Advanced Technologies and Laboratories International, Inc. 222-S Analytical Production Services and Testing Contractor

Report from the Department of Energy
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Onsite Review
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Foreword

The Department of Energy (DOE) recognizes that true excellence can be encouraged and guided but not standardized. For this reason, on January 26, 1994, the Department initiated the DOE Voluntary Protection Program (VPP) to encourage and recognize excellence in occupational safety and health protection. This program closely parallels the Occupational Safety and Health Administration (OSHA) VPP. Since its creation by OSHA in 1982 and DOE in 1994, VPP has demonstrated that cooperative action among Government, industry, and labor can achieve excellence in worker safety and health. The Office of Health, Safety and Security (HSS) assumed responsibility for DOE-VPP in October 2006. Assessments are now more performance-based and are enhancing the viability of the program. Furthermore, HSS is expanding complex-wide contractor participation and coordinating DOE-VPP efforts with other Department functions and initiatives, such as Enforcement, Oversight, and the Integrated Safety Management System.

DOE-VPP outlines areas where DOE contractors and subcontractors can surpass compliance with DOE orders and OSHA standards. The program encourages a "stretch for excellence" through systematic approaches, which emphasize creative solutions through cooperative efforts by managers, employees, and DOE.

Requirements for DOE-VPP participation are based on comprehensive management systems with employees actively involved in assessing, preventing, and controlling the potential health and safety hazards at their sites. DOE-VPP is designed to apply to all contractors in the DOE complex and encompasses production facilities, laboratories, and various subcontractors and support organizations.

DOE contractors are not required to apply for participation in DOE-VPP. In keeping with OSHA and DOE-VPP philosophy, *participation is strictly voluntary*. Additionally, any participant may withdraw from the program at any time. DOE-VPP consists of three programs with names and functions similar to those in OSHA's VPP: Star, Merit, and Demonstration. The Star program is the core of DOE-VPP. This program is aimed at truly outstanding protectors of employee safety and health. The Merit program is a steppingstone for participants that have good safety and health programs, but need time and DOE guidance to achieve true Star status. The Demonstration program, expected to be used rarely, allows DOE to recognize achievements in unusual situations about which DOE needs to learn more before determining approval requirements for the Merit or Star program.

By approving an applicant for participation in DOE-VPP, DOE recognizes that the applicant exceeds the basic elements of ongoing, systematic protection of employees at the site. The symbols of this recognition provided by DOE are certificates of approval and the right to use flags showing the program in which the Site is participating. The participant may also choose to use the DOE-VPP logo on letterhead or on award items for employee incentive programs.

This report summarizes the results from the evaluation of Advanced Technologies Laboratories International, Inc. (ATL), the Laboratory Analytical Services and Testing contractor for the 222-S Laboratory located at the Hanford Site, during the period of January 24-27 2011, and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding ATL's continued participation in DOE-VPP at the Star level.

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ABBREVIATIONS AND ACRONYMS

AMH	AdvanceMed Hanford
ATL	Advanced Technologies and Laboratories International, Inc.
ATS	Analytical Technical Services
CAMPATS	Corrective Actions Management/Price-Anderson Amendment Act Tracking System
DART	Days Away, Restricted, or Transferred
DOE	Department of Energy
HF	Hydrofluoric Acid
HSS	Office of Health, Safety and Security
ISMS	Integrated Safety Management System
ORP	Office of River Protection
OSHA	Occupational Safety and Health Administration
POD	Plan-of-the-Day
PPE	Personal Protective Equipment
RSF	Radiological Screening Form
RWP	Radiological Work Permit
SAF*T	Safety Awareness Focus Team
SIP	Safety Improvement Plan
Team	HSS DOE-VPP Team
TOC	Tank Operations Contractor
TRC	Total Recordable Cases
VPP	Voluntary Protection Program
WRPS	Washington River Protection Solutions, LLC

EXECUTIVE SUMMARY

Advanced Technologies and Laboratories International, Inc. (ATL), is the Laboratory Analytical Services and Testing contractor for the 222-S Laboratory located at the Hanford Site. ATL receives, processes, analyzes, characterizes, archives, and disposes of a variety of samples related to the Hanford Tank Farm cleanup activities, as well as other activities at the Hanford Site. ATL is responsible for using installed analytical equipment. Any change to the facility, installation of new equipment, and operation of facility equipment is conducted by Washington River Protection Solutions, LLC. ATL was admitted to the Department of Energy (DOE) Voluntary Protection Program (VPP) as a Star participant in January 2008; and continued participation requires a triennial onsite review by the DOE Office of Health, Safety and Security DOE-VPP Team (Team). The Team conducted its review January 24-27, 2011, to determine whether ATL is continuing to perform at a level deserving DOE-VPP Star recognition. This report documents the results of the Team review and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision about ATL's continued participation in DOE-VPP as a Star participant.

