

PFP Recovery Update – February 8, 2018

Updated 11:45 a.m. PST

Updates since February 7, 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. 8, wind prevented crews from completing fixative application to the grounds of the PFP office trailer village. Wind gusts around the trailers create a safety concern by potentially pushing fixative overspray onto the workers applying it.• On Feb. 8, during once-per-shift surveys in the radiological buffer area, contamination (830 disintegrations per minute (dpm)/100 cm² total alpha, <5000 dpm/100 cm² total beta/gamma (not removable)) was detected on a stair on the northwest side of mobile trailer MO-032. The trailer is used by workers to pass between the high contamination area and radiological buffer area. Both areas are controlled for contamination. The stairs are on the side of the trailer in the radiological buffer area. No other contamination was found. Some contamination was removed with a tape press. Some contamination (500 dpm/100cm² total alpha) remained on the step, so the step was replaced. A subsequent analysis indicated the contamination is plutonium. <i>See the map at end of this update, with an arrow indicating where the mobile trailer is located.</i>• CHPRC is evaluating the expansion of current PFP radiological boundaries based on air dispersion modeling scenarios. DOE would approve any expansion; communication with employees and other contractors would precede any expansion.

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 Feb. 7, at the request of employees working on the Soil and Groundwater Remediation Project (SGRP), crews deployed an additional cookie sheet and air sampler near the 200 West Pump and Treat facility and an additional cookie sheet and air sampler near an SGRP work

location at the intersection of Beloit and 19th Streets. CHPRC has now deployed a total of 69 cookie sheets and 24 air samplers around the PFP.

On-Site and Environmental:

Cookie Sheets (69 total)		
	Feb. 8 Day Shift	Feb. 7 Swing Shift
Number Surveyed	57	67
Number Clean*	57	67
Number Contaminated <i>(Note location and level)</i>	0	0
*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 11:00 a.m., Feb. 8
- **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** (Note, some of the following information that appeared in yesterday's update has been summarized for brevity. New information is highlighted):

- 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** (Note, some of the following information that appeared in yesterday's update has been summarized for brevity):

- 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 with arrow indicating location of mobile office MO-032

