better safety communications.
- *Consider requiring regular safety meetings to gain greater staff involvement.*

Conclusion

Trend: ↗ **Rating: Good (9)**

The Laboratory has developed excellent participation and involvement within most work groups. However, there continue to be many staff members who do not feel that safety applies to their job in a significant way. Staff members who want to be involved in safety often can get involved, but opportunities for meaningful involvement are limited in some groups. The development of a just and supportive culture is needed to improve employee involvement. Management is not always supportive of the level of employee involvement that is demanded of a best-in-class safety culture.

PNNL VPP Program Evaluation

Employee Involvement – Safety Committees *This element describes how PNNL uses safety committees to obtain employee involvement.*

FY-2007

Strengths

- Many staff have the opportunity to be involved in safety committee activities such as VPP Steering Committee, PNNL/HAMTC Laboratory Safety Committee, IOPS facility safety committees, Electrical Safety Committee, and other active safety committees.
- Most safety committees are well institutionalized with a written charter, regular agenda, formal process, and communication venues such as websites on the intranet.
- The VPP Steering Committee has become a very strong safety committee central to promoting an improving safety culture. Management relies on the VPP Steering Committee as a sounding board and vehicle for safety improvements.
- *DZAC meets monthly, with representatives from working team Bargaining Unit representatives, management, and support staff (e.g., safety and administrative assistants). DZAC has fulfilled their commitment to quick resolution of problems and open feedback/communication.*
- *DZAC and PHLSC provides forum for communication between some safety committees. The VPP Steering Committee receives updates from other safety committees as appropriate.*
- *Training on PNNL safety program implementation was provided for VPP Steering Committee members.*
- *A Best Practice was written to communicate the value of providing training for safety committee members.*

Weaknesses

- Participation in safety committees is limited and relatively static. It is sometimes hard to recruit new members for safety committees.
- *There is not as much communication as desired between safety committees.*
- Participation in safety committees isn't always recognized as valuable by immediate managers, particularly in R&D organizations.
- Many line organizations do not provide adequate funding to support staff participation in safety committee activities.

Recent/Expected Changes

- The emphasis on reducing indirect FTE and overhead budgets has had an adverse impact on safety committee participation*, particularly for R&D representatives*.
- *DZAC has had a positive impact on the Lab's safety culture, particularly within F&O.*

Improvement Opportunities

- Provide better recognition and reward for participation on safety committees *particularly from immediate managers and senior management*.
- *Consider expaningd DZAC to other directorates and explore the PZAC concept.*
- *Consider how to formalize/institutionalize cross-communication between safety committees.*

Conclusion

Trend: ➔ **Rating: Good (9)**

The value delivered by safety committees at PNNL is increasing. However, support for safety committee participation seems to be decreasing. Focus on reducing overhead cost and indirect FTE count is hindering participation in safety committees. The VPP Steering Committee *and DZAC are* good examples of how safety committees can positively influence worker safety and health. The perceived value of participation in safety committee activities needs to be improved. Safety committees *need to seek greater* integrat*ion* with each other, and with PNNL management and Management Systems. Management needs to improve how participation in safety committees is recognized and valued, especially by immediate managers. Resources for safety committee participation need to be specifically allocated as a management priority.

Tenet: *Worksite Analysis*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Worksite Analysis		
Pre-Use/Pre-Startup Analysis	**Good (10)**	↗
Comprehensive Surveys	**Good (11)**	↗
Self-Inspections	**Good (10)**	↗
Routine Hazard Analysis	**Good (11)**	↗
Employee Reporting of Hazards	**Good (10)**	↗
Accident Investigations	**Good (9)**	↗
Trend Analysis	**Good (10)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Worksite Analysis	**Good (10.1)**	↗

SYNOPSIS

Workplace hazards are generally well analyzed both before work begins and periodically thereafter. Recent 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 continue to be made in the area of staff member reporting of hazards (particularly DZAC and Safety DiaLOG) and trend analysis (using results of data that is collected). Continued improvement in self-assessment processes (particularly IOPS) are needed to achieve the highest level of excellence in self-assessment. Such efforts are underway and the prognosis is good.

