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**Tank
 Operations
 Contract
 Chemical
 Protection
 Program
 Office
 Weekly
 Report
 January 18,
 2018**



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The A Farm Exhauster, fabricated in FY2017, is currently located in Blackfoot, Idaho, at the manufacturer's facility. Projects is working on the ducting installation and pad design/installation preceding the exhauster's installation. (Picture courtesy Mark A.) More in [KPP 4](#).

*Tank Operations Contract
 Chemical Protection Program Office Fiscal
 Year 2018, 1st Quarter Summary
 January 12, 2018*

The CPPO's 53rd Weekly Report, the 1st Quarter Summary of FY2018, was published on January 12, 2018.

1. CHEMICAL PROTECTION PROGRAM OFFICE (CPPO) ACTIVITIES STATUS

In coordination with Industrial Hygiene and the ESHQ Chemical Protection Integration Manager, the approach to introducing the new vapors related Industrial Hygiene remedies to the workforce was drafted.

The draft Comprehensive Vapor Action Plan (CVAP) Dashboard with December data has been completed. The overall progress on draft CVAP scope (measuring the performance for all KPPs) is **Meets** where the options for overall ranking are **Exceeds, Meets, Declining, and Adverse**.

The January update of the draft CVAP Action Status Report has been posted to the CPPO intranet site. The updated report provides detailed completion status of each external assessment recommendation.

The CPPO published its 1st Quarter Summary for FY2018 last week. The report was published to HanfordVapors.com website, and can be found [here](#).

CPPO Oversight and Tracking

Communications Metrics Data

THE CPPO NOTEBOOK

The CPPO Notebook is distributed on a weekly basis to aid managers in providing vapor-related information to staff on current topics of interest. Three Notebooks were released in December:

- An overview of the second VMEP report
- An update on the planned NUCON® engineering-scale test, and
- The IH results from the C-105 transfer

The use of the Notebooks is tallied via email 'voting' replies sent in response to the distribution email. Since the Notebook is frequently used several weeks after distribution, the data regarding the utilization of individual editions may change over time (and is reflected in updates to monthly reporting). The data for December, to date, show that an average of 20 managers reported making use of Notebook each week, slightly reduced from the previous month. Utilization of the CPPO Notebooks by subject and week is shown in **Figure 1**. Since the beginning of FY2018, the data shows the Notebooks have been used by WRPS managers to present vapors-related information to the workforce 249 times.

The Notebook material is provided in multiple formats and includes an SME narrated presentation which is also posted to the intranet, available to all WRPS staff. The website traffic statistics identified 263 hits in December, accessing a variety of the Notebook audio files hosted on the WRPS intranet.

