



washington **river**
protection solutions



Tank Farms Headspace Sampling

Tank Operations Contract
Chemical **Protection Program Office Weekly Report**
November 3, 2016

1. CHEMICAL PROTECTION PROGRAM OFFICE (CPPO) ACTIVITIES STATUS

Primary CPPO focuses this week were:

- Working with External Affairs on the integration of vapors communication approaches.
- Finalizing the AP Cartridge Testing message mapping and preparing the FAQs for distribution to the website and presentation materials.
- Completing actions validation for the CPPO TVAT Phase 1 and Phase 2 tracking database.
- Supporting information requests from the field.

Two IH Information specialists joined the CPPO team this week. The current CPPO Org Chart is shown in Figure 1.

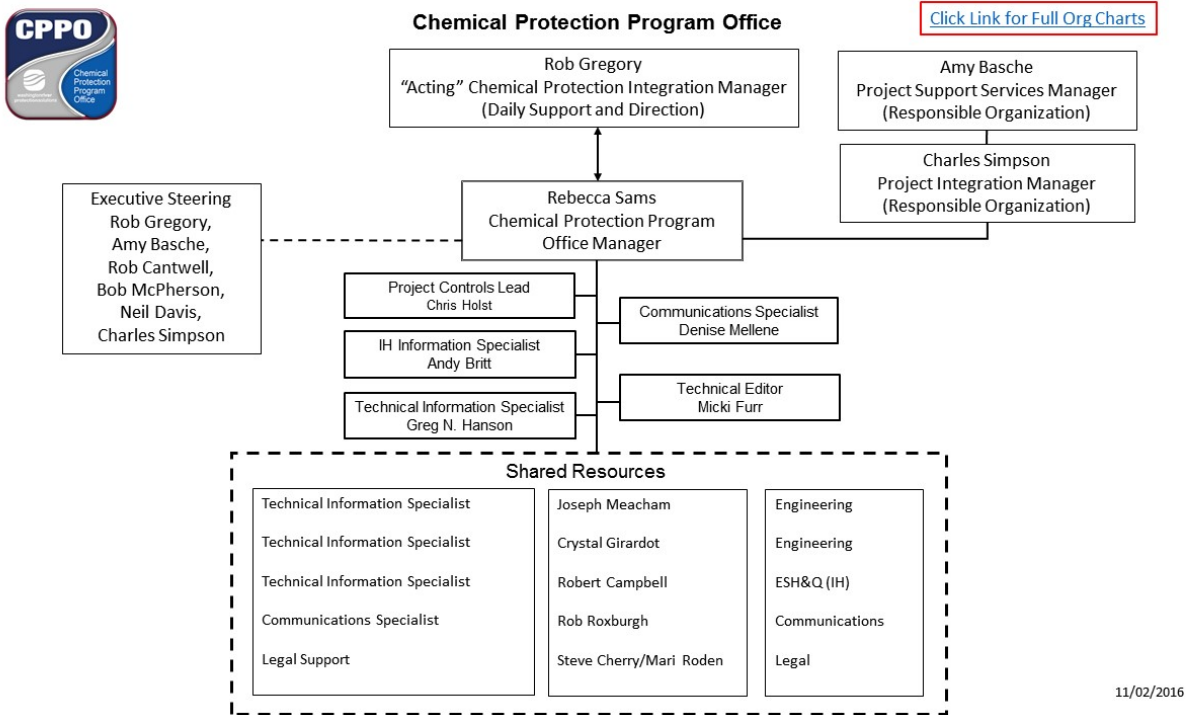


Figure 1. CPPO Organizational Chart, October 31, 2016

CPPO has recommended WRPS start including in each *News from Hanford Vapors* email a link and summary sentence of new Hanfordvapors.com website content that was posted. The basis for this recommendation is to let subscribers know when new vapors related content is being uploaded to the website. CPPO has also recommended to the CVST organizer information be provided at CVST meetings regarding new content posted to the vapors website.

2. CPPO COMMUNICATIONS

Hanford Vapors Usability Focus Groups session was held on 10/18/2016, the focus group feedback was submitted 10/31/2016. The focus group results are being compiled into a report for distribution. Two items were submitted for Safety Start – the announcement of the IH Communication Boards in operation in AP farms change trailer; and a CVST meeting topic list extending an invitation for participation. This was communicated with External Affairs prior to publication.

The vendor, *Cerex Monitoring Solutions* was contacted for additional information in response to a website inquiry. At WRPS' request the vendor will create new product material for the Hanford Vapors website, as the instrument brochures do not provide sufficient technical information.

HanfordVapors.com Posts

[Vapors Weekly Update – October 27](#) (Posted in the News & Updates section)

3. TRACKING/VERIFYING TANK VAPOR ASSESSMENT TEAM (TVAT) COMPLIANCE

Trending information summary to be provided monthly.

4. TVAT PHASE 1 AND PHASE 2 DETAILED STATUS

[Excludes status on TVAT Recommendations 24 – 28 and 31.]