Based on discussions and interviews with approximately 30 percent of the workforce, supervisors and managers, as well as extensive observation of work activities, inspection of the facility within the project scope, and review of records, the Team determined that ATL continues to exhibit the attributes of a strong safety culture. Managers and employees work as a team and equally own and participate in the safety and health program. Procedures and processes are mature and leverage not only internal expertise and capabilities, but also that of the facility management team and other Hanford Site contractors. Employees and managers demonstrated a sustained commitment to further the pursuit of safety excellence, continuous improvement, and a strong safety culture at ATL. Employee ownership of safety has a very strong foundation and is demonstrated in all aspects of the safety and health program.

ATL continues to use established programs that identify, evaluate, and mitigate hazards for new processes, procedures, material, facilities, or modified equipment before, during, and after use, or operation. There was no degradation of safety or health processes observed during this review. Programs observed in 2008 were effective then and continued to be effective at this review. ATL empowers the workforce to take ownership of all facets of hazard prevention and control. Supervisors and workers actively engage in dialogue to improve, ensure, and verify that safety is not just a phrase used in passing. Team observations confirmed that the ATL workforce, from top to bottom, is engaged and has ownership of safety and the processes to maintain a safe workplace.

Safety and health training methods remain effective in addressing the hazards associated with a nonreactor, hazard category 3 nuclear facility. The ATL safety and health training program continues to ensure that responsibilities are understood, that personnel recognize hazards they may encounter, and can perform their duties in a safe and reliable manner in accordance with management expectations and approved procedures.

The Team observed that ATL has fully met all DOE-VPP tenet requirements and recommends ATL's continued participation in DOE-VPP as a Star site.

TABLE 1
OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
Managers should find ways to spend more time with the workers in the Laboratory workspaces.	3
ATL should provide training to bargaining unit members to enhance their participation in event investigations.	6
ATL should establish a system for employee concerns to be submitted anonymously.	6
ATL should expand its hazard analysis process to include all supporting documents that contribute to controls contained or used in work activities.	8

I. INTRODUCTION

Advanced Technologies and Laboratories International, Inc. (ATL), is the prime contractor for the analytical services and testing contract for the 222-S Laboratory located at the Hanford Site. ATL receives, processes, analyzes, characterizes, archives, and disposes of a variety of samples related to the Hanford Tank Farm cleanup activities, as well as other sampling activities at the Hanford Site. ATL is responsible for using installed analytical equipment. Any change to the facility, installation of new equipment, and operation of facility equipment is conducted by the Tank Operations Contractor (TOC), Washington River Protection Solutions, LLC (WRPS).

ATL was awarded this small business contract in 2005. Most of the workforce that was subsequently transferred to ATL had previously been part of the Department of Energy (DOE) Voluntary Protection Program (VPP) under CH2M HILL Hanford Group, Inc. Due to significant change in management structure, DOE decided that ATL would have to apply separately to DOE-VPP. DOE's Office of River Protection (ORP) provides oversight of operations at the 222-S Laboratory. ATL submitted its DOE-VPP application in 2007 and was approved by ORP in December 2007. In 2008, ATL was awarded Star status after a DOE-VPP review. In 2009, the tank operations contract was awarded to WRPS. ATL's contract with ORP was recently renewed in 2010 and DOE-ORP continues to provide oversight of operations at the 222-S Laboratory. ATL employs approximately 100 people that perform and support analytical work in the 222-S Laboratory. The facility infrastructure continues to be maintained by the Analytical Technical Services (ATS) project within WRPS.

Continued participation in DOE-VPP requires a triennial onsite review by the Office of Health, Safety and Security (HSS) DOE-VPP Team (Team). The triennial review of ATL at the Hanford Site was conducted January 24-27, 2011. The Team evaluated ATL safety programs against the provisions of DOE-VPP. During the site visit, the Team observed activities, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of ATL health and safety programs.