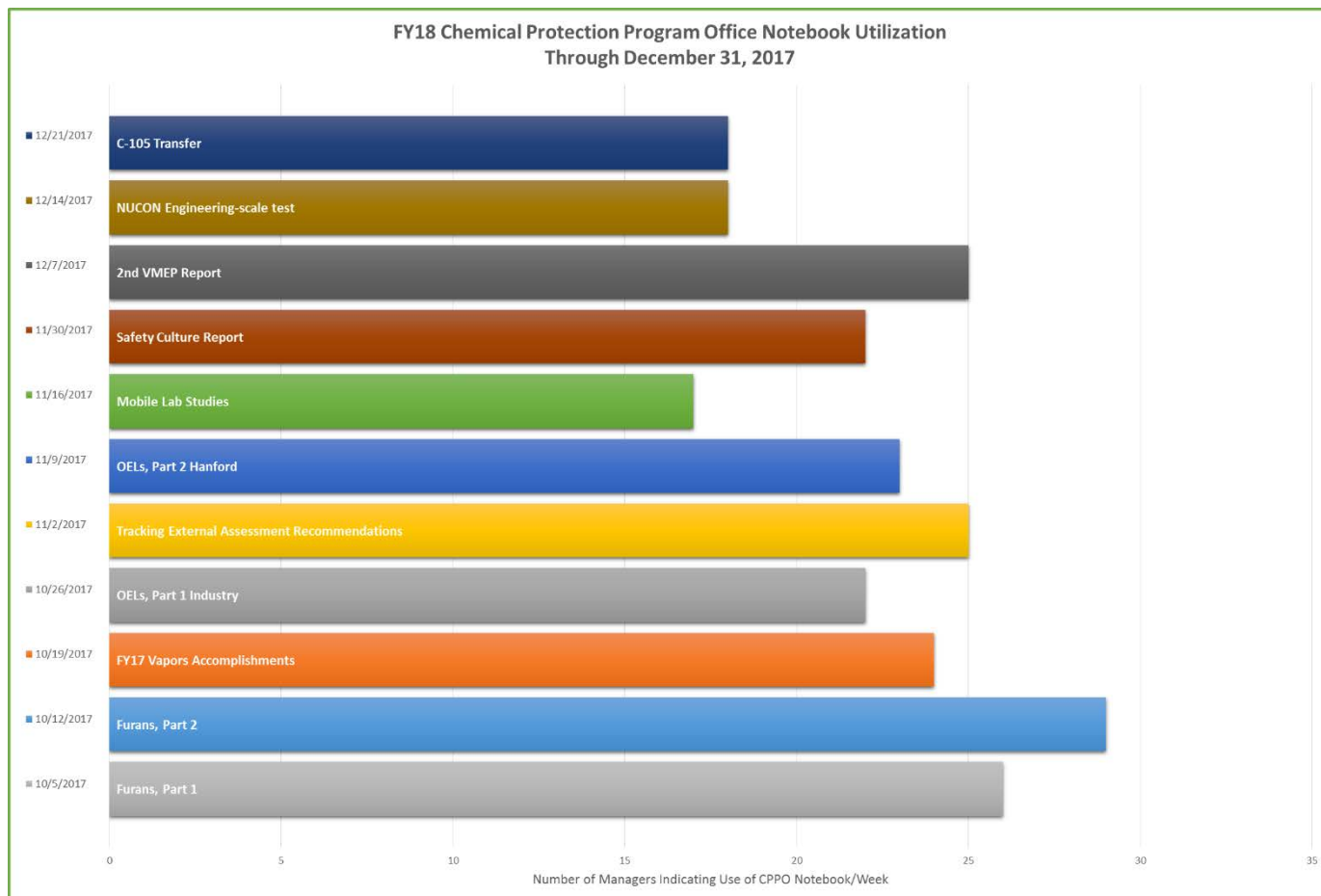


Figure 1. FY2018 CPPO Notebook Use through December 2017

CPPO REQUESTS AND PRODUCTION METRICS

The CPPO routinely summarizes complex, technical vapors-related information and provides monitoring results, report summaries, presentations, a weekly report on WRPS vapors activities, and other information for distribution to the workforce through established mechanisms such as the *Solutions* newsletter and the HanfordVapors.com website. In December an effort was made to re-evaluate outstanding items and consolidate or disposition as appropriate under the CPPO Look Ahead. The evaluation found 21 vapors-related information products currently requested from the CPPO, and 7 that were completed and delivered this month. **Tables 1 and 2** show the volume of activity over the course of the month and the three month trend. The CPPO Notebook and CPPO Weekly Report made up the bulk of the information provided this month, with several data reports in review.

Table 1. CPPO Vapors Information Products Completed from October 2017 through December 2017

CPPO Vapors Information Products Completed FY18	October	November	December	FY-to-Date Total
Data Report (Monitoring Data)	5	0	1	6
Presentations (includes CPPO Notebook and CVST)	4	4	3	11
CPPO Reports and Weekly Report	4	4	3	11
Information Requests	0	0	0	0
Articles, Summaries, and Message Maps	0	5	0	5
Surveys, Focus Groups, and Recommended Actions	2	2	0	4
Website Requests/Site Updates	0	0	0	0
Videos	0	0	0	0
Monthly Totals	15	15	7	37

Table 2. CPPO Vapors Information Products Requested from October 2017 through December 2017

