

PFP Recovery Update – February 9, 2018

Updated 1:00 p.m. PST

Updates since February 8, 2018 highlighted

The next update will be Feb. 12, 2018.

The focus at PFP is on the health and safety of the workforce, addressing worker concerns, ensuring PFP remaining facility debris and rubble piles are stable, and mitigating the potential for any additional spread of contamination. CHPRC is not authorized to conduct any demolition work at PFP until DOE has been briefed and approves the recovery plan.

Plant Status

| System/Area | Status |
|-------------------|--|
| PFP Workforce | <ul style="list-style-type: none">No new safety issues. |
| PRF Area | <ul style="list-style-type: none">Area remains stable since last report. |
| PFP Property Area | <ul style="list-style-type: none">On Feb. 9, crews conducted radiological surveys after the wind event on Feb. 8 as required by procedures implemented after the December 2017 contamination spread. No contamination was detected.On Feb. 8, during routine surveys of mobile office trailer MO-287, a small area (about 1.2 inches in diameter) of contamination was detected on one of the trailer's stairs. MO-287 is not inside a posted radiological area; this is the same trailer where contamination was detected Jan. 29 (see Jan. 29 daily report and Jan. 30 daily report). MO-287 is the administrative office where PFP contractor staff work. The stair was removed for further analysis, which determined the contamination was total alpha with a final count of 37,022 dpm/100cm², which indicates the contamination is not naturally occurring radon and is assumed to be plutonium or americium. A map showing the location of the trailer is at the bottom of this document. Additional surveys performed on Feb. 8 did not detect any further contamination. Additional surveying of the trailer and the surrounding area is being done. |

Radiological Surveys, Sampling and Analysis

Surface monitoring: metal pans, called “cookie sheets,” are placed throughout the work control area and analyzed twice a day. Any contamination detected is expressed in disintegrations per minute, a unit that measures how many radioactive atoms decay in a minute.

Continuous air monitors (CAMs): stationary monitors that are located in work areas and elsewhere, set to alarm if contamination reaches levels that would require protective measures for workers.

Contamination values are expressed as derived air concentrations times hours (DAC-hours).

Air samplers: filters in the CAMs are changed out routinely and analyzed for contamination.

On-Site and Environmental:

| Cookie Sheets (69 total) | | |
|--------------------------|------------------|------------------------|
| | Feb. 9 Day Shift | Feb. 8 Swing Shift |
| Number Surveyed | 55 | No surveys due to wind |
| Number Clean* | 55 | |
| Number Contaminated | 0 | |

| | | |
|--|--|--|
| <i>(Note location and level)</i> | | |
| *Clean = direct contamination < 500 dpm/100cm ² and removable contamination < 20 dpm/100cm ² (or < 100 dpm/100cm ² in a posted CA or HCA) | | |

- **Continuous Air Monitor Readings (14 total):** All CAMs reading less than 1 DAC-hr as of 9:00 a.m., Feb. 9
- **Samplers (24 total):** Air filters removed and analyzed with no indication of radioactivity other than radon as of 11:00 p.m., Feb. 7

Bioassays: Bioassays are used when a person is potentially exposed to contamination to determine whether or not there has been an intake (e.g., inhalation or ingestion) of radioactive material and results include an estimated dose. The table below provides a summary of bioassay results following the spread of contamination in December. The data shows radiological doses to personnel in millirem (mrem) and is current as of Feb. 8 at 7:00 a.m. This information will be updated as more results are received. Individual employees are briefed on their bioassay results as soon as the results are available.

| | |
|--------------------------------------|-----|
| Requested | 273 |
| Negative | 196 |
| Preliminary Positive* | 11 |
| Positive with Initial Dose Estimate | 2 |
| Less than 1 mrem: 0 | |
| 1-10 mrem: 1 | |
| 10-20 mrem: 1 | |
| Positive with Verified Dose Assigned | 1 |
| Less than 1 mrem: 1 | |
| 1-10 mrem: 0 | |
| 10-20 mrem: 0 | |

*Preliminary Positive: Initial indication from laboratory of positive result with no dose estimate. Subject to change (to negative) as additional analysis is completed.

- Doses are the expected dose over 50 years.
- DOE requirements for protecting individuals from ionizing radiation set an administrative control level, or limit, of 100 mrem/year for non-radiological workers and members of the public visiting DOE sites (DOE Order 458.1). The DOE dose limit for radiological workers is 500 mrem/year.

External:

- **Department of Health Web Page:** The Washington State Department of Health has set up a [web page](#) with environmental monitoring information about Hanford.
- **Government Vehicle Radiological Surveys:**
 - On Feb. 1, CHPRC completed requested surveys of four Hanford Fire Department (HFD) government vehicles. No contamination was detected.
 - Surveys of PFP-controlled government vehicles were completed Jan. 23. Decontamination and dispositioning of 27 contaminated vehicles is ongoing. Those vehicles remain in a radiologically-controlled area.

| | |
|--|-------|
| | Total |
|--|-------|

| | |
|--|----|
| PFP-Controlled government vehicles surveyed | 97 |
| Decontaminated and returned to service | 2 |
| Contaminated and awaiting disposition (held as radiologically-controlled vehicles or decontaminated) | 27 |
| No contamination found and returned to service | 68 |

- **Personal Vehicle Radiological Surveys:**

- There have been no new requests for personal vehicle surveys since Feb. 1. Personal vehicle survey summary:
 - Dec. 26: Seven personal vehicles identified as contaminated by close of business Dec. 19 were decontaminated, surveyed and released as of Dec. 26
 - Jan. 26: One of seven original personal vehicles surveyed and released Dec. 26 (and remained on site since that time) was found to be contaminated; vehicle was decontaminated Jan. 28.
 - Jan. 31: One of seven original personal vehicles surveyed and released Dec. 26 (rental car) was resurveyed and found to be free of contamination
 - Feb. 1: Seven Hanford Fire Department personal vehicles surveyed; no contamination was found

- **Home Surveys:**

- There have been no new requests for home surveys since Feb. 5. Home survey summary:
 - Dec. 20: Seven originally-requested home surveys complete with no contamination found.
 - Feb. 6: Requested survey of PFP employee's home completed with no contamination found.

Expert Panel: Members of the PFP Expert Panel continue to meet. The panel consists of federal, officials with expertise in several scientific and technical disciplines who can consult with industry and academic leaders with similar expertise. The panel will evaluate CHPRC's recovery from the contamination event and its proposed technical approach for safely completing demolition of PFP. The panel will provide observations and recommendations to CHPRC. The Expert Panel's charter and biographies of its members are available at www.Hanford.gov.

Causal Analysis: CHPRC is in the process of completing a root cause evaluation report that will identify the factors that led to the spread of contamination and that will propose corrective actions to reduce the likelihood of recurrence. Input from workers and Jacobs Engineering will be included in the root cause analysis.

Other Actions:

- CHPRC initiated an independent review of the PFP's radiological control (RadCon) program, with representatives of Oak Ridge Associated University.
- CHPRC brought in three additional Health Physicists to support the radiological protection program
- CHPRC RadCon is developing a proposal to perform an independent second clearance survey, based on a graded approach, for items/material that will leave the PFP footprint after exiting contaminated areas.

Workforce Management:

- The workforce remains committed to the current mission of hazard recognition and control despite the challenging situation.

Communications:

- On Feb. 8, CHPRC leadership will brief CHPRC construction subcontractors on the contamination event at PFP and current recovery status. This is the same presentation offered to all Hanford Site employees; additional briefings to employees are scheduled.

Map indicating location of trailer MO-287

