

**Office of Health, Safety and Security
Follow-up Review of the
Hanford Site Chronic Beryllium Disease
Prevention Program**



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**Office of Safety and Emergency Management Evaluations
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1.0 PURPOSE

At the request of the managers of the U.S. Department of Energy (DOE) Richland Operations Office (RL) and Office of River Protection (ORP), the Office of Safety and Emergency Management Evaluations, within the Office of Health, Safety and Security (HSS), performed a follow-up review of corrective actions taken to improve the Hanford Site chronic beryllium disease prevention program (CBDPP). The purpose of the review was to provide RL, ORP, and site contractor management with a mid-point assessment of corrective actions taken in response to the 2010 HSS inspection of the Hanford Site CBDPP and to provide site management with recommendations for further improving the program.

2.0 BACKGROUND

HSS conducted an inspection of the Hanford Site CBDPP in April and May of 2010 at the request of the Assistant Secretary for Environmental Management (EM). The 2010 HSS inspection identified a number of deficiencies in the content and implementation of the CBDPP. At EM's direction, Hanford Site management identified interim actions for all contractors to implement; these interim actions were completed following the HSS inspection. In November 2010, Hanford Site management determined that the approach lacked a common vision and alignment. As a result, a "systems approach to consensus" was developed to place more emphasis on the quality of products and consensus approaches to issue resolution, and less emphasis on schedules. This approach was approved by EM in January 2011. The managers of RL and ORP requested that HSS return to the Hanford Site to assess the revised corrective action process and to provide feedback regarding the extent to which these actions are responsive to the findings and opportunities for improvement identified by the inspection.

3.0 SCOPE

The follow-up review was performed April 18-21, 2011, by a team of HSS personnel, as listed in Appendix A. The HSS team met with managers, technical staff, and workers; reviewed records and documents; and observed beryllium team meetings and work activities to assess the effectiveness of interim corrective actions being implemented by the various Hanford Site contractors. The HSS team also met with selected Hanford Site stakeholders to gather their perspectives, including representatives of the Hanford Atomic Metal Trades Council (HAMTC), the Beryllium Awareness Group (BAG), the Hanford CBDPP Committee, and the Hanford Advisory Board (HAB) Safety Committee.

The HSS team focused on assessing direction provided by RL and ORP and corrective actions taken and planned by four Hanford Site contractors: Hanford Mission Support Alliance (MSA), CH2M-Hill Plateau Remediation Company (CHPRC), Washington Closure Hanford (WCH), and Washington River Protection Solutions (WRPS).

4.0 RESULTS

4.1 Corrective Actions by DOE

EM and its site organizations, RL and ORP, have acknowledged the need to strengthen the identification and control of beryllium hazards at the Hanford Site and are providing the leadership necessary to accomplish needed changes. EM provided clear expectations for corrective actions and the necessary

support to RL and ORP for meeting these expectations. RL and ORP directed their contractors to take appropriate actions to address the findings and opportunities for improvement identified in the 2010 HSS inspection report and have increased support and oversight to ensure effective implementation. EM has provided a facilitator to help managers and stakeholders reach consensus on steps needed to achieve success, and site offices have adjusted schedules to ensure that the products produced are of high quality and, when complete, will result in a “best in class” beryllium program.

RL and ORP have worked with site contractors and stakeholders to develop a Hanford Site Beryllium Corrective Action Plan (CAP), which describes actions to improve the sitewide CBDPP. The BAG and HAMTEC members have continued to support the efforts and work in partnership with site organizations including participation on sub team development efforts, all hands meetings, and CAP development; the BAG and HAMTEC efforts are notable and have contributed to unprecedented cooperation in the consensus process. The consensus-building process enables DOE, site contractors, HAMTC, and the BAG to work together effectively to achieve their common objective of ensuring the health of the Hanford workforce. The Beryllium CAP defines needed CBDPP changes to work products, establishes a process for developing these products, assigns the development tasks to product teams (consisting of DOE, contractor, HAMTC, and BAG representatives), and prioritizes and schedules the work.