CPPO Vapors Information Products Requested FY18	October	November	December	FY-to-Date Total
Data Report (Monitoring Data)	10	4	2	16
Presentations (includes CPPO Notebook)	4	4	3	11
CPPO Reports and Weekly Report	5	4	3	12
Information Requests	4	7	1	12
Articles, Summaries, and Message Maps	15	16	9	40
Surveys, Focus Groups, and Recommended Actions	7	6	3	16
Website Requests/Site Updates	3	1	0	4
Videos	3	3	0	6
Monthly Totals	51	45	21	117

WRPS VAPORS RELATED COMMUNICATIONS DISTRIBUTION AND TREND

The total number of documented WRPS vapors-related communications provided to the workforce in FY2018 to date is shown in **Table 3**. The data for December includes 400 vapors-related communications, which continue to be led by the CPPO Notebook, plan-of-the-day (POD) meetings, and items posted to the HanfordVapors.com website. The number is slightly reduced from the prior month, possibly due to December holidays and adverse weather conditions.

Table 3. WRPS Vapors Information Distribution Avenue

WRPS Vapors Information Distribution Avenue	October	November	December	FY-to-Date Total
All Employee Email/Meetings & ESHQ Comm.	9	3	1	13
CPPO Notebook*	101	71	61	233
CPPO Report and Weekly Report	4	4	3	11
Fact Sheet & Information	0	0	0	0
Meeting - CVST *	2	1	1	4
Meeting - CVST Sub-team meeting *	4	4	4	12
Meeting - Hanford Advisory Board Briefing *	0	0	0	0
Meeting/Briefing*	7	4	1	12
Meeting -Morning/Pre-Shift Brief*	415	367	301	1083
Presentation*	0	0	0	0
Safety Start	0	0	0	0
SOEN	1	4	0	5
Solution Article	2	2	2	6
Survey and Focus Group	1	0	0	1
Tours*	0	0	0	0
Website/Individual Inquiry	0	0	0	0
Vapors Weekly Update or Website Post	22	11	26	59
Video	0	0	0	0
Monthly Totals	568	471	400	1439

2. COMPREHENSIVE VAPOR ACTION PLAN Key Performance Parameters

KPP 1. Engagement and Effective Measurement

✦ Chemical Protection Engagement: Center for Toxicology and Environmental Health (CTEH)

Last week, the CTEH team worked diligently on drafting the Industrial Hygiene Risk Assessment notebook presentations, of which there are nine.

✦ Chemical Protection Engagement: Chemical Vapors Solutions Teams (CVST)

The CVST Cartridge Sub-committee held a meeting on January 3, 2018.

The CVST Communications Sub-committee held a meeting on January 8, 2018.

✦ Chemical Protection Engagement: Communications

Last week's CPPO Notebook is titled *Dimethylmercury, Part 2*, created by the Center for Toxicology and Environmental Health. This week's CPPO Notebook is titled *Department of Energy Office of Enterprise Assessments (EA-32), Follow-up visit summary*.

✦ Chemical Protection Engagement: Worker Feedback

The **HAMTC Safety Representatives/CPPO Interface** meeting was held on January 3 and January 10. It is always the focus and intention of CPPO and the HAMTC Safety Representatives to afford workers the opportunity to investigate contemporary vapors-activities in this meeting.

Worker feedback with 222-S allowed WRPS to determine an appropriate path forward for canister sample and sorbent tube sample requirements. 222-S confirmed that nitrous oxide, 1,3-butadiene, benzene, acetaldehyde, furan, acetonitrile, propanenitrile, and 2,4-dimethylpyridine analysis can be performed from canister samples.

Received worker feedback from WRPS Operations on the recently released NUCON® engineering-scale testing presentation. The feedback was in regards to how similar technologies may have been previously reviewed in support of SST retrieval activities. A meeting will be held in the near future between CPPO, CTO, and Operations to discuss these technologies.

Key Performance Parameter 1
Establish a comprehensive vapor management communication plan, engagement processes, and effectiveness measurements.