The Team interviewed approximately 35 employees, managers, and supervisors either formally or during observation of field activities. Hazards associated with ATL activities include potential radiological contamination, potential chemical exposure associated with various activities, electrical hazards, ergonomic hazards associated with fume hoods and gloveboxes, and a multitude of other standard industrial hazards. Activities observed included plan-of-the-day (POD) meetings, prejob briefings, sample analysis, and waste handling.

II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE

Injury Incidence / Lost Workdays Case Rate (ATL)					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Rate	DART* Cases	DART Case Rate
2008	121,948	1	1.64	0	0
2009	130,472	0	0	0	0
2010	166,023	2	2.41	0	0
3-Year Total	418,443	3	1.43	0	0
Bureau of Labor Statistics (BLS-2009) average for NAICS ** # 56291 Waste Management and Remediation Services			3.3		1.8

*Days Away, Restricted, or Transferred
**North American Industry Classification System

Conclusion

ATL 3-year average injury rates are 57 percent below the averages for the comparable industry and meet the criteria for continued participation in DOE-VPP at the Star level.

III. MANAGEMENT LEADERSHIP

Management leadership is a key element of obtaining and sustaining an effective safety culture. The contractor must demonstrate senior-level management commitment to occupational safety and health in general and to meeting the requirements of DOE-VPP. Management systems for comprehensive planning must address health and safety requirements and initiatives. As with any other management system, authority and responsibility for employee health and safety must be integrated with the management system of the organization and must involve employees at all levels of the organization. Elements of that management system must include: (1) clearly communicated policies and goals; (2) clear definition and appropriate assignment of responsibility and authority; (3) adequate resources; (4) accountability for both managers and workers; and (5) managers must be visible, accessible, and credible to employees.

The commitment to safety excellence and continuous improvement was evident throughout the organization from the President of the Company to the newest member of the workforce. Interviews with employees indicated that the commitment has not waned since the initial certification 3 years ago. Moreover, the ownership of safety is continually reinforced and demonstrated. Managers clearly continue to support a safe work environment at ATL. One of the consistent themes voiced by employees and managers centered on the visibility of the management team in the Analytical Laboratory spaces. Most managers indicated they wanted to be in the workspaces more often, but their administrative duties interfered with the ability to spend more time in the Laboratory. Laboratory technicians expressed their desire to have their managers in the workspaces more often as well. Discussions with the Company President indicated that efficiency initiatives were being considered that would allow managers to interface with employees more often. This recognition by management and employees indicates a very close-knit organization with a free flow of communication between managers and the workforce.

Opportunity for Improvement: Managers should find ways to spend more time with the workers in the Laboratory workspaces.

The employees at ATL continue to be involved in the pursuit of safety excellence with the support of their managers. A strong incentive and award program is in place which encourages participation at all levels. Further discussion on employee participation opportunities is discussed in the Employee Involvement section of this report. Safety performance expectations continue to be part of the norm at ATL. All employees interviewed indicated that expectations and accountability for safety and health performance are documented through performance appraisals as found in 2008. ATL retains the 2008 policies for violations of unacceptable work behaviors.

ATL continues to have defined interfaces with Hanford Site prime contractors that contribute to the protection of worker safety and health: WRPS, Mission Support Alliance, LLC, and AdvanceMed Hanford (AMH). Integration of safety and health is required with WRPS and AMH. Work scope is controlled under Memoranda of Understanding or Agreement or through Administrative Interface Agreements. These interfaces are maintained through clearly defined roles and responsibilities, implementation of established programs and procedures, and periodic self-assessments of interface activities.

During the onsite review, ATL indicated that it had lost its industrial hygienist and had just hired a replacement. In addition, ATL also recently hired a health and safety manager. One of its ongoing challenges is retaining qualified safety professionals. ATL was relying on the ATS organization's industrial safety professional to augment its needs while new personnel were being brought up to speed on their work scope and job requirements. Additional resources are available through contractual agreements with TOC to augment on a case-by-case basis.

ATL continues to provide employees with information about safety items through the communication vehicles observed in 2008. However, to be more efficient, ATL has combined the Safety Awareness Focus Team (SAF*T) and VPP Champions into one committee. Interviews with employees confirmed that these communication methods are still effective.