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PNNL VPP Program Evaluation

Worksite Analysis – Pre-Use/Pre-Startup Analysis *This element describes how equipment, facilities, and systems are analyzed for worker safety and health issues prior to use.*

FY-2007

Strengths

- *F&O has significantly improved their process for analysis of* new equipment.
- The R&D Experimental Authorization process *has been piloted with success and* is available *as part of the IOPS tool.*
- SBMS provides comprehensive, consistent requirements for planning, analysis, and control of hazards.
- 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.
- F&O work control process provides excellent planning and control for maintenance and construction work.
- The processes for F&O Plan-of-the-Day and pre-job briefings are very good and they are consistently conducted.
- *The permitting process (e.g., Chemical Process Permits) has improved in support of pre-startup planning.*

Weaknesses

- *Hazard identification, procedure selection, and work authorization at the activity level has been identified as needing improvement.*

Recent/Expected Changes

- The R&D Experimental Authorization process *was deployed within IOPS.*
- Offsite project hazard ID and planning *has improved.*
- *Acquisition management for flow-down of safety requirements for onsite services continues to improve.*

Improvement Opportunities

- *Continue to improve* worker involvement in *pre-job analysis in order to enhance ownership and the get the best input from employees who will perform the work.*
- *Clarify expectations with regard to implementation of the Experimental Authorization and other processes for hazard identification, procedure selection, and authorization of experimental activities.*

Conclusion

Trend: ↗ **Rating: Good (10)**

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 assessments 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 as expectations for excellence have increased.

PNNL VPP Program Evaluation

Worksite Analysis – Comprehensive Surveys *This element describes how PNNL comprehensively surveys all worksites and activities for worker safety and health hazards.*

PNNL VPP FY-2007

Strengths

- *A comprehensive survey of hazards related to* 300 Area D&D has good PNNL involvement and worker communications (posters, hotline, and website).
- *Ergonomic evaluations have been performed for many staff.*
- The 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 *regularly* updated.
- *Self-assessment of IOPS spaces is conducted by Safety & Health Representatives at least annually.*
- 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.
- VPP surveys have established a comprehensive baseline of staff safety culture.
- Metrics are being used for key process performance indicators for EPR, IOPS, and other processes.
- *Workplace Exposure Assessmentns are effectively used by F&O in pre-job planning.*
- *IOPS permits provide a process for evaluation of key risks in IOPS workspaces.*
- *MIT is an efficient and effective tool for locating hazards.*

Weaknesses

- *Staff in* some orgs *are asked to provide* Work Package numbers for ergonomic evaluation – impacting availability *of that hazard analysis process.*

Recent/Expected Changes

- *Electronic tools for tracking hazards (e.g., IOPS, CMS, RMT, BioMS, EPR, etc.) continue to improve.*

Improvement Opportunities

- Continue to *proactively address the potential for ergonomic risks.*

Conclusion

Trend: ↗ **Rating: Good (11)**

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 *effective*. 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.

PNNL VPP Program Evaluation

Worksite Analysis – Self-Inspections *This element describes how PNNL workers and organizational elements perform self-assessments to identify worker safety and health issues.*

PNNL VPP FY-2007

Strengths

- There has been considerable improvement in self-assessment programs (e.g., CSM, manager, SME, and a*ctivity assessment*)
- A variety of roles in R&D organizations perform self-assessments including CSMs, TGMs, SMEs. Field deployed subject matter experts are well integrated into the organizations' self-assessment program.
- Activity assessments are being performed by managers.
- 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.
- F&O WCMs and TLs do frequent walk-around inspections.
- Some support organizations are doing self-assessments.
- Management system self-assessments are performed in accordance with approved procedures.
- An Independent Oversight group performs unbiased assessments.
- *Activity Observations have resulted in some valuable lessons learned.*
- *Effective implementation of the Corrective Action Management process is resulting in fewer repeat findings.*
- *The IOPS self-assessment process has improved (e.g., by efficiently facilitating corrective action management)..*

Weaknesses

- F&O workers are not involved in shop inspections.
- Results of self-inspections are often not communicated widely (i.e., to maintenance workers).
- STOP was not well communicated among bargaining unit craft/maintenance workers.
- *Expectations for Activity Observations are not clear.*
- *Office spaces are not reviewed by some organizations.*

Recent/Expected Changes

- *The new Activity Observation process is gaining momentum and is providing value across the Lab.*

Improvement Opportunities

- Consider how to get workers more involved in self-inspection. CSMs are good worker representatives, but Bargaining Unit and support staff are often not involved in inspections of their spaces.
- Provide feedback to workers regarding the results of self-inspection of their workspaces.
- Need to *continue to work to do* a better job of communicating STOP to involved workers.
- *Consider how to validate self-inspection results (e.g., IOPS self-assessments).*

Conclusion

Trend: ↗ **Rating: Good (10)**

PNNL has implemented a good self-assessment program. The program includes assessments 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-assessments are analyzed and continuous improvement actions are identified. Results of assessments could be better integrated and results communicated to affected workers.

