



washington **river**  
**protection** solutions



*Facility Scan on 242-A Stack, 11/01/2016*

**Tank Operations Contract**  
**Chemical **Protection Program** Office Weekly Report**  
**for the Weeks of December 15 and 22, 2016**

Department of Energy Contract NTE 16-TF-0089

## 1. CHEMICAL PROTECTION PROGRAM OFFICE (CPPO) ACTIVITIES STATUS

Reference to Tank Vapor Assessment Team (TVAT) Phase 2 has been revised to “Hanford Vapors Mitigation.” This change has been made based upon the recognition that vapors management at Hanford has grown beyond a focus on only TVAT recommendations.

The scope determination for the next phase [Fiscal Year (FY) 2017-18] of Hanford Vapors Mitigation activities continues. An integrated project team (IPT) has been formed with participation from both U.S. Department of Energy Office of River Protection (DOE-ORP) and WRPS. The majority of the FY 2017 – FY 2018 Hanford Vapors Mitigation scope has been defined and rough order of magnitude (ROM) costs are developed. The team is refining scope details and addressing identified gaps to ensure budget would fall within funding parameters and to ensure all TVAT, Office of Inspector General (OIG), National Institute for Occupational Safety and Health (NIOSH), and other recommendations will be adequately addressed.

CPPO is supporting the Contractor Assurance Organization with the effort to address the OIG Report (OIG-17-01) recommendation “Take action to input all vapor issues into the WRPS PER system, to ensure adequate tracking, closure, and visibility of corrective actions.” Management has agreed to “take steps to strengthen the tracking and closure of vapor issues using the WRPS PER system” (OIG-17-01). There are 117 actions resulting from TVAT recommendations that are being entered into the problem evaluation request (PER) system as sub-actions within WRPS-PER-2014-0602. CPPO and Contractor Assurance are finalizing the development of actions, actionees, and completion criteria for these actions. Entering of all actions in the PER system will be completed this calendar year.

In the OIG Report (OIG-17-01), OIG has also recommended: “Take steps to improve communication with the workforce about prior proposals to address vapor hazards that have been studied and not acted upon, to explain the rationale for these decisions.” In response, management committed to “summarize prior and ongoing engineering control evaluation reports and to share these with the workforce and the public” (OIG-17-01). CPPO has drafted the summary of engineering controls. This summary is in review and will be posted to the HanfordVapors.com website this calendar year.

## 2. CPPO COMMUNICATIONS

As part of the CPPO vapors communication improvement initiative, a presentation on the vapors management detection system (VMDS) has been provided to managers throughout WRPS. These managers may then provide the vapors related briefing to their staff. CPPO has requested a response when managers use these briefings. This information will be included in the Communication Metric presentations category.

A weekly status meeting was held with Pacific Northwest National Laboratory (PNNL) to discuss Tank Vapors Data Access and Visualization status (i.e., the Phoenix web application project). The goal of this project is to develop a publicly accessible system link within the HanfordVapors.com website that provides context and data from the Tank Waste Information Network System (TWINS) and Site Wide Industrial Hygiene Database (SWIHD).

Three website inquiries are being researched to answer recent inquiries received on the HanfordVapors.com website.

The Fall Lobby Video included a ten minute and thirty-four second informational piece on the Hanford Vapors.com website and the CPPO Mission. The next group of VMDS reports are in the process of being cleared for public release.

The CPPO website content maintenance plan is being drafted. The plan will identify periodic content review, communicating when new posts occur, and turnaround time for posting of information.

### **HanfordVapors.com Posts**

[Vapors Weekly Update – December 7](#)

[New VMDS Pilot-Scale Testing Data Sets](#)

[UV-DOAS Weekly Report 10/05/16 – 10/12/16](#)

## **3. PERFORMANCE TRACKING**

The CPPO office monitors and facilitates WRPS vapors information and communication with the workforce, stakeholders, and community. This communication effort is demonstrated by category in Figure 1 and by further detail in Figure 2.

Figure 1. YTD FY2017 CPPO Communication Lines.

