



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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Matthew Greenberg  
Air Force Civil Engineer Center/AFCEC  
via matthew.greenberg.2@us.af.mil

Re: Independent Finding on Final Sixth Five-Year Review Report  
Hanscom Field/Hanscom Air Force Base Superfund Site,  
Bedford, Concord, Lexington & Lincoln, MA

Dear Mr. Greenberg:

Thank you for submitting the Final Five-Year Review (FYR) Report for the Hanscom Field/Hanscom Air Force Base Superfund Site (Hanscom) in Middlesex County, Massachusetts. It is EPA policy to make protectiveness determinations at federal facilities by the statutory due date. The Hanscom FYR statutory due date is September 27, 2022.

Air Force submitted a draft FYR Report to EPA and the Massachusetts Department of Environmental Protection (MassDEP) on May 11, 2022, with EPA's initial comments provided on July 14, 2022, and MassDEP comments provided on July 25, 2022. Air Force provided a revised draft final FYR Report on August 11, 2022, with a request for the regulators' position or concurrence by August 19, 2022. On August 18, 2022, EPA sent an e-mail to Air Force indicating that it was unable to concur given the limited time left to resolve the deficiencies, including certain of those EPA had identified in its July 14, 2022, comments that were not addressed in the August 11, 2022, draft final FYR Report, and that it intended to issue an independent finding on the protectiveness of the remedies by the FYR due date.

This letter is based on the revised Final FYR Report submitted by Air Force on September 8, 2022, that also did not address all of EPA's previous comments. EPA appreciates the effort to address regulators' comments and subsequent conversations regarding protectiveness, however a number of significant issues identified by EPA remain outstanding. As discussed throughout this process, it remains Air Force's responsibility to respond to regulator comments and complete the FYR in a timely fashion. Air Force signed its Final FYR Report on September 19, 2022. Air Force has indicated that the report was unchanged from the September 8, 2022 version.

**Operable Unit 1 (IRP Sites 1, 2, and 3)**

For Operable Unit 1 (OU1) (IRP Sites 1, 2, and 3), Air Force's Final FYR Report determined that the remedy currently protects human health and the environment and identified the following recommendations necessary for the remedy to be protective in the long-term:

- Air Force must prepare a Memorandum for Record to add 1,4-dioxane as a contaminant of concern to the OU1 Record of Decision and add 1,4-dioxane to groundwater and surface water monitoring requirements; and
- Air Force must evaluate the groundwater treatment plant and to proceed with any recommended actions, as well as conduct a plume stability study to determine if potential optimization or alternative remedial actions are required

While EPA agrees that the OU1 remedy is short-term protective, EPA has determined the following additional recommendations are necessary for the remedy to be protective in the long-term (further explanation is provided later in this letter):

- Air Force must complete and implement a Land Use Control Implementation Plan (LUCIP) which identifies how subsequent enforceable LUCs will be established;
- Air Force must complete its PFAS treatability study and implement any resultant recommendations, as necessary to ensure compliance of PFAS-contaminated effluent standards into the Shawsheen River; and
- Air Force must complete a PFAS Remedial Investigation that addresses the nature and extent of contamination throughout the site, regardless of source.

Air Force's Final FYR Report identified as an issue that while a Supplemental Remedial Investigation determined that 1,4-dioxane was found to exceed the risk-based screening level (RBSL) in groundwater, it was not found to exceed the RBSL at the influent or effluent to the OU 1 groundwater treatment plant. A subsequent Focused Feasibility Study recommended adding 1,4-dioxane as a contaminant of concern (COC). The remedy currently protects human health and the environment because the groundwater is not currently being used. In order for the remedy to be protective in the long-term, Air Force recommended preparing a Memorandum for Record to add 1,4-dioxane as a COC to the OU1 Record of Decision and add 1,4-dioxane to groundwater and surface water monitoring requirements. Air Force's Final FYR Report's milestone date for this work is "December 2022". By e-mail dated September 22, 2022, Air Force indicated that its specific milestone date for this work is December 20, 2022. By this letter, EPA agrees with this determination and accepts this milestone date.

Air Force's Final FYR Report identified the following issues related to the OU1 groundwater treatment plant: the age of the groundwater treatment plant, the reduction in volume and mass of contaminant removal, and a lack of progress in cleaning up groundwater contamination. The remedy currently protects human health and the environment because the plant contains the plume of identified COCs contaminants and Air Force is taking steps to restart plant operation. In order for the remedy to be protective in the long-term, Air Force recommended an evaluation of the treatment plant and to proceed with any recommended actions, as well as to conduct a plume stability study to determine if potential optimization or alternative remedial actions are required. Air Force Final FYR Report's milestone date for this work is "2027". By e-mail dated September 22, 2022, Air Force indicated that its milestone date for this work is August 31, 2026. By this letter, EPA agrees with this determination and accepts this milestone date.