✦ Chemical Protection Engagement: Hanford Vapors Website Updates

- Jan. 11, 2018 - CPPO FY18 1st Quarter Review
- EIR-2017-35, *Investigation of AOP-015 Entry outside TX Change Trailer*
- Mobile Lab PTR-MS Monthly Report March 2017
- WMDS Weekly Report (Feb. 15-22, 2017)
- Mobile Lab PTR-MS Monthly Report April 2017
- SRNL-L3100-2016-00142, *Evaluation of Photocatalytic Oxidation Degradation of Ammonia Summary*

✦ Chemical Protection Engagement: Effectiveness Measures

The survey has been distributed to 700 random WRPS participants, and is available by request. The CPPO requests that the completed survey be returned by Monday, January 22, 2018.

Key Performance Parameter 2

Maintain Industrial Hygiene Chemical Vapor Technical Basis and the chemicals of potential concern (COPC). Institutionalize a disciplined and rigorous process for updates to include new scientific findings and enhanced understandings of potential exposures.

3. KPPs 2 and 3. IH Technical Basis and IH Program

✦ IH Manual and Technical Basis

Last update 1/12/2018:

TFC-PLN-174, *Chemical Vapors Technical Basis Plan*, TFC-ESHQ-S_IH-C-67, *IH Chemical Vapor Technical Basis Maintenance*, TFC-ESHQ-S_IH-C-66, *COPC to COC Evaluation*

Process, and other implementing documents and procedures were en route through the Workflow Review & Approval Process (WRAP), when a reviewer identified information that needed further clarification. The process was interrupted, and the documents are being revised. They will be re-submitted to WRAP.

Much progress has been made on the IH Manual. Key sections of the IH Manual have been developed and are in review. Specifically, Section 1: Introduction and Section 4: *Tank Waste Chemical Vapors of the IH Manual*, are developed and in review, as are many procedures. Briefing material is being developed to help facilitate the communication of the changes affecting the exposure assessment process and the management of chemical vapors in the tank farms.

✦ Health Process Plan

Last update 1/12/2018:

The following HPP reports have been developed: *Proposed OELs for Chronic Exposures – COPCs with Regulatory Guidelines*, *Proposed Occupational Exposure Limits for Furans*, *Proposed Risk-Based Approach for Nitrosamine Chemical of Potential Concern*, *Proposed Acute Exposure Limits for COPCs with Regulatory Guidelines*, *Proposed OELs for Chronic Exposures – Nitrile Class COPCs and 2,4-*

Dimethylpyridine, Recommendations for Sampling and Analysis of Hanford Waste Tank Vapors, and Hanford Tank Vapors FY 2017 Chemicals of Potential Concern update. The final study, currently in progress, is *Assessing the Potential for Chronic or Acute Health Effects from Exposure to COPC Mixtures*. This study will incorporate the chemical mixtures modeling, Acute Transient Exposure Concentration (TEC) Standard Operating Procedure (SOP) and Initial Screening, and potential approach to fill gaps in acute TECs and mixture effects. After the IRP's review, the studies will be reviewed by an external expert panel (EEP), finalized, and submittal to WRPS.

Leading Indicators

Last update 1/12/2018:

During the 1st Quarter, the leading indicators project team evaluated the concentration ratios between COPCs found in the data collected during the previous year's cartridge testing. Ammonia (NH₃) is currently the focus of the study due to its prevalence within the tanks. Direct read instrumentation (DRI) Ammonia readings are being compared to ammonia analytical samples to see how each sample type corresponds to concentration and duration of sampling. There were approximately 50 samples from the AP Exhauster and 5 samples from the A-103 Tank with reported concentrations for NH₃ and N-Nitrosodimethylamine (NDMA). The clustering of data points from the mobile lab at the AP Exhauster show that the concentrations of both NDMA and NH₃ were relatively constant over the 7-day campaign, indicating that ammonia and NDMA may be viable as leading indicators.