Evaluations of ATL safety and health program are scheduled and performed as part of the management assessment process. Manager participation is documented in the monthly safety walkdowns that focus on particular areas and are led by the industrial safety representative from ATS. Prior to the walkdown, the ATS industrial safety lead briefs management on the focus of the walkdown and what to look for in the evaluations.

Workers and management conduct an annual VPP self-assessment across all activities at the facility. The results are evaluated, documented, and incorporated into the Safety Improvement Plan (SIP) by the VPP Champions /SAF*T members and management. SIP initiatives are entered into Corrective Actions Management/Price-Anderson Amendment Act Tracking System (CAMPATS) for tracking. Status on SIP is reported quarterly at the VPP Champions/SAF*T meeting, and communicated to the workforce periodically via All-Hands meetings, the VPP newsletter, and on the Health and Safety Web page.

At the corporate level, safety and health planning is incorporated into the annual budget process. Based upon the work scope for the upcoming fiscal year, safety and health resources, such as safety professionals, industrial hygiene technicians, and radiological control personnel, etc., are included in the departmental financial planning.

Conclusion

There is a strong safety culture at ATL that is supported by the management team's commitment to continuous improvement. Employees interviewed expressed continued support for the management vision of safety excellence and continuous improvement. There is a strong relationship and commitment by all parties to make ATL a safe work environment where anything less is not acceptable. ATL meets all of the requirements of the Management Leadership tenet of the DOE-VPP program.

IV. EMPLOYEE INVOLVEMENT

Employees at all levels must continue to be involved in the structure and operation of the safety and health program and in decisions that affect employee health and safety. Employee participation is in addition to the individual right to notify appropriate managers of hazardous conditions and practices. Field observations and interviews indicate that ATL workers remain committed to their personal safety, as well as the safety of their coworkers and plant visitors.

The Team observed that employees are still strongly involved in the ATL safety and health program. Programs are in place to notify employees of new job hazards and procedural changes. Employees indicated they have the opportunity to provide feedback to procedural changes and may be required to take additional training upon final approval. Chemists have been tasked with the preparation of procedures and openly solicit input from the laboratory technicians during procedure development. Work observations and interviews clearly showed that ATL workers own the safety programs and have full authority to stop work and initiate immediate corrective actions or control. In addition, each worker has the right and responsibility to report unsafe conditions/practices.

The Team interviewed a wide range of employees with anywhere from 2 weeks to over 30 years experience onsite, and all exhibited a very strong sense of safety and health ownership and responsibility. Work at ATL is very structured with most work performed to procedures. Procedures development, use, and revision involve the workers in all phases. Employees are fully aware of the potential hazards associated with their jobs and are adequately trained to identify, report, and, in some cases, mitigate potential hazards and potentially hazardous conditions. Although none of the workers contacted by the Team have had to implement their stop-work authority, they all indicated that they would not hesitate to do so if warranted, and they would do so without fear of reprisal from any level of management. Several employees recalled instances where they paused their work for a question or clarification from their leads or technical authority. This type of open communication was prevalent across the workforce.

Employees are encouraged to recommend safety improvements and become involved with safety committees and associated activities. Experienced employees are also used to mentor and train new employees with regard to safe work practices. One of the continuing challenges for VPP participants centers on increasing employee involvement in the safety efforts of VPP and devising methods to promote involvement. The core group for ATL VPP typically has a participation rate of about 10 percent of the employee population. During discussions with the VPP Champions, the Team suggested onsite resources that might help them institute new ways to encourage participation and continue improvements. ATL employees also participate in ATS safety awareness activities, including laboratory-wide safety campaigns and the annual Hanford Health and Safety Exposition. The Health and Safety Exposition is an exhibition of information, equipment, supplies, and success stories that promote the health and safety of workers both at home and at work. It is supported by DOE, as well as all the other Hanford Site contractors.

A variety of communication efforts continue to be used to support employee involvement, including:

- Posters;
- Health/safety bulletins;
- E-mail notices (minutes from safety meetings, suggested readings, links to safety-related Web sites, etc.);
- Newsletters;
- Lessons learned discussions;
- Employee input into procedures; and
- Employee participation on monthly safety walkdowns.