PNNL VPP Program Evaluation

Worksite Analysis – Routine Hazard Analysis *This element describes how hazards are identified in the routine planning and performance of work at PNNL.*

PNNL FY-2007 VPP

Strengths

- Awareness of *the importance of* office safety *and "life experience" risks continue to* improve.
- 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.
- Some offsite projects (ARM/RPMP) have very good work planning/hazard analysis.
- Safety and health professionals are available to assist project managers, line managers, and staff members implement their hazard analysis responsibilities.
- Hazard Awareness Summaries are used to communicate hazards.
- *CSMs typically identify all appropriate hazards on their Hazard Awareness Summaries (HAS) as part of their routine assessment process. This has been impacted by CSM training and improvements in the self-assessment process.*
- *SMEs validate CSMs' hazard evaluation documented in HAS.*
- *A majority of staff have adopted a vigilant attitude to routine hazard analysis.*
- *Permits provide a way to routinely evaluate hazards of R&D work.*
- *The F&O JPP process provides good analysis of routine hazards, including worker involvement and review by SMEs.*

Weaknesses

- *Line management expectations for minimum standards for routine assessment of office spaces are not well defined.*
- *The maintenance post-job feedback process has not been improved as expected since the FY05 VPP Program Evaluation.*

Recent / Expected Changes

- Significant improvements in automated tools have been made to support this area.
- *IOPS Experimental Authorization ia helping to analyze hazards of some R&D project activities.*

Improvement Opportunities

- Need to continue to increase the emphasis on ergonomics prevention of soft tissue injuries, *and prevention of "life experience" injuries,* which *are* an area of increasing importance.
- *Continue to improve ES&H planning for offsite work.*

Conclusion

Trend: ↗ **Rating: Good (11)**

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.

PNNL VPP Program Evaluation

Worksite Analysis – Employee Reporting of Hazards *This element describes how employees report hazards and the process for resolution of those reports of hazards at PNNL.*

PNNL VPP FY-2007

Strengths

- Numerous avenues are available for staff members to report hazards, both formally and informally.
- Communications between staff members and their immediate managers, and with support staff members (i.e., Building Managers, Safety & Health Representatives, etc.), are typically open and effective at identifying and resolving issues.
- Most staff members report that they comfortable bringing up safety issues. There was improvement in this area over past years.
- The need to report accidents and significant hazards is well established and was a common theme during staff member interviews. Management works to create a climate where reporting of hazards is allowed and encouraged.
- The "Stopping and Restarting Work" Subject Area *provides an effective way for employees to address urgent safety risks*.
- Employee-reported issues are usually fixed in a timely manner.
- More reporting is occurring now than in the past – on a broader variety of issues.
- *Safety DiaLOG and the safety suggestions contest have provided staff with an effective means to report issues and safety suggestions.*
- *Most staff reported that they feel comfortable reporting hazards (~90% - see FY2007 Survey results, question 4).*
- *DZAC encourages reporting and resolution of issues.*

Weaknesses

- There is *sometimes* less than adequate feedback on employee-reported issues, which *creates frustration and may* discourage employee reporting of hazards.
- Fixes are sometimes not as timely as needed, which discourages employee reporting of hazards.
- *There were isolated instances where staff (primarily craft) reported their reports of hazards were not adequately addressed.*

Recent/Expected Changes

- Issues reported through PNNL/HAMTC Laboratory Safety Committee are decreasing in number and significance indicating better communication between workers and managers.
- SafetyDiaLOG *- a new tool for staff to report safety issues – is expected to gain increased usage this year..*

Improvement Opportunities

- We *still* need better tracking and feedback on employee reported issues.
- Focus a communication campaign on reporting hazards "because you care about people." Recipients of reports of such hazards should say "Thank you!"
- *Faster resolution of issues with prompt feedback can improve reporting (this has been an issue in isolated cases).*

Conclusion

Trend:↗ **Rating: Good (10)**

Culture and process improvements have been made that should be positively impacting this element. However, we continue to have employees who report reluctance and/or apprehension regarding the reporting of safety issues. Management needs to continue to implement efforts to improve safety culture and trust among staff.

PNNL VPP Program Evaluation

Worksite Analysis – Accident Investigations *This element describes how accidents are investigated at PNNL so that similar accidents are prevented in the future.*

PNNL VPP FY-2007

Strengths

- PNNL has a strong accident investigation process. All injuries and illnesses are investigated and critiques are held for all recordable injury/illness accidents.
- Corrective actions for serious accidents are taken care of with great rigor *including investigation and corrective action*.
- *Corrective actions for injuries and illnesses are tracked in ATS.*
- F&O has a strong injury and illness reporting culture.
- PNNL has taken a strong position regarding the recent emphasis on safety metrics: we are more interested in real safety results than immediate reduction in accident rates.
- While TRC & DART improved, first aid rates held steady, indicating that our staff are still reporting injuries and illnesses as required.
- Critiques and accident investigations are doing a much better job of clearly focusing on fact finding, not fault-finding. Staff perception of this has improved a little.
- *F&O has made significant improvements in the accident investigation process.*
- *Lessons learned from serious accidents are shared with others (including other contractors).*