Parity Implementation with Established Programs

Last update 1/12/2018:

WRPS made strides in the 1st Quarter of FY2018 in improving parity with other well established programs such as the radiological controls program. *Tier 1* training is complete and has been implemented as *Tank Operations Contractor Hanford General Education Training (TOC HGET)*. It will be included as part of WRPS's all employee annual training. The class provides very basic information on chemicals and chemical odors. *Tier 2* training is designed for workers that may work in the 200 East and West areas, but do not perform work within the tank farm's fence. It is complete. *Tier 3* training is designed for workers that will actually enter the tank farms. The class is an access-controlled entry systems (ACES) requirement for tank farm entry. This class was successfully piloted on October 4, 2017. The attendees offered many insightful recommendations regarding content and worker perspective. These comments have been incorporated. Once *Tier 3* training is

Key Performance Parameter 3

Maintain Industrial Hygiene Program and institutionalize vapor program requirements, best practices and program parity, and complete necessary training to support full implementation at the beginning of FY2018.

implemented, it will be taught in the class room, and will eventually take the place of the *Chemical Hazards Awareness Training*. The *IH Fundamentals Training*, still in development, targets industrial hygiene technicians.

Central Residence for Industrial Hygiene Technicians (IHT)

Last update 1/12/2018:

Retrieval Industrial Hygiene Technicians (IHT) and their first-line supervisors will be relocated to a centralized mobile office (MO) building. The MO is slated to house approximately 100 workers. According to retrieval field support, this new space will be large enough to house all retrieval IHTs and their first-line supervisors. Plans are to install the MO in 200 East area on 4th Street near 218A across from PUREX. The installed and occupied MO will satisfy KPP 3 for retrieval IHTs. KPP 3 advocates a central location for IHTs that is commensurate with other technician level employees.

Air Dispersion Modeling

Update: The Dispersion Modeling project team is currently working on Air Pollutant Graphical Environmental Monitoring System (APGEMS) regression tests and test cases; the model updates are complete, but modifications continue as they perform tests and identify fixes or opportunities for improvements, mostly in the software and graphic user interface (GUI). They are also drafting a report to summarize the model, capabilities, limitations, and to provide a quick users guide.

KPP 4. Engineering Controls

A Farm Exhausters

Update: A Farm: American Electric successfully conducted the “proof-of-concept” for verifying isolation of the A Farm ventilation ducting. In addition to the ducting activities, the engineering design media was prepared for relocating the exhausters, which allowed a request-for-proposal to be submitted for construction of the exhauster slab and exhauster installation. Also, the statement of work was prepared for equipment removal in support of ventilation installation.

Key Performance Parameter 4

Complete engineering control concept demonstrations for Strobic Air Tri-Stack® and NUCON® International, Inc. thermal combustion in support of unrestricted work boundaries

AW Stack Extension

Update: The final (100%) design package is currently being reviewed. The *Plant Forces Work Review* was also completed and is currently under review.

AN Stack Extension

Last update 1/12/2018: Engineering evaluations to determine the optimum height required for the stack and whether the existing superstructure can support that stack height increase are planned.

¹Strobic® Air Dilution Fan

Update: WRPS continues to review submittals provided by Strobic. In parallel with submittal reviews, equipment was procured.

²NUCON® Thermal Oxidation Vapor Abatement Unit (VAU)

Update: The engineering-scale testing continues to be developed, with the following accomplished during the reporting period:

- Terragraphics
 - Performed preliminary inspection of electrical rack to review supplier requested changes.
 - Received a draft copy of NUCON®'s suggested modifications to the VAU skid.
 - Continued developing the site alternatives for the technical demonstration.
 - Continued working on the Functions and Requirements document revision.
- NUCON®
 - Continued working on the design and fabrication of the diesel conversion kit. Accomplishments included the following:
 - ✓ *Completed the Process and Instrumentation Diagram (P&ID), skid structural, and piping arrangement drawings.*
 - ✓ *Received the diesel oxidation catalyst and diesel particulate filter.*
 - ✓ *Procured the pipe and fittings.*
 - ✓ *Painted the diesel generator skid.*
- PNNL
 - The team focused on determining the analytical requirements for the engineering-scale test, including the following:
 - ✓ *Worker feedback with 222-S allowed WRPS to determine an appropriate path forward for canister sample and sorbent tube sample requirements. 222-S confirmed that nitrous oxide, 1,3-butadiene, benzene, acetaldehyde, furan, acetonitrile, propanenitrile, and 2,4-dimethylpyridine analysis can be performed from canister samples.*
 - ✓ *Canisters will be a combination of ³Restek® and ⁴Entech® cans (30 existing and 35 new purchased) with silconert/silicosteel coating for inertness. Moisture control plans are already established by 222-S and sampling can proceed as planned.*
 - ✓ *PNNL P&ID and equipment design will integrate sorbent tube sampling with canister sampling for 222-S analysis. In addition, only a single sorbent tube sample will be required for each vapor abatement unit, which will simplify the PNNL P&ID and equipment requirements.*

