



## Third Five-Year Review of Remedial Actions at NASA Wallops Flight Facility

**This information sheet describes the Third Five-Year Review for two environmental restoration sites at NASA Wallops Flight Facility: Operable Unit (OU) 02, Former Fire Training Area and OU 03, Waste Oil Dump.**

### What is a Five-Year Review?

The purpose of the Five-Year Review is to determine if cleanup actions completed at an environmental site continue to protect human health and the environment as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). NASA conducts a review of ongoing cleanup actions every five years until hazardous substances, pollutants, or contaminants remaining at the site are below levels that allow for unlimited use and unrestricted exposure.

The Five-Year Review addresses three major questions:

- Is the site cleanup action functioning as intended?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives still valid?
- Has other information surfaced that could affect the protectiveness of the remedy?

A protectiveness determination may be defined as: Protective, Not Protective, Protective in the Short-Term, Will be Protective, or Protectiveness Deferred.

- **Protective:** The remedy is protective; risks currently under control and anticipated to be under control in the future.
- **Short-Term Protective:** The remedy is currently protective but for the remedy to be protective in the long term, action is needed to address an issue affecting future protectiveness.
- **Will be Protective:** Construction activities are ongoing, and the remedy is expected to be protective when completed and there are no current exposure pathways that could result in unacceptable risk.
- **Not Protective:** Human and/or ecological risks are currently not under control.
- **Protectiveness Deferred:** There is insufficient information and documentation to conclude risks are currently under control.

This is NASA's Third Five-Year review for the Former Fire Training Area and Waste Oil Dump sites. Each Five-Year Review is available online at <https://www.nasa.gov/goddard/memd/wallops-restoration-program/five-year-review>.

## OU 02, Former Fire Training Area

The Navy and NASA used the Former Fire Training Area (FFTA) for firefighting training exercises from the late 1940s to 1987. Flammable liquids were dispersed onto the ground into a shallow pit, onto a discarded plane fuselage, and/or into a tank and ignited for these exercises. NASA excavated and removed petroleum-contaminated soils in 1986. NASA implemented the cleanup remedy in 2008. The remedy consists of in situ biological treatment (biostimulation) of contaminants in groundwater, monitored natural attenuation of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals in groundwater, and land use controls (LUCs) to prohibit intrusive activity, prohibit groundwater use, and unrestricted exposure.

The Five-Year Review also summarized the evaluation of per- and polyfluoroalkyl substances (PFAS) in site groundwater, soil, surface water, and sediment, which was a recommendation in the second five-year review. These contaminants of emerging concern are present in soil, surface water, sediment, and groundwater due to historical use of aqueous film forming foams.

**The protectiveness determination for the FFTA in the Third Five-Year Review is Short-term Protective.** The Five-Year Review determined the remedy at the FFTA currently protects human health and the environment because there is no direct exposure, LUCs are maintained, and post-closure groundwater monitoring is being performed. Remedial Investigations to evaluate PFAS are ongoing at the time of this review. For the remedy to be protective in the long-term, the Five-Year Review recommended NASA conduct a multi-phase RI and work with EPA and the Virginia Department of Environmental Quality to determine the most appropriate path forward for the presence of PFAS by developing a Final Phase 1 RI Work Plan by December 2025.

## OU 03, Waste Oil Dump

The Navy and NASA used the Waste Oil Dump (WOD) to dispose of waste oils and other flammable liquids from the 1940s through the 1960s. NASA excavated and removed petroleum-contaminated soils in 1986. NASA implemented the cleanup remedy from 2008 – 2009. The remedy consists of biostimulation of contaminants in groundwater, monitored natural attenuation of contaminants in groundwater, and LUCs to prohibit intrusive activity, prohibit groundwater use and unrestricted exposure. The Five-Year Review also summarized the evaluation of PFAS compounds in site groundwater.

**The protectiveness determination for the WOD in the Third Five-Year Review is Short-term Protective.** The Five-Year Review determined the remedy at the WOD currently protects human health and the environment because there is no direct exposure, LUCs are maintained, and post-closure groundwater monitoring is being performed. Remedial Investigations to evaluate PFAS are ongoing at the time of this review. For the remedy to be protective in the long-term, the Five-Year Review recommended NASA conduct a multi-phase RI and work with EPA and the Virginia Department of Environmental Quality to determine the most appropriate path forward for the presence of PFAS by developing a Final Phase 1 RI Work Plan by December 2025.

## Keeping Our Community Informed

NASA is committed to communicating about all environmental investigations and will continue to share information about the progress being made at WFF. Updates like this sheet will be distributed periodically and information will be posted on the WFF Environmental Restoration Program website at <https://www.nasa.gov/goddard/memd/wallops-restoration-program>.

## For More Information Contact

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