Weaknesses

- *There was reported to be a low comfort level related to reporting of near-miss events.*
- *There were several instances where a large number of managers accompanied staff to AMH, creating an intimidating atmosphere..*
- *Many managers and staff do not believe the "zero accident" goal is achievable or reasonable.*
- *There is a perception in some parts of the organization (except for most parts of F&O) that reporting and investigation of accidents is punitive.*
- *Some staff are reluctant to report minor accidents or near-misses. Reporting minor incidents is perceived to be a hassle and a waste of time.*

Recent/Expected Changes

- *SHIMS is being upgraded to produce improved capabilities for trending and data analysis.*

Improvement Opportunities

- Consider involving workers independent of the event in the investigation of injury/illness accidents (e.g., using safety committee members).

Conclusion

Trend: ↗ **Rating: Good (9)**

The accident investigation *process is* well defined and incorporates a rigorous reporting, investigating, analysis, tracking, and distribution process. General knowledge regarding staff members' reporting requirements could be enhanced. In the presence of strong pressure to reduce accident rates, PNNL has kept the emphasis on improving safety rather than simply reducing injury and illness rates.

PNNL VPP Program Evaluation

Worksite Analysis – Trend Analysis *This element describes how various safety-related data streams such as accidents, self-assessments, and employee reports of hazards are analyzed for trends that require action to improve worker safety and health programs at PNNL.*

FY-2007

Strengths

- SHIMS is used to track injury and illness data including TRC and DART rates. SHIMS has also supported focused trend analysis such as the Craft Resources injury and illness analysis that identified target Craft groups and injury types.
- Staff can monitor monitor the *hours since the last lost workday* on the Safety Communication Boards located in each building lobby occupied by staff.
- Use of metrics to monitor operational trends related to IOPS, EPR, and other operational processes is increasing and used to good effect.
- PNNL is using the occurrence reporting process to capture and trend near-miss or close-call type events.
- Lessons Learned are being used to communicate issues related to trends, including near-miss and close call events.
- Use of ATS for trending has been a significant improvement and continues to be a focus area for improvement.

Weaknesses

- The version of SHIMS used during CY 2006 continues to be limited in terms of support for trend analysis that can focus on emerging or previously unrecognized accident groups or accident causes.

Recent / Expected Changes

- *Hours since last lost workday (instead of* injury and illness trends) are tracked on the Safety Communication Boards.
- IOPS and EPR metrics. The new IOPS "Line Manager Viewpoint" will enhance managers' ability to monitor compliance and safety-related trends in their org.
- SafetyDiaLOG will help track and trend safety suggestions and issues.
- The Assurance process and Operations Management Forum are helping senior management keep track of risk issues and trends.
- Trending of self-assessment results (especially activity assessment) is improving
- *The migration of SHIMS into Datapipe will enhance the capability for Trend Analysis of injury and illness data.*

Improvement Opportunities

- Continue to improve delivery of relevant metrics to management.

Conclusion

Trend: ↗ **Rating: Good (10)**

Trend analysis at PNNL continues to improve with the Operations Management Forum and the entire Lab learning to focus on trending results for safety improvement.

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Tenet: *Hazard Prevention & Control*

SUMMARY

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

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Hazard Prevention & Control	**Good (10.6)**	↗

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. However, 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 a reflection of the complexity of the hazards and the business environment that PNNL operates under.

Although there continue to be opportunities for improvement in various aspects of hazard prevention and control, improvements were again noted in the “Personal Protective Equipment” program.

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PNNL VPP Program Evaluation

Hazard Prevention & Control – Professional Expertise *This element describes the level of expertise in worker safety and health disciplines available to support work at PNNL.*

FY-2007

Strengths

- *Well*-qualified safety and health professionals support Hazard Prevention and Control at PNNL.
- Some safety and health reps are considered to be "outstanding" in their support, primarily of R&D orgs. Most staff and managers are very happy with their safety and health reps.
- Safety and health professionals are field deployed to provide support to all potentially hazardous activities.
- Worker Safety & Health has strengthened technical qualifications through key hires during the last year.
- Immediate managers *have been* given training in safety leadership.
- Safety and health reps are typically co-located with the workers they support whenever possible.
- The increasing workload on safety and health representatives is a positive indication of acceptance of their value by staff.
- *Most staff know multiple ways to access safety and health expertise.*
- *CSM hazard awareness training leverages professional expertise.*
- *Training in PNNL safety management processes was provided for VPP Steering Committee.*

Weaknesses

- The increasing demand for safety & health support *(including support for offsite work and subcontractor activities)* continues to create a workload issue for safety & health reps.