- WRPS
 - Instead of using the ⁵CEREX® ultra-violet Fourier transform infrared spectroscopy (UV-FTIR) currently located at tank farms to support testing, WRPS authorized PNNL to lease an Fourier transform infrared spectroscopy (FTIR) from another company. Authorization was based on a favorable cost and risk comparison, and initiated by worker feedback from PNNL.
 - Efforts continued to identify and procure a photoionization detector for volatile organic carbon analysis on high temperature diesel exhaust.
 - Received worker feedback from WRPS Operations on the recently released NUCON® engineering-scale testing presentation. The feedback was in regards to how similar technologies may have been previously reviewed in support of SST retrieval activities. A meeting will be held in the near future between CPPO, CTO, and Operations to discuss these technologies.

KPP 5. Administrative Controls and Monitoring

Permanent Installation of VMDS Equipment in A and AP Farms

Last update 1/12/2018:

In FY2017, WRPS identified viable VMDS components for use in the tank farms. The turnover of AP Farm UV-FTIR to Operations was initiated. The main 1st Quarter activities included the following:

- The *Phase 2 Pilot-Scale Report*, a report summarizing the results of the FY2017 viability assessments used to select VMDS equipment for full-time operations, was prepared. Comments have been resolved and the report is currently in the approval cycle.
- The UV-FTIR, currently installed at AP Farm, is in the process of being turned over to Operations. A functions-and-requirements (F&R) document confirming the use and purpose of the equipment, alarm set points, contingency plans for equipment that goes off-line, and other similar types of operational issues has been drafted. The document provides direction for much of this project moving forward. Reviews of the F&R are currently in progress. Other important turnover activities included preparing key design drawings, starting development of operating and maintenance procedures, developing software and cyber security protocols, and resolution of readiness activities.
- ARES prepared a calculation refining the set point for ammonia. The draft calculation was completed and is currently under review.
- Modification of the Autosampler (Real-Time Detecting, Optimized-Sample-Selection [RDOSS] system) for stack monitoring continued during the 1st Quarter. The RDOSS is fitted with a gas chromatograph flame-ionization

Key Performance Parameter 5

Define unrestricted work boundaries and implement monitoring on active stack ventilation and unrestricted work boundaries in the A farms to provide defense-in-depth.

detector and Ultra Violet- Differential Optical Absorption Spectrometer; this unit will provide real-time analysis of easily detectable indicator COPCs (e.g., NH₃ and mercury), hourly analysis of a suite of COPCs, and also collect targeted laboratory samples for analysis that will provide more accurate detection and characterization of Hanford COPCs. The following activities were performed in the 1st Quarter:

- Determining gas standards for testing is a key component in development of the RDOSS. Initially in the quarter, progress was delayed approximately 1-2 months as a result of modifications required on the testing equipment. This delay will not impact completion of integrated testing activities. In support of developing test gas standards, samples were collected during waste disturbing and quiescent (inactive or dormant) activities at AP Farm. The samples will be analyzed by both the 222-S Lab and an off-site vendor in order to confirm that the sample adequately supports integrated testing. Results are expected early in the 2nd Quarter.
- Design drawings for the test bed manifold and Hanford E-Skid were initiated in the 1st Quarter.
- Procurement of key equipment (probes, pumps, UV-DOAS) needed to support integrated testing was started.
- Preparation of the test plan, which will be used for integrated testing, was started and is currently in review. Efforts are also underway to brief key WRPS IH personnel on the test plan and solicit their feedback.
- Early in the 1st Quarter, the UV-DOAS and Open path Fourier transform infrared spectroscopy (OP-FTIR) units were transported to HAMMER and used to support demonstrations. The equipment was returned to the tank farms after HAMMER demonstrations were completed.
- Efforts are on-going to schedule a meeting between the Chief Technology Office, Projects, and Operations to determine a path forward for VMDS equipment currently in A and AP Farms.
- Performed zero and span calibration checks of VMDS equipment in support of Phase II acceptance testing.
- The software libraries for both the OP-FTIR and UV-FTIR units were updated in October. Revisions to the library are periodically performed to improve accuracy of analysis for analytes.