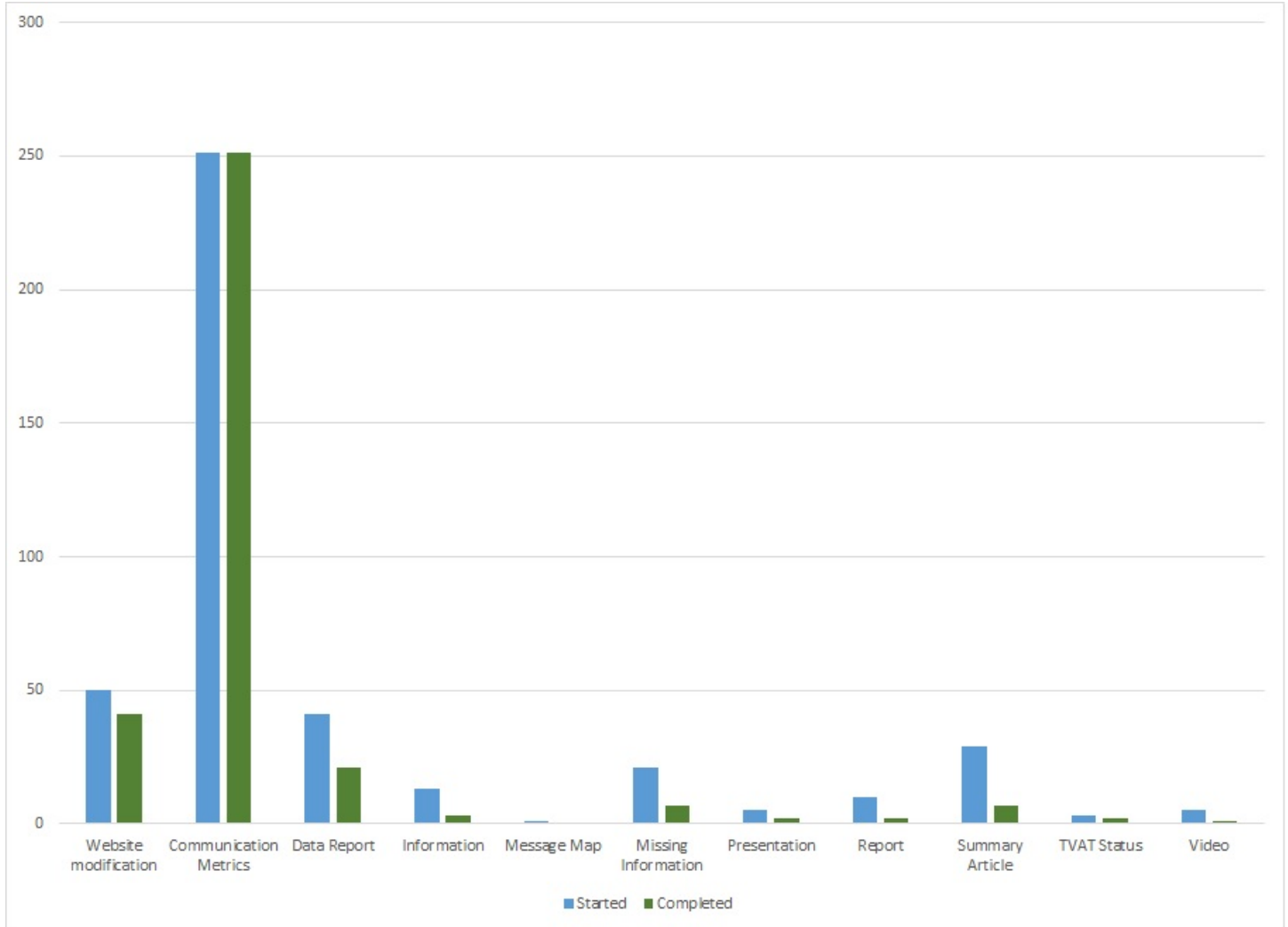


Figure 2. Communications by Category in Further Detail.