TVAT Recommendations 1 and 9; Headspace Sampling: There are 6 tanks planned to be sampled this FY, samples will be taken for each tank before, during, and after waste disturbing conditions. Tank AW-102 sampling is planned and discussions are currently ongoing for selection of the remainder of the tanks.

TVAT Recommendation 6; IH Personnel Monitor Equipment: A variety of personal sample canisters were tested in a mock up field setting as well as inside and outside AP Farm. The 450 mL canister size paired with the TOV-2 valve was recommended for field deployment. These results were presented at the 10/19/16 CVST meeting. The 222-S laboratory will discuss testing procedures and results at the 11/9/16 CVST meeting.

TVAT Recommendation 8; Dispersion Model Review: Consolidation of the dispersion modeling report has been completed (PNNL-25654, *Atmospheric Dispersion Modeling Tools for Hanford Tank Farms Applications*). A meeting is scheduled to discuss the results of this study with the author.

TVAT Recommendation 10; Review/Update Chemical of Potential Concern (COPC) Listing: The final report from Pacific Northwest National Laboratory (PNNL) has been received (PNNL-25880, *Hanford Tank Vapors COPCs Update*). Message mapping of this report is currently being developed.

TVAT Recommendations 11-13, 15, 17-18; PNNL Health Study Roadmap: The final report from PNNL has been received (PNNL-25790, *State of Knowledge Assessment: COPC/Exposure Limits*). Message mapping of this report is currently being developed.

TVAT Recommendation 21; Rounds and Routines: The IH Programs is creating a schedule for Rounds & Routines implementation as well as identifying IH Program members responsible for drafting the procedures and plans.

TVAT Recommendation 22; Acute Bolus Assessment (RJ Lee mobile lab): RJ Lee Group, Inc. performed seven 1-week area monitoring events, intensive sampling at the AP Farm actively ventilated stack and the A-103 passive breather filter, and monitoring of emissions from the newly installed AP Farm ventilation stack. WRPS-1604060.1 Enclosure 10, Chemical Vapor Initiative, includes the data from four weeks of general area monitoring. A final report is being drafted to incorporate all results. A meeting is planned with the CPPO to tour the RJ Lee mobile lab and discuss FY16 results. A contract is being developed for RJ Lee support to begin daily monitoring in FY17.

TVAT Recommendation 33; Vapor Monitoring Detection System (VMDS): The pilot scale testing of the VMDS is ongoing. The weekly reports on the monitoring system and data interpretation are being prepared and uploaded to the vapors website. For Phase 2 of testing, the set-up and shakedown of components to be utilized are being finalized. Discussions continue for the scope of Phase 2 testing.

TVAT Recommendation 35; Cartridge Testing: The TVAT team has completed the sampling at eight different locations (AP exhauster, SY-102, BY-108, A-101, AZ-702 stack, AX-101, AW stack, and AN stack) to verify the protection capabilities of two air purifying cartridges (Scotts 7422-SC1 single chemical cartridge and 7422 SD1 dual chemical cartridge). Pacific Northwest National Laboratory (PNNL) completed the lab analysis report from the AP exhauster location and a summary of the results was presented at the 10/19/16 CVST meeting. The remainder of the reports are being drafted.

The draft message map of this report was finalized with Projects, IH Programs, and HAMTC safety representatives. A meeting has been scheduled to review the message map with DOE-ORP.

TVAT Recommendations 38-39, 41; Management Commitment: The 10/26/16 CVST meeting discussed IH Rounds & Routines path forward, IH Program parity with RadCon, and provided an update from the CVST Sub-Teams, New Technology and Communications. The next CVST meeting is scheduled for 11/09/16.

OTHER VAPOR ACTIVITIES:

A meeting with the authors on 10/25/16 discussed the conclusions of the final report from PNNL, PNNL-25533 (68592-RPT-001 Rev. 0.0), *Leading Indicator Process Development Report*. The message map for this report is currently being developed. The path forward for this report is being discussed with the VMDS project to ensure future data collected meets both the VMDS Phase 2 and Leading Indicator projects.

Document RPP-RPT-59584, Rev. 0, *WRPS – SCBA Equipment Evaluation*, was issued 11/1/16 which discusses the findings made by the Self-Contained Breathing Apparatus (SCBA) Equipment Evaluation Team (SEET). The SEET was established to evaluate SCBA respiratory equipment currently in use at Tank Farms and identified possible new market ready SCBAs for future use. Recommendations were made by the SEET to perform field testing for the top four SCBAs that were evaluated.

IH Programs

Finalizing the transition of completed Phase 1 items to IH programs from Projects is ongoing Attachment-A shows the TVAT items transitioned to IH Programs. A priority list of the TVAT items to implement is being created. The FY17 TVAT scope IH program needs are being verified.

5. ATTACHMENT - A

TVAT Project Transition Items

The following items have been completed by Phase 1 of the TVAT project and are turned over to IH Programs for implementation and/or further evaluation. Documentation to support the project items is available via shared folder and also in the Implementation Plan for Hanford Tank Vapor Assessment Results and Recommendations Report (Mega Report).