Stack and Boundary Monitors

Update:

In addition to the turnover of the AP Farm UV-FTIR stack monitor to Operations discussed above, other stack and boundary monitoring activities will be performed. The work scope includes installing stack monitors on the AW, AX (two), AN, and 702-AZ Exhausters. Although installing perimeter monitors and designing stack

monitors for the A Farm Exhausters is FY2019 work scope, some procurement activities have begun. The primary 1st Quarter activities included the following:

- Began designing revisions of the 702-AZ, AN, and AW, stack monitors.
- The PFWR was completed for stack monitor installation and the work was awarded to construction forces.
- A resolution to the vendor QA Program issued was identified. A contract was awarded for the procurement of the 5 UV-DOAS stack monitors.

Establishing Safe Unrestricted Boundaries

Last update 1/12/2018:

The scope of work defined in the draft CVAP under KPP 5 is to define unrestricted work boundaries, implement monitoring on active stack ventilation, and unrestricted boundaries in the A Farms, thus providing defense-in-depth. This work scope includes:

- Establishing a basis for defining work boundaries in and around the tank farms
- Completing the permanent installation of VMDS equipment in A and AP Farms
- Installing monitoring equipment on active exhausters (stack monitors) and perimeter monitors along the A Complex corridor and SY Farm
- Completing the installation of the public address (PA) speakers and reader boards throughout the tank farm areas and access points

Coordinated by ORP, a draft paper, tentatively titled *Comprehensive Vapor Action Plan KPP 5 - Defining the Unrestricted Work Boundary*, was developed clarifying how WRPS will define work boundaries in and around the tank farms. This document provides a basis for the implementation of the tank farm boundaries moving forward for the IH Program.

During FY2017, WRPS's subcontractor Kenexis completed three quantitative risk assessments (QRA) designed to assess the probability and likely consequences of an episodic, acute exposure. The QRAs are being evaluated by WRPS and ORP. The subcontractor used a computational fluid dynamics air model; they modeled three tank farm emission sources, including a passively ventilated farm, an actively ventilated farm, and an actively ventilated farm in which one of the five tanks experiences buoyant displacement gas release events (BDGRE). The three QRAs are *A Farm Passive Breather Filters*, *AP Farm Exhauster*, and *AW Farm Exhauster* (including a BDGRE event).

Public Address System

Update:

In FY2017, WRPS completed the field installation and functional tests for many of PA systems in the East area tank farms. Activities performed in the 1st Quarter of FY2018 include the following:

- System integration activities were completed in December. Towards the end of the 1st Quarter, efforts focused on finishing the A, AX, AY, and AZ Farm turnover to Operations.
- Early in the 1st Quarter, orders were placed for all reader boards in the East and West areas. In parallel with procurement activities, efforts were started on the design packages for B, BX, BY, S, SX, SY, T, TX, TY, and U Farms. The majority of the farms are at the 90% design levels.
- An issue was identified during turn-over testing of the PA system in response to which the vendor must replace components of already-installed equipment. This work, although warrantied, requires the construction contractor's resources in support of the repairs. This is causing a 1-2 week schedule slip for the installation of the new units.

KPP 6. Tank Operations Stewardship

Pilot SST Stewardship Program

Last update 1/12/2018:

SST Remote Monitoring Equipment:

The Project schedule was prepared and presented to the CVAP Field Execution Schedule meeting in early October. The schedule provided details on the design, procurement, and installation activities for TY Farm. An engineering contract for the TY Farm automation design was awarded the week of November 6, and work

was immediately started with a kick-off meeting the week of November 13. Shortly thereafter, efforts were in full swing for both the TY Farm temperature and surface level designs. Towards the end of November, it was announced that TX Farm would be the second SST farm to be designed. In addition to design activities, bench-scale testing of both the level and temperature indicators were performed and completed during the 1st Quarter and procurement of both temperature and level equipment was initiated.