RL and ORP and the EM facilitator provided the HSS team with briefings on the Hanford CAP team’s effort to establish a product development process to meet Beryllium CAP deliverables. Using a systems approach to reach consensus, the CAP team was able to develop a process that used integrated teams to develop, validate, and reach consensus on the Beryllium CAP products that were necessary to implement the CBDPP. Following that briefing, the HSS team observed an actual 60% product development presentation for the site facility assessment process. The meeting was well attended and managed by the facilitator. The process allowed for an orderly presentation of the facility assessment product and ample time for questions, concerns, and feedback from all members in attendance. The product team responded to questions and identified actions that needed further development before the 90% presentation would be scheduled. Representatives from RL, ORP, contractor organizations, and stakeholder organizations, including HAMTC and the BAG, indicated that the corrective action process provided all parties with a sense of ownership for the CBDPP products that are under development. Based on the observed meetings, the HSS team agreed that the process is working well to promote effective interactions and develop consensus solutions. The products produced to date and the work products planned as part of the Beryllium CAP are responsive to the findings and opportunities for improvement identified in the 2010 HSS inspection report

The revised Beryllium CAP is in an early stage of implementation. No work products have been completed, and the progress reported by the 15 product teams varies. However, prioritization of actions is appropriately focused on facility assessments and the beryllium work permit (BWP) process, which are essential in controlling exposures to beryllium. The two teams associated with these areas have reported the most progress (60 percent). Hanford Site managers and stakeholders expressed concern about the time required to implement the Beryllium CAP, but most expect the pace of work to increase as the product teams gain experience with the process.

RL has established an Independent Beryllium Oversight Team (IBOT) to oversee implementation of the sitewide CBDPP. The IBOT reports to the RL Quality Assurance Manager, the RL Be project lead, and the ORP Be project lead, and is staffed by MSA personnel with industrial hygiene and medical expertise. The HSS team met with IBOT members and discussed IBOT activities with other stakeholder organizations. The members are technically competent in their areas of expertise and have earned the trust and respect of HAMTC and BAG members.

Oversight and support by the IBOT will be particularly important until the CBDPP has been revised pursuant to the Beryllium CAP. The HSS team noted a tendency of site CAP Teams to assign duties and responsibilities to the IBOT and that such assignments could reduce the capability of IBOT members to provide needed oversight and support as directed by RL. The HSS team also noted that a recent IBOT surveillance of beryllium controls at the Hanford Plutonium Finishing Plant (PFP) identified a number of deficiencies that warrant additional review.

The HSS team met separately with members of HAMTC and the HAB Safety Committee and also attended a meeting of the BAG. Significant progress has been made in gaining mutual trust and respect between stakeholders and contractor management. Most HAMTC and BAG members were supportive and optimistic regarding the Hanford Site Beryllium CAP. However, some members of these stakeholder organizations expressed concerns that indicated a continuing distrust of contractor management, timeliness of beryllium corrective actions, and frustrations with the process for obtaining medical assistance.

The team attended a CBDPP Committee meeting and observed that the committee is actively engaged in initiatives to improve the Beryllium CAP process and is addressing questions and concerns regarding the CBDPP. Several new committee members have joined the group, and preparations are being made to incorporate approved changes into the CBDPP. Members of the HAB Safety Committee reported that communications had improved and that the RL project lead was keeping them informed of CBDPP improvement actions.

4.2 Corrective Actions by Hanford Mission Support Alliance

MSA has been working to address the issues and opportunities for improvement identified in the 2010 HSS review of the site CBDPP. In addition, MSA has completed the interim actions directed by RL, which addressed facility assessments, characterization, sampling, and training issues identified during the 2010 HSS inspection.

MSA is responsible for approximately 240 buildings and/or structures throughout the Hanford reservation. However, only a small number of those facilities impact MSA employees. In compliance with RL's interim beryllium control instructions, MSA again reviewed seven facility assessments and sampled each occupied facility to verify that current facility postings were accurate and that no changes to access requirements were needed. The environment, safety, and health (ES&H) staff was actively engaged in the revised beryllium training sessions provided to all Hanford and ORP employees and worked with RL to coordinate the all-employee meetings that discussed changes in the site's CBDPP process.

MSA is actively engaged in the revised Hanford beryllium corrective action process. Staff members from the ES&H organization are involved with CAP-related products, such as the facility assessment process, characterization, data management, medical determinations, and training. Two MSA personnel are members of the CBDPP Committee and are working on methods to support a change control process for the current CBDPP, which will be used to address ongoing revisions from the CAP teams that would modify current CBDPP practices. MSA is also assisting RL by developing communication materials and training modules and has provided staff to support independent reviews of beryllium program activities.