Discussions with the Union indicated that the bargaining unit would like to be more involved with event investigations and have Union personnel trained and qualified to participate. Currently, managers lead event investigations and invite the Union to participate. When this subject was discussed with ATL senior managers, they thought it was a good idea to have trained and qualified Union members as part of the event investigation processes and committed to pursue the suggestion.

Opportunity for Improvement: ATL should provide training to bargaining unit members to enhance their participation in event investigations.

The Team found employees fully engaged in prejob briefings and POD meetings. Employees were very comfortable discussing safety shares with their fellow coworkers. During work observations, the Team found ATL workers worked very closely and effectively with ATS employees, demonstrating a culture of caring and looking out for each other's safety regardless of their company affiliation.

During this review, the Team noted that ATL did not have a system for employees to submit safety concerns anonymously. According to employee interviews, the submittal of concerns was typically done by directly contacting the VPP contact or their manager. At no time did any employee express any distress with this arrangement. The ability to communicate one-on-one about concerns is a strong attribute for ATL.

Opportunity for Improvement: ATL should establish a system for employee concerns to be submitted anonymously.

ATL has the same safety committees as in 2008. The only significant change is that the SAF*T and VPP Champions Committees have been combined for efficiency. The current VPP Champions/SAF*T Committee activities include performing the annual VPP self-assessments, and supporting SAF*T in the development of SIP. Committee members include both workers and managers. Some committee members are also actively involved in the site-wide VPP Champions Committee. This committee serves as a vehicle to provide information, support, and mentoring to assist Hanford Site non-VPP facilities in their pursuit to attain VPP recognition and to assist participating VPP facilities in their efforts to maintain VPP Star status.

Conclusion

Employee ownership of safety has a very strong foundation and is demonstrated in all aspects of the safety and health program. ATL workers are encouraged to address existing and new hazards, are empowered to suggest corrective actions, and actively participate in ATL safety and health initiatives. ATL meets all of the requirements of the Employee Involvement tenet of DOE-VPP.

V. WORKSITE ANALYSIS

Management of health and safety programs must begin with a thorough understanding of all hazards that might be encountered during the course of work and the ability to recognize and correct new hazards. There must be a systematic approach to identifying and analyzing all hazards encountered during the course of work, and the results of the analysis must be used in subsequent work planning efforts. Effective safety programs also integrate feedback from workers regarding additional hazards that are encountered and include a system to ensure that new or newly recognized hazards are properly addressed. Successful worksite analysis also involves implementing preventive and/or mitigating measures during work planning to anticipate and minimize the impact of such hazards.

The chemical inventory control system currently used by ATL barcodes all chemicals and requires workers to sign out chemicals used from the central chemical storage location. The system reconciles inventory on a monthly basis and, according to ATL personnel, has been very accurate. The institution of this new system has helped ATL reduce the chemical inventory and thereby reduce the chemical hazard footprint for ATL. The Team observed the storage of chemical compounds and their placarding with no discrepancies observed. Additionally, with the help from American Recovery and Reinvestment Act funds, ATS has purchased new analytical equipment for use at ATL that will reduce the amount of material required for analysis of a specific analyte or compound and further reduce the hazardous constituents within the Laboratory space.

The 2008 review identified a need to institutionalize the basis for control selection in the hazard analysis process for ATL. Since that time, ATL has instituted a revision to its process and developed a form that identifies hazards and controls in an attempt to capture the rationale for the selected controls. This effort is still ongoing with procedures that come up for revision subjected to the improved process. During this assessment, the use of personal protective equipment (PPE) as a control was reviewed in ATL's Chemical Hygiene Plan. In one laboratory, Hydrofluoric Acid (HF) was used and latex gloves were identified as the control for splash protection. The use of latex gloves as a control for HF protection was questioned. Documents from the vendor indicated that HF breakthrough could occur in 19 minutes, but the hygiene plan incorrectly indicated breakthrough occurred in 480 minutes. ATL could not find any historical hazard analysis that supported the 480-minute breakthrough time in the Chemical Hygiene Plan. In order to provide for review of hazard analyses and ensure those analyses are accurate and retrievable, ATL should expand its hazard analysis process to include all supporting analyses that contribute to controls contained or used in work activities.

Opportunity for Improvement: ATL should expand its hazard analysis process to include all supporting documents that contribute to controls contained or used in work activities.