Recent/Expected Changes

- Worker Safety & Health Management System has placed strong emphasis on the responsibilities and accountabilities of safety and health reps.
- Staff noted that they are more aware of whom to contact for safety & health support
- Certain key roles with collateral safety and health responsibilities (e.g., immediate managers, PLMs, CSMs) have been provided with safety training appropriate for their role.
- *More Safety & Health Representatives were hired to support increasing demand.*
- *PNNL improved the expertise of those with collateral safety responsibilities (e.g., VPP Steering Committee, CSMs, immediate managers).*
- *Several S&H staff received professional certifications this year.*

Improvement Opportunities

- *Allocation of professional expertise is sometimes constrained by assignment or available funding rather than the highest risk/priority need.*
- *Look for opportunities to improve efficiency of the S&H rep work activities (especially documentation).*

Conclusion

Trend: ↗ **Rating: Good (11)**

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.

PNNL VPP Program Evaluation

Hazard Prevention & Control – Safety & Health Rules *This element describes the rules used at PNNL to prevent and control worker safety and health hazards.*

FY-2007

Strengths

- SBMS is an excellent repository and vehicle for safety and health "rules" (required procedures and suggested guidelines).
- SBMS Subject Areas 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-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.
- *SBMS has improved in the past year (e.g., Electrical Safety Subject Area).*

Weaknesses

- *The key words used in SBMS are different than what some staff use when searching for requirements.*
- Investigation of the concern about navigation above indicates that *some* staff members don't understand the structure and approach (including search/support capabilities) of the tools.
- Improvements are needed in processes for assurance that vendors and non-construction contractors are following safety and health rules.

Recent / Expected Changes

- Improvement of SBMS and IOPS *continue to be a* priority for the Management Systems responsible for them.
- *The SBMS website was improved to aid navigation and use by staff.*
- *The Contractor ES&H Manual was significantly revised to support better contractor safety.*

Improvement Opportunities

- Continue to work to *help staff find things easier/faster in* SBMS.
- *Continue to work toward improvements in delivery of IOPS work practices.*

Conclusion

Trend: ↗

Rating: 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. Staff members are involved in the development of new requirements (SBMS subject areas and IOPS). There is certainly room for improvement in both the content and organization of SBMS and IOPS. Accountability after events reinforces staff members' compliance with safety and health rules. Most staff and managers prefer to go to SMEs rather than SBMS to understand applicable safety and health rules. Notwithstanding, SBMS and IOPS provide good structure for safety and health rules.

PNNL VPP Program Evaluation

Hazard Prevention & Control – Personal Protective Equipment

This element describes how Personal Protective Equipment (PPE) is used at PNNL to control and mitigate safety and health hazards.

FY-2007

Strengths

- There is a written program that addresses the elements defined in regulatory requirements for a PPE program.
- PPE is required when hazards are present and the hazards cannot be controlled by other means. PPE is to be used only when engineering and administrative controls cannot feasibly be used to mitigate a given hazard.
- PPE is provided free and readily made available to the users. (Line organizations or projects are responsible for purchase of PPE.)
- PNNL staff members are aware of the need to inspect PPE and replace it as needed.
- Routine PPE requirements are driven by training, permits, and postings based on analysis of the hazards of the activity.
- Specific PPE training programs (e.g., fall protection, electrical, respiratory, and hearing protection) are provided as required.
- 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.
- PNNL staff members report that use of PPE at work has made them more likely to use appropriate PPE at home.
- Staff report that workers are helping each other recognize PPE issues (e.g., forgetting to put it on or use it correctly).
- Use of PPE by student workers is improving.
- *Requirements for PPE are enforced throughout the Lab (e.g., visitors are prevented from entering labs if they don't have appropriate apparel or PPE such as close-toe shoes)*
- *Use of key PPE is analyzed and certified PPE is issued (HV gloves, respirators).*
- *Subcontractor use of PPE has improved.*

Weaknesses

- Some staff have been observed leaving *hazardous material* labs with gloves on (begging the question about how we know if the gloves are clean).
- *While subcontractor performance in general has improved, vendors* are sometimes observed not wearing PPE when required.

Recent / Expected Changes

- The VPP Program Evaluation assessors noted a continuing improvement in the area of PPE this year.