MSA is also responsible for maintaining site service contracts. When concerns were raised about potential beryllium contamination in elevator electrical switch components, MSA conducted a thorough beryllium baseline assessment for all site elevators. One brand of elevator was found to have beryllium alloy components and was effectively remediated. In addition, MSA provided environmental sampling results from adjacent facilities before and after multiple demolition projects to assure employees that

hazardous dust from demolition projects was not infiltrating into occupied buildings. Sampling results after demolition showed that beryllium, silica, lead, arsenic, and other materials were not found in significant quantities, and sampling results were routinely posted on the MSA web site.

At the Waste Sampling and Characterization Facility (WSCF) analytical laboratory, the HSS team reviewed a typical industrial hygiene sampling plan for beryllium workers, observed actual sampling methods, and interviewed workers about recent changes in the Hanford beryllium medical surveillance program for laboratory workers at WSCF. The resident industrial hygiene and laboratory staff members were aware of the beryllium program enhancements, and no deficiencies or concerns were identified. Previous samples in the beryllium processing areas have not detected any beryllium contamination. In addition, a routine sampling program was established to verify the effectiveness of control techniques.

MSA ES&H managers have been actively engaged in resolving issues and concerns with their loaned labor pool personnel who may have medical restrictions associated with CBD or need special clearances and/or training for specific projects. MSA managers have been advised to verify the employee job task analysis (EJTA) form for each employee to ensure that the information is current and accurate. Managers are also required to verify the actual work scopes for each employee before making assignments and to understand the requirements necessary for each job assignment. MSA is working with other site data management teams to build a data warehouse that can be used to access real-time information on training, medical, and EJTA status to ensure that workers are qualified to perform work assignments before they are dispatched to specific work locations.

4.3 Corrective Actions by CH2M-Hill Plateau Remediation Company

CHPRC has completed interim actions to address the findings and opportunities for improvement identified by the 2010 HSS inspection of the Hanford CBDPP, including those specified in an RL letter dated May 18, 2010, and a contract amendment issued October 8, 2010. Actions taken to date include performing gap analysis to compare current beryllium controls with CBDPP requirements, developing a plan and schedule for closing identified gaps, posting beryllium areas in accordance with CBDPP requirements, completing characterization sampling in active buildings, providing additional training to beryllium workers and beryllium-affected workers, monitoring and counseling beryllium-affected workers in accordance with the CBDPP, changing beryllium sampling protocols and investigation levels, and updating the Hanford Beryllium website. Additionally, the interim corrective action resulted in supervisors, planners, and persons in charge involved with beryllium work receiving training, including beryllium worker training and a new beryllium course designed by the Hazardous Materials Management and Emergency Response (HAMMER) facility specifically for persons in charge, planners, supervisors, and managers. CHPRC is also actively participating in sitewide initiatives to strengthen the Hanford CBDPP, including leading efforts to improve the processes for assessing and characterizing facilities. Members of the HAMTC and the BAG are actively engaged in developing these processes.

CHPRC is conducting validation sampling to confirm that facilities that have been declared beryllium-clean are actually free of beryllium contamination. The sampling is being conducted pursuant to interim actions specified in an October 2010 contract amendment. The HSS team observed validation sampling of two beryllium-clean buildings (2736ZC and 2731ZA) at the PFP to assess sampling techniques and compliance with the interim license conditions. A pre-job briefing was conducted before sampling began, and a detailed, site-specific sampling plan was provided to the industrial hygienist who performed the sampling. The sampling plan was consistent with interim actions specified by contract, and sampling practices were in accordance with this plan. Sampling was observed by the PFP Safety and Health Manager, who had knowledge of work performed in the buildings. Samples were appropriately collected from areas considered more likely to be contaminated, and wipe samples were taken from the areas where bulk samples had been collected. The current sampling program does not require that individuals with

knowledge of work performed in a facility be involved in the development of sampling plans. The lack of worker involvement in the sampling may diminish its effectiveness.

CHPRC has properly posted beryllium facilities as required by the CBDPP. The HSS team reviewed facility assessment records to identify facilities that contained beryllium controlled areas and verified that selected facilities (Buildings 105KW, 209E, 202A, and 284W) were properly posted as beryllium facilities.