Request Type:	Medium	Oct	Nov	Dec	Grand Total
<b>Communication Metrics</b>	All Employee Email Blast	1		1	2
	CPPO Reports & Newsletters	1	4	2	7
	CVST Meeting	1	3	2	6
	CVST SubMeeting	3	1		4
	Email Individual Reply	1			1
	ESH&Q Communications			3	3
	Focus Group - Website	1			1
	Information		1		1
	Meeting/Briefing	38	86	70	194
	SOEN	1	1		2
	Solutions	1	3		4
	Tours	3	8		11
	Vapors Website (External)	4	5		9
	Website Analytics	3	1		4
Website Inquiry - Submitted via website			2	2	
<b>Data Report</b>	Vapors Website (External)	23	9	9	41
<b>Information</b>	CPPO Reports & Newsletters	1			1
	Fact Sheet		1		1
	Individual Email Response/Reply		1		1
	Information			2	2
	Vapors Website (External)		2	1	3
	Website Inquiry - Submitted via website			5	5
<b>Message Map</b>	Vapors Website (External)			1	1
<b>Missing Information</b>	CVST Meeting			1	1
	Focus Group - Website			4	4
	Internal Website	1			1
	Vapors Website (External)	15			15
<b>Presentation</b>	CVST Meeting		1	1	2
	Presentation Internal	1			1
	Safety Start (Tailgate)		1	1	2
<b>Report</b>	CPPO Reports & Newsletters	1			1
	Information	1			1
	Vapors Website (External)	7		1	8
<b>Summary Article</b>	CPPO Reports & Newsletters			1	1
	Solutions		1	1	2
	Vapors Website (External)	17	4	5	26
<b>TVAT Status</b>	CPPO Reports & Newsletters	2			2
	Vapors Website (External)	1			1
<b>Video</b>	Safety Start (Tailgate)		1		1
	Vapors Website (External)	4			4
<b>Website modification</b>	Focus Group - Website			3	3
	Vapors Website (External)	42		5	47
<b>Grand Total</b>		174	134	121	429

#### 4. TVAT PHASE 1 AND PHASE 2 DETAILED STATUS

**TVAT Recommendations 1 and 9; Headspace Sampling:** For FY 2017, headspace sampling is being re-planned after the impacts to the transfer schedule caused by the switch of AP-106 and AW-106. There are only five waste disturbing activities planned so it is critical headspace sampling occurs during these five activities. Stack sampling (AP and 702-AZ) during AY-102 retrieval is being planned and anticipated to start in December.

**TVAT Recommendations 2, 7, 16; Chemical Plating (Aerosol Study):** As reported last week, the Statement of Work (SOW) for FY 2017 work is currently being drafted.

**TVAT Recommendations 3-5; IH Instruments:** No update.

**TVAT Recommendation 6; IH Personnel Monitor Equipment:** As reported last week, the C2Sense draft test plan has been received for FY 2017 testing. The plan is to test some of these ammonia sensors at Hanford conditions (with the AP exhaust stack) using lab support from RJ Lee Group. If viable, these sensors could be worn by workers for real time ammonia monitoring.

**TVAT Recommendation 8; Dispersion Model Review:** The draft SOW is in review for FY 2017 work. A meeting on 12/8/16 discussed plume modeling and what types of models are needed for near, intermediate, and far field predictions.

**TVAT Recommendation 10; Review/Update Chemical of Potential Concern (COPC) Listing:** No update.

**TVAT Recommendations 11-13, 15, 17-18; PNNL Health Study Roadmap:** As reported last week, the contact for FY 2017 work with PNNL has been put in place and a schedule has been drafted.

**TVAT Recommendations 14; Evaluate Medical Surveillance Program:** ORP Action. No status.

**TVAT Recommendations 19, 20; Toxicology Studies:** ORP Action. No status.

**TVAT Recommendation 21; Rounds and Routines:** The draft procedure is currently in the final review cycle.

**TVAT Recommendation 22; Acute Bolus Assessment (RJ Lee Mobile Lab):** As reported last week, the final FY 2016 report has been drafted and is undergoing reviews with WRPS. The FY 2017 contract was placed 12/6/16. The FY 2017 test plan should be out for WRPS review this week. RJ Lee personnel are being briefed on the AY-102 retrieval strategy this week and plan to be out monitoring during retrieval activities starting this weekend.

**TVAT Recommendation 28; Chemical Vapor Guidance Manual:** No update; currently on hold.

**TVAT Recommendations 29, 30; Enhanced Training:** Chem Worker training is on schedule. Tank Farms training is working on scope and module development.

Enhanced Chemical Hazards Awareness Training (CHAT) is on schedule for roll out at the end of January. This training will be used as a supplement while the Chem Worker training modules are developed and rolled out (anticipated summer 2017).