Improvement Opportunities

- *Consider providing guidance in SBMS and/or IOPS that gloves used for protection from hazardous materials are to be removed before exiting the area where hazardous materials are used (e.g., before contacting door handles or other public surfaces).*

Conclusion

Trend: ↗

Rating: Good (11)

There are good requirements for use of PPE and staff know and comply with those requirements. There has been improvement in the PPE program over the past several years.

PNNL VPP Program Evaluation

Hazard Prevention & Control – Preventive Maintenance *This element describes how PNNL uses preventive maintenance to keep tools and equipment operating safely.*

PNNL VPP FY-2007

Strengths

- There is a formal process for evaluating equipment and systems for developing Preventive Maintenance procedures (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 previous decision to abandon 300 Area facilities, which has recently been reversed for some key facilities, will create challenges for the Preventive Maintenance program in terms of identifying and catching up on improvement opportunities in those facilities.*
- *There are instances where structures and equipment are not being maintained to address issues of concern to staff (both in 300 Area as well as in RCHN).*

Recent / Expected Changes

- *The recent decision to remain in key 300 Area facilities will significantly impact the Preventive Maintenance program for those faciltities.*

Improvement Opportunities

- *Facility Management needs to assure that good risk decisions are being made for preventive maintenance concerns that staff raise.*

Conclusion

Trend: ➔ **Rating: Good (10)**

There is a formal PM Program implemented that meets the regulatory requirements. The program is based on sound business principles and has a great deal of documentation and rigor to assure that it is performed as intended with feedback processes to obtain continuous improvement.

PNNL VPP Program Evaluation

Hazard Prevention & Control – Emergency Preparedness *This element describes emergency preparedness programs at PNNL that help keep workers safe in the event of an off-normal event.*

FY-2007

Strengths

- The Emergency Preparedness subject area serves Laboratory needs
- Building Emergency Plans (BEPs) are delivered by the Map Information Tool.
- All Building Emergency Response personnel participate in an annual table top emergency drill and critique or are provided personal training.
- *Tabletop emergency preparedness exercises are very good and have improved over past practices.*
- All occupied facilities participate in one evacuation drill a year.
- PNNL has established teams that can provide technical assistance involving radiological and chemical hazards in the event of an emergency response.
- PNNL relies on several emergency response providers (primarily City of Richland, Hanford Site, and Clackamas Co.). Their area of coverage is well defined and they participate in emergency response drills.
- Homeland security issues are being incorporated into building emergency plans.
- PNNL has deployed AEDs and more are being added as needed.
- *Avian flu pandemic planning is a best practice with increased emphasis expected in FY07.*
- *Operations center has added emergency response capability (e.g., AEDs in security vehicles, video surveillance cameras, and emergency call stations).*
- *Staff indicated a high dergree of willingness to use AEDs based on survey results (>73%).*

Weaknesses

- Recent events have demonstrated that staff *and/or the systems* sometimes do not respond effectively in some types of emergencies (e.g., bringing AEDs to the scene of a medical emergency and being prepared to use it if appropriate*, response to a real spill in a 300A building was not as expected/trained*).
- *Awareness/orientation for use of AEDs could be improved (currently slightly over 50%).*
- *When staff who are on the emergency team in a facility move to a different facility, there is no automated process to replace them.*

Recent/Expected Changes

- Additional AEDs *continue to* be procured as needed.

Improvement Opportunities

- *Continue to improve staff ability to respond correctly to emergencies.*

Conclusion

Trend: ➔

Rating: Good (11)

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 capability for anticipated emergencies. Staff members understand their responsibility in the event of an emergency in their Facility. *Emergency response capabilities (e.g., AEDs, emergency call stations, and video surveillance cameras) have been deployed to facilitate better emergency response.*

PNNL VPP Program Evaluation

Hazard Prevention & Control – Radiation Protection Program *This element describes PNNL's programs for protecting workers from radiological hazards.*

PNNL VPP FY-2007

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 *and improving* 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 perceptions regarding the consistency and ease of use of RadCon requirements.
- *The Radioactive Material Tracking tool is enhancing inventory control of radioactive materials.*
- *There has been a significant effort to reduce radioactive material inventory and to improve sealed source control.*
- *ALARA impovements continue to be made (e.g., waste box stands to facilitate faster/easier survey of waste boxes).*
- *RadWorkerII competency is verified in the field.*
- *Improvements have been made in the ARACS system in terms of log-on and verification of qualification.*

Weaknesses

- The RadCon program is quite complex and reportedly confuses some staff members who work with radiological hazards.
- *There is still a known issue* that RCT procedures do not *always align* well with SBMS/RCP requirements for users, resulting in the possibility that requirements may not be met due to confusion/conflicting guidance. *The RCTs and RadCon management continue to work this issue as problems are identified.*

Recent / Expected Changes

- *None*

Improvement Opportunities

- Continue working to improve/integrate user requirements in SBMS/RCPs with RCT procedures.