ATL continues to utilize the knowledgeable workforce in developing and reviewing work documents. There were many examples, as offered by interviewees, of cooperative efforts between the document developer and the user to achieve the highest degree of safety possible. Procedure development includes validation methods to test procedure usability, correctness, and compatibility with equipment or systems. During a prejob briefing for the Organic Chemistry

work group, the Team observed discussion about previous lessons learned related to the performance of work in its area. This dialogue provided an excellent example of using its lessons learned program. The ATL Lessons Learned Program helps workers avoid repeating mistakes of others and promotes good work practices that improve the safety, quality, and efficiency of analytical operations, highlights a good work practice or innovative approach, and/or prevents the recurrence of an adverse event.

ATL performs ongoing analyses of events in accordance with the Occurrence Reporting and Processing of Operations information procedures. Reports are based on analysis of both reportable and nonreportable events. Safety and health-related issues that require management review, corrective action, and/or trending, such as VPP Champions/SAF*T issues, are entered into CAMPATS. The corrective actions management team performs periodic trend analyses. These trend analyses are reviewed by management for possible process improvements. As an example of how these processes are performing effectively, the Team reviewed ATL actions to date in response to an event in Room 1P-1 where radiological survey media are evaluated. In that case, several employees detected an odor while placing planchets in a counting machine for radioactivity. The chemical analysis of the sample extracts has been completed, but the existence of hazardous components had not yet been determined. ATL's approach has been methodical and appropriate to determine the cause and ensure workers are protected.

Conclusion

ATL continues to use established programs that identify, evaluate, and mitigate hazards for new processes, procedures, material, facilities, or modified equipment before, during, and after use or operation. Programs that were effective in 2008 continue to remain effective at the time of this review. ATL meets all the requirements of the Worksite Analysis tenet of DOE-VPP.

VI. HAZARD PREVENTION AND CONTROL

Once hazards have been identified and analyzed, they must be eliminated (by substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, and/or PPE). Equipment maintenance, PPE, processes to ensure compliance with requirements, and emergency preparedness must also be implemented where necessary. Safety rules and work procedures must be developed, communicated, and understood by supervisors and employees and must be followed by everyone in the workplace to prevent mishaps or control their frequency and/or severity.

ATL's safety and health rules are defined by the ATL Worker Safety and Health Program, the Integrated Safety Management System (ISMS), and the ATL Safety and Health Policy. Each employee is expected to take ownership for his/her personal safety, as well as for the safety of those with whom they work. Every employee is expected to follow the Master Safety Rules as described by ATL's program. The Master Safety Rules are communicated to all employees through posting in the workplace, management reinforcement, the required reading program, and the ATL Web site.

With very few exceptions, ATL work is low risk and involves the use of routine, analytical chemistry methods documented as controlled procedures. The analytical procedures are reviewed and released to ensure hazards are identified and appropriate controls are implemented. This review, among other things, includes the new Hazard Analysis Process, including the Laboratory Addendum, Radiological Screening Form (RSF), a chemical compatibility review, waste planning checklist, qualification/training requirements, procedure validation, and management approval. RSF determines the appropriate level of radiological risk (low, medium, or high) to perform radiological work planning and facilitate the correct set of radiological controls. Selection of preventive controls were appropriate for the complexity and risk involved with job planning and work evolutions observed by the Team. Personnel involved with planning and prejob briefings continue to engage workers in discussions on ways to prevent or mitigate hazards anticipated at work locations.

ATL utilizes engineered controls extensively throughout its Laboratory operations. In order to minimize worker exposure, prevent the spreading of contamination, and reduce the need for additional PPE, engineered controls, such as fume hoods, gloveboxes, and hot cells, are used. In addition, exposure is limited administratively by performing work to specifically developed and reviewed procedures during Laboratory operations. Fume hoods are used extensively and their performance closely monitored as they represent the predominant engineered control for analytical work. Discussions with safety personnel indicated that evaluations of fume hoods included monitoring of airflow at the face, periodic airflow measurements, visual evaluations of airflow in the hood via carbon dioxide (smoke), and monitoring of hood housekeeping to assure material/equipment inside the hood was not affecting the ability of the hood to perform its function.