4.4 Corrective Actions by Washington Closure Hanford

In support of the RL river corridor closure project, WCH has taken actions on the interim actions identified in a June 2010 letter of direction (calling for WCH to work with RL to develop an integrated CAP) and a contract modification (issued as Modification 218, September 2010, which directed WCH to perform actions related to the Hanford Site CBDPP). The actions and status are discussed below.

WCH completed implementation of facility-specific posting recommendations contained in the 2010 HSS inspection report, including posting/controlling buildings that are awaiting characterization sampling. In September 2010, WCH facility directors compiled a list of facilities and verified that posting was complete in each of these facilities.

All WCH supervisors, planners, and persons in charge who were involved with work activities involving a BWP were required to complete, and have completed, the existing beryllium worker training course and the newly developed persons in charge, planners, supervisors, and managers training. Currently, training reports for these individuals and qualification cards are used to confirm that training is current and that workers assigned to beryllium work activities are qualified.

WCH issued a directive in the form of a standing order (#SO-SITE-2010-004 rev4, dated September 20, 2010) to all planning, industrial hygiene, and supervisory personnel. The directive indicated that previously published lists of beryllium contaminated or potentially contaminated buildings are not to be used as a basis for work planning without confirming the buildings' current classification and status with the WCH beryllium program subject matter expert or designee.

WCH also revised its sampling protocol through the same directive (#SO-SITE-2010-004 rev4, dated September 20, 2010), which requires that characterization samples be collected using wipe samples when no dust accumulation is visible and by collection of bulk samples when dust is visible. The bulk and wipe sample results must be evaluated against the revised criteria. The standing order also provides the revised acceptance criteria and additional instructions. These included instructions to investigate results that meet or exceed $0.1 \mu\text{g}/100 \text{ cm}^2$ for a wipe sample or 1 ppm for a bulk sample per the National Institute for Occupational Safety and Health (NIOSH) 7300 series methodology; identify the extent of potential beryllium contamination; provide notification of IBOT requirements; and follow up with re-sampling and additional sampling requirements to meet the interim actions and compliance with the requirements of the sitewide CBDPP.

WCH also initiated work to address corrective actions assigned to them in the draft document "Corrective Actions for Hanford Site Chronic Beryllium Disease Prevention Program." WCH used a project management approach to implementation, including assignment of a project manager, a technical manager, a project controls manager, points of contact (POCs) for each of the major projects, dedicated certified industrial hygienists, a dedicated industrial hygiene technician supervisor, and a team of industrial hygiene technicians. WCH developed an internal plan and schedule that is maintained through the WCH plan-of-the-week process that includes daily team meetings and provides support to the Beryllium CAP product team.

WCH has instituted interim processes and, in some cases, draft procedures (pending issuance of the various products from the respective beryllium CAP product teams) that include guidance for validation sampling and characterization sampling. WCH has also conducted facility/mobile office and Conex box verification campaigns, as well as a special sampling campaign for electrical components, including development of a sampling strategy and sampling plans. The job-specific BWPs in use at the time of this review were found to be an improvement over the more general BWPs that had been used in the past. Further improvement is expected to occur when the BWP work product, which is being developed pursuant to the Beryllium CAP, is issued and used. Other areas where implementation changes will be needed include facility designations – specifically, the product team’s recommendation for the creation of a “beryllium suspect facility” designation and requisite screening tool. These may cause reevaluation of facilities currently assumed to be cleared or otherwise designated. Further refinement of WCH programs will also be necessary as the Beryllium CAP team products are issued. WCH is actively involved in the sitewide processes for developing and implementing these refinements.

Work observations by the HSS team verified that pre-job briefings were comprehensive and that systems to verify worker status and training completion were sufficient. With some minor exceptions (e.g., one individual was observed handling personal items prior to wet-wiping hands and face), donning and doffing of radiological and BWP-required personal protective equipment followed good radiation control and industrial hygiene practices. However, the placement and use of wet wipes earlier in the decontamination line would further reduce the potential for contamination.

During interviews, safety and health professional staff indicated their commitment to institutionalizing interim guidance to ensure program consistency and improve the industrial hygiene technical basis. HSS’s review indicated that routine facility surveys were being conducted in a timely manner and that the survey frequencies (daily, weekly, and monthly) appeared to be appropriately risk-based. One disparity that was observed and discussed with WCH supervision related to the designation of a briefing area on a survey sheet; this area is also routinely used as a break area (including an area for food consumption); this type of use should be considered in determining the survey frequency. The contractor accepted HSS’s observations and comments and plans to take action to further improve the beryllium protection programs.