Conclusion

Trend: ↗ **Rating: Good (10)**

Control of radiological hazards at PNNL is considered to be very good. There has been improvement in the RadCon program during the past year following a critical external surveillance report. Improved compliance with procedures has resulted. *Continue to work to i*mprove Radiological Control procedures by removing conflicting and confusing information between SBMS and RCT procedures to help staff and RCTs better comply with radiological controls.

PNNL VPP Program Evaluation

Hazard Prevention & Control – Medical Programs *This element describes how medical programs are used at PNNL to address worker health issues.*

PNNL VPP FY-2007

Strengths

- The Employee Job Task Analysis (EJTA) program is *specified and administered by the Site medical provider*.
- The "Return to Work" program continues to improve. Bi-weekly Case Management meetings are conducted with staff members' managers, ES&H field representatives, Human Resources, and OSHA record keeping.
- The Medical monitoring program is conducted by the Site medical provider.
- The online Map Information Tool (MIT) has been enhanced to identify specific locations of trained first aid responders*, AEDs,* and first aid kits within individual facilities. Most first aid responders have "First Aid" signs posted outside 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. *Many* bargaining unit staff members *take* advantage of Past History physicals.
- The development of a new process for "new-hire" medical examinations has improved. The process is expected to 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.
- *S&H professionals have been very proactive in addressing ergonomic issues.*
- *PNNL VPP sponsors blood pressure monitors, which are used by numerous staff.*
- *PNNL VPP has promoted wellness through various initiatives (e.g., Spring Wellness Challenge, brown-bags, health fairs, wellness vendor fair, and the procurement of a stretch machine onsite).*
- *Battelle Staff Association promotes wellness by offering exercise classes (e.g., yoga, tai chi, pilates, etc.) onsite in the Battelle Fitness Center.*
- *AMH reviews and participates in wellness and health communications and programs at PNNL.*

Weaknesses

- *Worker and/or line manager participation in maintenance of EJTAs is not always achieved (Admins take care of it without worker involvement or explicit management approval).*

Recent / Expected Changes

- An innovative wellness program *continued* this year by the VPP Steering Committee in partnership with Advanced Med Hanford.
- *The "Safety 24-7" initiative kicked off in FY 2006.*
- *PNNL is benchmarking wellness programs for health and fitness best practices.*
- *Communications regarding the availability of voluntary health maintenance exams was promoted this year.*

Improvement Opportunities

- *Continue to increase employee awareness of health and wellness.*
- *Improve EJTA compliance.*

Conclusion

Trend: ↗ **Rating: Good (11)**

The medical program continues to be strong under the new medical contractor. *Partnership has been established to promote worker wellness and health. AMH is actively involved in preventing/reducing the impact of on-the-job injuries.*

PNNL VPP Program Evaluation

Hazard Prevention & Control – Occupational Safety & Health Programs

This element provides a detailed description of PNNL occupational safety and health programs (primarily in the context of SBMS).

PNNL FY-2007 VPP

Strengths

- SBMS continues to deliver strong well-documented programs and it is undergoing continuous improvement to address usability concerns.
- 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.
- 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 VPP Program Description was recently enhanced to incorporate the old/updated Application material.

Weaknesses

- The structure of SBMS is considered by staff to be complex and difficult to navigate.
- *The programs for offsite safety were found to be deficient and still need attention to be implemented with rigor and well communicated.*

Recent / Expected Changes

- Continuing improvement in SBMS structure and navigation.
- *Programs continue to be improved including ergonomics, electrical safety, construction safety, subcontractor safety.*
- *10CFR851 will require additional changes in Occupational Safety & Health Programs.*

Improvement Opportunities

- Continue to work to make SBMS more accessible and easy to use.
- Improvements in delivery of requirements through IOPS Work Practice Documents.
- *Offsite safety needs additional emphasis.*
- *Address recently recognized improvement opportunities in key safety and health programs (e.g., those related to 10CFR851).*

Conclusion

Trend: ➔ **Rating: Good (11)**

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, and other initiatives continue to reflect PNNL's goal of continuous improvement. *Rating decreased because we recognize that expectations for program performance are increasing, scope (e.g., construction safety management) is changing, and some of our programs do not fully meet current standards.*

Tenet: *Safety & Health Training*

SUMMARY

TENET/ELEMENT	ASSESSMENT SUMMARY	TREND
Safety & Health Training		
Employees	**Good (10)**	↗
Supervisors Improved! Managers	**Good (10)**	↗

TENET RATING

TENET	ASSESSMENT SUMMARY	TREND
Safety & Health Training	**Good (10)**	↗

SYNOPSIS

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

Safety and health training 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 has recently been improved. First line managers (supervisors), in particular, have benefited from improved knowledge of their responsibilities and technical aspects of safety, as well as the skills necessary to successfully support and empower staff members. The excellent support network provided to managers by professional safety and health staff members supplements their ability to implement an effective safety program. Feedback from the *recent training for managers (particularly DuPont Safety Leadership training) indicated that managers felt the training was valuable.*

An improvement opportunity related to training *continues to exist in terms of making* training *more* effective. The Training and Qualification Management System is exploring how to address this improvement opportunity.