**TVAT Recommendations 32, 36; Bolus Assessment/Medical Stakeholders:** ORP Action. No status.

**TVAT Recommendation 33; Vapor Monitoring Detection System (VMDS):** As reported last week, the weekly VMDS reports are continually being updated and published on the website. The Phase 2 test plan is progressing as planned. The team is working to develop scope and related information for meetings with ORP.

Preparations were made to have equipment online during AY-102 retrieval operations (Open Path Fourier Transform Infrared Spectrometer [OP-FTIR] Multi-path on east and OP-FTIR on west fence lines; Ultraviolet Fourier Transform Infrared Spectrometer [UV-FTIR] on AP Stack, train B; Ultraviolet Differential Optical Absorption Spectrometer [UV-DOAS]; 5 volatile organic chemical [VOC] sensors in AP Farm; 19 NH<sub>3</sub> sensors in AP Farm [15 Gastronics, 4 MeshGuard], 14 NH<sub>3</sub> sensors in A- farm [all MeshGuard]).

**TVAT Recommendation 34; Vapor Control Zones/Vapor Reduction Zones (VCZs/VRZs):** The task team is undergoing a review of the VCZ/VRZ procedures and reports to identify needed procedure changes.

**TVAT Recommendation 35; Cartridge Testing:** Documentation from the third party review of the AP Farm cartridge testing report was received 12/11/16. The report stated that the method used for testing of cartridges and their measured performance was acceptable for the conditions and exposures at the time of testing at the AP Farm exhaust. However, more testing is needed to determine the performance of the cartridges before they can be applied in respiratory protection in the farms.

As reported last week, the report PNNL-26041, *Analysis of Respirator Cartridge Performance Testing on Hanford Tank SY-102* was given to the Hanford Atomic Metal Trades Council (HAMTC) on 12/1/16 to start the third-party review of this report.

Fabrication of the new test jigs are underway to support FY 2017 testing of two different cartridges.

**TVAT Recommendation 37; IH Improvements Tracking:** As reported last week, the schedule of activities is continually being tracked. The 47 TVAT Recommendations are currently being added to the PER system.

**TVAT Recommendations 38-39, 41; Management Commitment:** No update.

**TVAT Recommendation 40; Improve EJTA:** No further actions required.

**TVAT Recommendation 42; Revise Exposure Letter:** No further actions required.

**TVAT Recommendation 43; IH Covello Training:** No update.

**TVAT Recommendation 44; Public Address (PA) System:** As reported last week, the three contracts are underway for support from Mission Support Alliance (MSA), ARES, and Safer. The conceptual design has been finished for location of the speakers and reader boards in all the farms.

Some feedback received on the PA system installed in AP Farm has been that the messages coming from the speakers are not as clear as they should be. The plan is to fix this when the permanent PA system gets installed.

**TVAT Recommendation 45; Lab Support/Determination & Development of Similar Exposure Groups (SEGs):**  
No update; currently on hold.

**TVAT Recommendations 46, 47; Communications:** No update; currently on hold.

#### **OTHER VAPOR ACTIVITIES:**

##### **242-A Ammonia Analyzer Upgrade**

The 242-A Ammonia Analyzer been kicked off to start Phase 1 of upgrades.

##### **242-A Stack Extension**

The 95% design had to be re-started due to an issue with the calculation that was noticed during peer review. The 95% design is expected to be finished in December 2016.

##### **Leading Indicators**

As reported last week, the leading indicator contract has been put in place to continue FY 2017 work.

##### **Abatement Technologies**

Developing down-select criteria to support decision on vapor abatement scope definition for FY 2017.

##### **SCBA Equipment Evaluation**

Field testing of SCBAs during Phase 2 testing in a non-hazardous setting for approximately 2 weeks at the Volpentest HAMMER Federal Training Center was completed 12/07/16. The Phase 2 test report is currently being drafted and is expected to be completed in December 2016.

Certification of existing air-line equipment was completed the week of December 19th. After certification, the crew will begin using air-line during single-shell tank and double-shell tank annulus videos. This activity will serve as a pilot for determining if other projects can effectively utilize air-line systems across tank farms.

##### **AY-102 Retrieval**

The VMDS equipment and Mobile lab was utilized over the weekend to support the AY-102 waste retrieval campaign with no results observed that were unexpected.