4.5 Corrective Actions by Washington River Protection Solutions

On September 7, 2010, ORP directed WRPS to implement the interim actions identified by the HSS review of the Hanford Site CBDPP. All of these interim actions have been completed.

The first interim action resulted in a review of facility-specific postings to implement the related recommendations contained in the HSS report, including postings in buildings that were awaiting characterization sampling. Eight beryllium controlled facilities (BCFs) were identified and posted. Three beryllium controlled items, including beryllium labeled gang boxes, beryllium labeled tool boxes, and vent and balance photometers, were identified and controlled. The second interim corrective action resulted in supervisors, planners, and persons in charge involved with beryllium work receiving training, including beryllium worker training and a new beryllium course designed by the HAMMER facility specifically for persons in charge, planners, supervisors, and managers. The third interim corrective action resulted in a revision and update to the WRPS beryllium website listing beryllium contaminated or potentially contaminated buildings and a directive to confirm current classifications with the WRPS subject matter experts before performing work. The fourth corrective action resulted in a revision to the WRPS beryllium sampling protocol to require wipe samples to be collected where bulk samples had been collected if there was no visibly accumulated dust. The fifth interim corrective action resulted in additional revisions to the beryllium sampling protocols to include an investigation of all beryllium

survey results in excess of the specified criteria, notification of the IBOT when these levels were exceeded, and additional criteria for re-sampling and declaring an area as being beryllium cleared, based on using the geometric mean of sampling results. The final interim corrective action was to initiate work to address the 75 corrective actions assigned to WRPS in the draft CAP in response to the 2010 HSS beryllium inspection report. Each of these six corrective actions has resulted in noticeable improvements to the WRPS beryllium program.

In addition to completing the beryllium program interim corrective actions, WRPS has been proactively engaged in improving the WRPS beryllium program and in supporting the sitewide Hanford beryllium improvement project, as discussed below.

With respect to beryllium sampling, WRPS has completed sampling in all 46 targeted buildings and revised facility assessments based on sampling information. Sampling has also been partially conducted for other suspect areas, including electrical switchgear. As a new activity, beryllium air sampling within the tanks farms has commenced to determine whether beryllium is a measurable source in the workplace, even though the Beryllium Rule is not clear whether the 0.1% limit for beryllium control applies to tank solutions; this activity is a change from the WRPS approach to tank waste at the time of the 2010 HSS inspection. Beryllium air sampling is also included during activities that have a high potential for disturbing waste.

WRPS has posted facilities not previously posted as beryllium facilities and is routinely controlling work under BWPs; this is in contrast to the 2010 HSS inspection, where BWPs were not in routine use. WRPS is also developing an approach to posting and controlling tank farm facilities using a radiological-beryllium ratio based on actual tank sampling data for both radiological and beryllium constituents.

Considerable efforts have been directed at beryllium in the 222S laboratories since the 2010 HSS inspection. For example, additional beryllium sampling has been conducted within the 222S labs, the issue of the potential for beryllium in laboratory hoods has been resolved, three beryllium controlled areas have been identified and posted, and the 222S labs are currently listed as one of the eight tank operating contractor (TOC) BCFs.

Efforts to train workers and communicate beryllium issues within the TOC facilities have improved. As indicated in the interim actions, beryllium worker training and training for persons in charge, supervisors, and work planners were initiated and now include over 200 WRPS workers and supervisors. The WRPS beryllium website, which contained outdated information at the time of the 2010 HSS inspection, has been updated and is kept current with changing beryllium plant conditions. The website also includes additional and more detailed beryllium information for workers, managers, and planners that was not previously available. The WRPS beryllium website is now more accessible to workers. In addition, an all-hands beryllium meeting was conducted with participation by beryllium affected workers, the onsite medical provider, members of the BAG, and CBDPP members.

WRPS management involvement in the sitewide beryllium program activities and senior management's focus on beryllium issues at the tank farms has increased. For example, WRPS beryllium program updates on such topics as facility characterization, sampling, listing of BCFs, and web page development are now presented to the Executive Safety Review Board (a group of senior-level managers). Weekly updates of beryllium program status are provided to the Environment, Safety, Health, and Quality Assurance Manager for presentation to the senior staff plan of the week. In addition, the WRPS Vice President for Safety and Health attends the monthly meeting of vice presidents to discuss beryllium issues. Routine attendance and support for sitewide beryllium program development products now include an industrial hygiene professional and BAG/bargaining unit members.