SST Stewardship Execution Strategy Document (FY2015 LEAN Report):

The Project schedule was prepared and presented at the CVAP FES meeting early in the 1st Quarter. The engineering services contract for preparing this report was awarded to ARES in October and a kick-off meeting was held. A detailed draft

Key Performance Parameter 6

Institutionalize a tank operations stewardship program that minimizes required tank farm personnel entries; and establishes parameters for locating ancillary personnel and offices.

outline of the *SST Stewardship Execution Strategy Document* was prepared, which addressed all topics identified in the FY2015 LEAN event, in addition to numerous other activities which may help reduce SST entries. A draft of the document was started mid-November.

Efforts are on-going to assemble a team that will provide the necessary feedback to review this first-of-its-kind document.

Work Location Evaluations:

Originally, this evaluation was to have been performed as part of the SST Stewardship Execution Strategy Document. However, early in FY2018, it was announced that the *Work Location Evaluation Report* would not be included as part of this document. Instead, it would be addressed in a separate correspondence, which was started in FY2017. Management met during the 1st Quarter to review the current draft correspondence, define the remaining scope, and assign responsibility for completing the correspondence.

KPP 7. Hierarchy of Controls

Cartridge Testing and SCBA Alternatives

Last update 1/12/2018:

The 1st Quarter of FY2018 has seen the fruition of the hard work and effort that went into the air purifying respirator cartridge (APR) testing program by WRPS, PNNL, and STC. STC is the independent 3rd party selected by HAMTC to oversee the cartridge test process and FFAPR implementation. WRPS, HAMTC and STC have agreed FFAPRs, equipped with ⁴Scott 7422-SD1[®] or 7422-SC1[®] cartridges, are appropriate for use in SY Farm for similar exposure groups 1 (SEG1) and similar exposure groups 2 (SEG2) (non-waste disturbing) work activities. WRPS and HAMTC also agreed that although FFAPRs are effective against tank vapors, the rollout of FFAPRS must be done on a farm by farm basis. A properly completed industrial hygiene hazard assessment, specific to each farm, must support the transition from SCBA to FFAPR. STC is planning to be at WRPS in mid-to-late January. They will be available to answer questions about the APR cartridge testing process.

The IH assessment for SY Farm was approved, and the rollout of FFAPRs there began December 12, 2017. The hazard assessment for AP Farm is being created. Once it is approved, FFAPR rollout will continue at AP Farm for SEG2 work activities. FFAPR use at AP for SEG1 activities was rolled out in FY2017. Separate IH assessments are concurrently being developed for AY/AZ, AW, AN, and AX Farms.

Key Performance Parameter 7

Provide options to promote the hierarchy of controls for chemical vapor respiratory protection beyond current use self-contained breathing apparatus.

Mobile Laboratory

Update:

The contract for RJ Lee Mobile Laboratory has been extended through June 30, 2018, to allow for mobile lab operations in FY2018.

Personal Vapor Monitor

Update:

A contract was issued for ⁶C₂Sense[®] to provide support for the upcoming field test in the tank farms. An Integrated Project Team was established for the field trial and a kick-off meeting is currently planned.

KPP 8. Medical Support

The scope of KPP-8 is to support RL medical program enhancements in conjunction with other Hanford Site organizations.

Key Performance Parameter 8

Support medical program enhancements in conjunction with responsible Hanford Site organizations and establish update to WRPS process/procedures.

¹Strobic Air is a registered trademark of MPC Inc., Wilmington, Delaware.

²NUCON is a registered trademark of Nucon International, Inc., Columbus, Ohio.

³Restek is a registered trademark by Restek Corporation in Bellefonte, Pennsylvania.

⁴ENTECH is a registered trademark by ENTECH INC. in Lebanon.

⁵CEREX trademark by TECAN SP, INC. Baldwin Park, California.

⁶C₂Sense is a registered trademark by C2Sense, Inc., Cambridge, Massachusetts.