TVAT #	TVAT Recommendation	Actions Taken	Supporting Documents
21	Periodic follow-up monitoring be conducted and documented to provide needed data for the industrial hygienist to verify that worker chronic exposures have not changed with time. (IH Rounds & Routines)	Initiated a strategy for an enhanced IH monitoring routine for the tank farms. This included developing and implementing additional routine processes to identify and validate chemical vapor controls and fugitive emission points in a pilot program.	<ul style="list-style-type: none"> TFC-MD-117 Draft IHT routine procedure
29	Achieve functional parity of the IH program with the radiological control program with respect to worker training and core competencies. (Chem I/II)	Created draft Chemical I/II training program, similar to RAD I/II training.	<ul style="list-style-type: none"> Draft lesson plans, training modules, exams and student manuals for Chemical I/II training
30	Expand general chemical hazard awareness training (CHAT) for tank farm workers to be more consistent with the length and intensity of the radiological-hazard training currently mandated for all site workers. (CHAT)	Revised CHAT to increase worker, supervisor, and management understanding of chemical management practices, specific to the tank farms. Recommendation to update CHAT on annual basis.	<ul style="list-style-type: none"> Draft updated CHAT modules
34	Establish a more effective methodology for designating Vapor Control Zones (VCZs) and Vapor Reduction Zones (VRZs). (VCZ/VRZ Evaluations)	Initiated a comprehensive review and evaluation regarding the establishment, implementation, and maintenance of VCZs and VRZs. Conducted a comprehensive evaluation of air dispersion modeling based on the AIHA Standards to assist in the reevaluation of VCZ and VRZ boundaries.	<ul style="list-style-type: none"> Draft Step instructions Farm evaluations (SmartPlant)
41	Improve the degree of employee involvement in and ultimate acceptance of all teams and programs that are associated with tank farm vapor issues (e.g., PERs, CVST). (Chemical Vapor Manual)	Created outline for chemical vapor guidance manual and recommendations for chemical parity implementation into the work control process. Initiated efforts to develop and formalize a chemical ALARA program to manage and oversee overall improvements for vapors.	<ul style="list-style-type: none"> Draft Chemical Vapor Manual Draft IH Work Permit Procedure and draft IH work Permit
45	Ensure all exposure data is assigned correctly to all members of the Similar Exposure Group. (SEGs)	Performed a review of the existing Similar Exposure Groups (SEGs) basis to ensure proper assignment.	<ul style="list-style-type: none"> Draft SEG evaluation

Share Folder Link Address:

[SDX](#)

Folder/Document List:

- Chemical Vapor Guidance Manual
- Chemical Worker-Contains CHAT initial and CHEM I/II Modules
- Rounds and Routines
- SEGs
- Vapor Control Zone and Vapor Reduction Zones
- Work Control

Issued Applicable Procedures

- TFC-MD-117, "Interim Plan for IH Rounds and Routine Development"
- TFC-PLN-64, "Industrial Hygiene Instrumentation Plan"
- TFC-ESHQ-S_IH-CD-38, "Evaluation and Procurement of Industrial Hygiene Monitoring Instruments"

SmartPlant Documents (OUO)

- TOC-IH-RPT-50002, Respiratory Protection Protocol & Methodology Technical Evaluation – A Farm
- TOC-IH-RPT-50003, Respiratory Protection Protocol & Methodology Technical Evaluation – AP Farm
- TOC-IH-RPT-50004, Respiratory Protection Protocol & Methodology Technical Evaluation – AY Farm
- TOC-IH-RPT-50005, Respiratory Protection Protocol & Methodology Technical Evaluation – B Farm
- TOC-IH-RPT-50006, Respiratory Protection Protocol & Methodology Technical Evaluation – BY Farm
- TOC-IH-RPT-50007, Respiratory Protection Protocol & Methodology Technical Evaluation – S Farm
- TOC-IH-RPT-50008, Respiratory Protection Protocol & Methodology Technical Evaluation – T Farm
- TOC-IH-RPT-50009, Respiratory Protection Protocol & Methodology Technical Evaluation – TY Farm
- TOC-IH-RPT-50010, Respiratory Protection Protocol & Methodology Technical Evaluation – AN Farm

- TOC-IH-RPT-50011, Respiratory Protection Protocol & Methodology Technical Evaluation – AW Farm
- TOC-IH-RPT-50012, Respiratory Protection Protocol & Methodology Technical Evaluation – AZ Farm
- TOC-IH-RPT-50013, Respiratory Protection Protocol & Methodology Technical Evaluation – BX Farm
- TOC-IH-RPT-50014, Respiratory Protection Protocol & Methodology Technical Evaluation – C Farm
- TOC-IH-RPT-50015, Respiratory Protection Protocol & Methodology Technical Evaluation – SY Farm
- TOC-IH-RPT-50016, Respiratory Protection Protocol & Methodology Technical Evaluation – TX Farm
- TOC-IH-RPT-50017, Respiratory Protection Protocol & Methodology Technical Evaluation – U Farm
- TOC-IH-RPT-59065, Respiratory Protection Protocol & Methodology Technical Evaluation – AX Farm

TVAT Project Manager: Paul Gagnon

Signature: Paul A. Gagnon Date: 10/25/16