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PNNL VPP Program Evaluation

Safety & Health Training – Employees *This element describes how employees are provided with the safety and health training they need for their work.*

FY-2007

Strengths

- A well-established ES&H T&Q Program is implemented through SBMS Subject Areas, facilitating the flow of information from ES&H to the worksite and lab bench.
- Most staff members feel they receive adequate hazard training.
- 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.
- PNNL won the "Training Top 100 Award" from Training Magazine *three years in a row (2003-2005)*. This award recognizes training excellence in the top 100 organizations across the country.
- *The change to eliminate low value required reading for access to IOPS workspaces for maintenance and RadCon staff was a significant improvement.*
- *Informal safety communications like safety meetings and Porcelain Press are helpful in improving staff knowledge and awareness of safety issues.*
- *Changes in required reading assignments (e.g., IOPS work practices) are clearly highlighted*

Weaknesses

- IOPS reading assignment completion is not verified in any effective way.
- Some staff members report that web based training is less effective for them and that they would appreciate more personal training.
- Staff reported that better mentoring is needed after initial training to achieve full qualification to perform some kinds of work.
- *Training is overkill, too much for experienced workers*
- *Annual training (e.g., fire extinguisher) doesn't always add value*
- *Delivery of "awareness" training via informal communications (e.g., ESH&Q exchange or PP) is not always adequate or effective.*
- *Need more focus on effectiveness of training.*

Recent / Expected Changes

- *T&Q continues* to improve training delivery in response to staff member comments.
- *10CFR851 is expected to impact (and increase) general employee training.*
- *Streamlining IOPS required reading process for maintenance workers. Training CSMs related to hazard identification and analysis.*
- *Changes to electrical safety training are planned.*

Improvement Opportunities

- Continue working to improve the delivery and relevance of safety training materials. *Consider using different/creative approaches (venue, delivery methods, web-based methods, content) for effective and cost-effective training.*

Conclusion

Trend: ↗ **Rating: Good (10)**

Safety & health training processes for PNNL staff members and onsite 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. Improvement to the IOPS tool to provide useful information in a timely manner still remains an improvement opportunity. Delivery of training in a way appropriate for the learning styles of staff and the risk associated with the training material needs to be improved.

PNNL VPP Program Evaluation

Safety & Health Training – Supervisors/Managers *This element describes the safety and health training supervisors and managers receive to help them perform their job and keep their workers safe.*

PNNL VPP FY-2007

Strengths

- The Job Evaluation Training System (JETS) provides *managers with* an annual review of required training.
- Supervisors and managers have access to Subject Matter Experts (SME). SMEs are aligned with core teams and facilities. This has allowed immediate response to health and safety issues.
- Managers are knowledgable, particularly managers of higher risk work.
- 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. *This is primarily useful for maintenance work planning.*
- The Facility Management qualification card system provides good verification that basic technical skills are learned by key roles.
- Immediate manager*s receive annual* safety*, operations, and security refresher t*raining.
- *DuPont training was very well received and has produced noticeable results.*

Weaknesses

- *New managers may not always be well qualified to provide appropriate safety leadership. This applies to safety leadership and/or understanding of safety requirements applicable to an organization's staff.*
- *Managers of minimal risk work are less knowledgable of good safety leadership and safety requirements.*
- *There is considerable variability in the knowledge and skills of managers across the Laboratory.*
- *Many managers do not know how to effectively use tools such as SBMS or IOPS.*

Recent/Expected Changes

- *None*

Improvement Opportunities

- Consider requiring managers to have training in key tools such as SBMS and IOPS (as applicable to their responsibilities).

Conclusion

Trend: ↗ **Rating: Good (10)**

Management Safety & Health training for managers *is improving*. Most managers *are* well qualified and knowledgable, and they have excellent operational support services available, including field deployed safety and health staff members. *Managers need to continue to develop their safety leadership skills and increase their knowledge of PNNL systems and tools.*

End of Report

Voluntary Protection Program

Pacific Northwest National Laboratory

FY-2007 PROGRAM EVALUATION

January

vpp.pnl.gov