5.0 CONCLUSIONS AND RECOMMENDATIONS

EM, RL, and ORP have acknowledged the need to strengthen the identification and control of beryllium hazards at the Hanford Site and are providing the leadership necessary to accomplish needed changes. RL and ORP have worked with site contractors and stakeholders to identify interim actions and develop an appropriate Hanford Site Beryllium CAP. All four contractors have taken the interim actions specified by DOE to improve identification and control of beryllium hazards, and all are actively engaged in implementation of the Hanford Site Beryllium CAP. Contractor managers expressed a strong commitment to develop and implement a CBDPP that meets DOE expectations for protecting the health of the Hanford workforce. EM supports the RL and ORP goal of establishing a “best in class” CBDPP, and the collaborative process provides an appropriate method to achieve this. However, many of the individuals with whom the HSS team interfaced, including stakeholders, managers, and workers, expressed their concern that implementation of the actions was not timely. Various individuals indicated that continuous improvement efforts would result in accelerated implementation as the process progresses.

However, some aspects of implementation of the corrective actions could be further improved, as indicated in the HSS recommendations presented below. As with all HSS reviews, recommendations are not intended to be prescriptive or mandatory and are provided for contractor and DOE line management consideration. DOE line management has the responsibility and authority to review and evaluate the recommendations through site issues management processes and accept, reject, or modify them as appropriate, in accordance with site-specific program objectives and priorities.

1. **Emphasize the importance of senior contractor management involvement and concurrence in ongoing changes to the CBDPP and in beryllium product development.** HSS supports the RL ES&H manager’s suggestion that contractor ES&H vice presidents and/or their designees should be present at all 60% and 90% milestone presentations for each beryllium team product. Their continuing involvement would help expedite the completion of the Beryllium CAP process.
2. **Continue to explore ways to expedite the development and implementation of CBDPP products without compromising quality.** The HSS team acknowledged the value of the consensus building approach to development of the beryllium products, but also noted that the process can be lengthy and resource consuming. As a result, the beryllium product development teams should continually seek opportunities for improving the efficiency of product development through lessons learned.
3. **Develop a charter for the IBOT, describing its roles and responsibilities.** The charter should be sufficiently flexible to accommodate new roles and responsibilities for the IBOT as they are identified. The charter should be shared with each of the Hanford contractors so that contractors are aware of the function and limitations of the IBOT. Furthermore, the CAP Teams should refrain from issuing procedures and guidance documents that assign roles and responsibilities to the IBOT that are not explicitly identified in the IBOT charter.
4. **Consider using Facility Representatives, as part of their normal activities in the facilities, to supplement the IBOT for gathering information regarding the implementation of certain CBDPP corrective actions.** The engagement of Facility Representatives in oversight of beryllium program implementation, when performed in conjunction and coordination with the IBOT, can provide another opportunity for RL and ORP to gauge the effectiveness of the new beryllium products in the field, evaluate the effectiveness of pre-job briefings, verify appropriate attention to the requirements in BWPs, and verify training for workers assigned to beryllium controlled areas. To achieve this purpose, additional training for and oversight by FRs would be beneficial.

5. **Consider the use of methods to evaluate the safety culture, such as culture surveys, to better characterize and address attitudes of workers and management.** During meetings and discussions, some members of stakeholder groups raised concerns related to safety culture, most of which were associated with work control and hazard analysis at PFP. Further evaluation of the safety culture could provide useful insights and could lead to further opportunities for improving the safety culture and addressing worker and stakeholder perceptions. Also, site management should consider devoting priority attention to PFP for any efforts to evaluate the safety culture.

6. **Continue to seek opportunities for worker involvement in the implementation of CBDPP.** For example, workers are not currently involved in the development of sampling plans; the current beryllium sampling program does not require that individuals with knowledge of work performed in a facility be involved in developing sampling plans for that facility. However, involving workers knowledgeable of the history of the buildings to be sampled in the review of draft sampling plans could result in the identification of potentially contaminated facility areas that may otherwise have been missed. Also, beryllium issues could be discussed at routine worker meetings at the tank farms.

APPENDIX A
Office of Health, Safety and Security Team Composition

Dates of Review

Onsite Review

April 18-20, 2011

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