After considering substitution, selecting engineered controls, and implementing administrative controls, the use of PPE is the final protection level to protect employees from potential health and safety hazards. PPE equipment in the Laboratory, at a minimum, includes safety eyewear

with side shields, laboratory coat, substantial footwear with shoe covers, and a pair of latex or nitrile gloves. These are required by all personnel when in the Laboratory, including visitors. When the Radiological Work Permit (RWP) requires, the laboratory coat will be replaced with one or two pairs of coveralls and additional gloves, foot covers, head covers, and as the RWP or procedure requires, respiratory protection. As described in the 2008 review, the Team concluded that ATL is consistent and utilizes effective controls, including the appropriate use of PPE.

There were no observed issues during this review regarding the Radiation Protection Program, Emergency Management Program, Medical Services provider, or ATS support.

Conclusion

ATL meets the elements of the Hazard Prevention and Control tenet by empowering the workforce to take ownership of all facets of hazard prevention and control. All hazards are appropriately controlled through the hierarchy of substitution, engineering controls, administrative controls, and PPE as a last resort. Supervisors and workers actively engage in dialogue to improve, ensure, and verify that hazard prevention and control is effective. ATL meets all the requirements of the Hazard Prevention and Control tenet of DOE-VPP.

VII. SAFETY AND HEALTH TRAINING

Managers, supervisors, and employees must know and understand the policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety must ensure that responsibilities are understood, that personnel recognize hazards they may encounter, and they are capable of acting in accordance with management expectations and approved procedures.

Training is an essential component to the mission of ATL. Personnel are routinely exposed to hazardous conditions in the office and laboratory environments. Formal classroom training, required reading, and on-the-job training are among the tools used by ATL to minimize the potential for incidents.

Interviews with ATL personnel indicate their training continues to be comprehensive and adequate for the work they perform.

ATL has identified many of their new workers receive training that is not applicable to their specific job duties. This delays their integration into the ATL workforce and may distract or diminish their attention to their job. As a training improvement initiative, ATL is considering tailoring Hanford General Employee Training specifically for the ATL workforce. This will provide more specific information needed by the laboratory workers to better prepare them for their unique work.

ATL maintains its workers training records, and WRPS provides the electronic tool for use in the maintenance of those records. The WRPS training organization maintains a Web site used for employee training, qualification, and proficiency confirmation. A standard report is generated that includes each student's name, Hanford (user) Identification Number, courses completed, and expiration dates (as applicable) for those courses. Training attendance and course completion information is downloaded nightly from PeopleSoft® into the Integrated Training Electronic Matrix with record information available to the appropriate ATL personnel and organizations that have a need-to-know. Additionally, hardcopy training records are maintained in Central Files. Training records are archived and stored in designated records retention areas on a quarterly basis according to the approved Record Inventory Disposition Schedule. All workers, supervisors, and managers interviewed were aware of their training needs and requirements, and all training was current, indicating the interface between ATL and WRPS is effective. There were no observed discrepancies or major changes to training noted on this review since the 2008 VPP review.

Conclusion

Safety and health training methods remain effective in addressing the hazards associated with a nonreactor, hazard category 3 nuclear facility, tasked to provide laboratory analyses, technical analytical development support, and chemistry services for environmental, waste, and process facility operations. The ATL safety and health training program continues to ensure that responsibilities are understood, that personnel recognize hazards they may encounter, and can perform their duties in a safe and reliable manner in accordance with management expectations

and approved procedures. ATL continues to meet all requirements of the Safety and Health Training tenet of DOE-VPP.

VIII. CONCLUSIONS

ATL has built a safety culture that goes well beyond the minimum mandated ISMS requirements. The climate at ATL is one of manager and employee teamwork with equal involvement, participation, and ownership of everyone's safety across the Company. Managers and workers are committed to safety excellence and continuous improvement. ATL has built a manager-supported, worker-driven, safety culture, which embodies the tenets of DOE-VPP. Workers are clearly involved in the safety culture that continues to improve at ATL. The new process for Hazard Analysis should provide the necessary improvements to ensure that the rationale for control selection is institutionalized for the entire workforce. ATL continues to employ the hierarchy of controls that eliminate or mitigate identified hazards at the Laboratory. The training program continues to meet the expectations of a Star participant. As a result, the Team is recommending that ATL continue to participate in DOE-VPP as a Star site.

Appendix A: Onsite VPP Assessment Team Roster

Management

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