EPA's initial comments on the draft FYR Report noted that the lack of a final LUCIP, a component of the OU1 remedy, impacted protectiveness of the remedy in the short-term. Air Force disagreed, stating, "A LUCIP will not include expanded LUCs beyond what is included in any related Record of Decision (ROD). Its use is intended for Air Force Base personnel and contractors to make them better aware of the land use controls (LUCs) stated in RODs." Air Force included this as a follow-up action in *Section 10, Other Findings*, noting an anticipated completion date of December 2022. The requirement to establish LUCs as required in the ROD<sup>1</sup> does not negate the need for a LUCIP, since the LUCIP is the first step in establishing the enforceable LUCs. This deficiency affects the protectiveness of the OU1 remedy in the short term. In order for the remedy to be protective in the long-term, Air Force must complete and implement a LUCIP which identifies how the subsequent enforceable LUCs will be established. Furthermore, a final LUCIP serves as an instruction for Air Force staff in maintaining compliance with the LUCs in the event of any future development that could impact the protectiveness of the remedy. By this letter, EPA determines that the specific milestone date for this work is December 30, 2022. EPA encourages Air Force to solicit EPA and MassDEP comments on the draft LUCIP. Furthermore, the Air Force needs to provide EPA and the State with the drafts of actual enforceable LUC documents (such as a Base Instruction, if used to establish the LUC).

During a January 26, 2022, partnering meeting among Air Force, EPA, and MassDEP, the group agreed to table the start-up of the groundwater treatment plant (GWTP) due to concerns regarding PFAS in effluent potentially entering the Shawsheen River. As outlined in Air Force's September 13, 2022, *Final Quality Assurance Project Plan (QAPP) Addendum to the Final Per- and Polyfluoroalkyl Substances (PFAS) Expanded Site Inspection (ESI) QAPP for Operable Unit Sites 1 and 2*, potential migration from GWTP effluent could cause PFAS to be present at and/or beyond the base boundaries. Air Force will complete GWTP Treatability Study to implement treatment of PFAS to levels at or below the MassDEP PFAS6 MCL prior to effluent discharge. Air Force's Final FYR Report notably lacks any discussion of this issue and efforts being undertaken by Air Force to address it. As EPA and MassDEP have discussed with Air Force, drinking water supplies in two municipalities downstream of the site have been impacted by PFAS. If not for actions taken by the municipalities, citizens would potentially be exposed to PFAS in drinking water in excess of the MassDEP PFAS6 MCL. The remedy currently protects human health and the environment in the short-term because the GWTP is currently not discharging PFAS-contaminated effluent into the Shawsheen River. In order for the remedy to be protective in the long-term, Air Force must complete its GWTP Treatability Study for PFAS and implement any resultant recommendations as necessary to ensure compliance of PFAS-contaminated effluent standards into the Shawsheen River. By this letter, EPA determines that the specific milestone date for Air Force to complete this work is September 30, 2024.

Air Force's February 2022 *DRAFT FINAL PFAS Expanded Site Inspection Report* recommended a PFAS Remedial Investigation (RI) for four AFFF-related sources. Air Force's July 29, 2022 letter to EPA stated that it was currently awaiting contract award for this work, and Air Force's agenda for the September 21, 2022 partnering meeting among Air Force, EPA and MassDEP indicated that the PFAS RI contract was awarded with a kick-off meeting held August 31, 2022.

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<sup>1</sup> The OU 1 ROD is not prescriptive in the form of the LUCs to be used, instead describing them generally as "includ[ing] non-engineered instruments such as legal and/or administrative controls."

During the September 21, 2022 partnering meeting, Air Force indicated it plans to submit work plans related to the PFAS RI this fall/winter. Air Force must provide a path forward and an enforceable schedule for this work including a determination as to whether the RI work will be done in conjunction with an established OU or as part of a new basewide PFAS OU.

Air Force's Final FYR Report states that no basis for remedial action has yet been established for PFAS, therefore it is not appropriate to evaluate the potential impact of PFAS on the long-term protectiveness of the existing remedies for OU1. The Report notes in *Section 10, Other Findings*, a follow-up action: "Implement recommended actions, as appropriate to address PFAS as indicated in the Expanded Site Inspection for Hanscom AFB. Any required PFAS remedies will either be implemented through ROD modification or issuance of a separate ROD." Air Force's Final FYR Report indicates this action has a milestone date of "2027".

Air Force declined to address EPA's May 2022 updated Regional Screening Levels (RSLs) for PFAS, stating that the reporting period for its FYR was through December 2021<sup>2</sup>, while noting in the same report that PFAS compounds were identified in the 2018 Site Investigation above EPA screening levels (in place at that time). Air Force also declined to address PFAS Ecological Screening Values, issued in September 2021 by Argonne National Laboratory and Air Force Civil Engineer Center (AFCEC).

EPA, MassDEP, and Air Force have exchanged correspondence and conducted several discussions regarding the upcoming PFAS RI and specific ways EPA and the State have identified that the draft scope is deficient. These include a lack of commitment to include all potential releases, irrespective of source (*i.e.*, the use of AFFF by Air Force and/or any 3<sup>rd</sup> Party - *e.g.*, the 2014 private jet crash, to which Air Force personnel responded), or the release of PFAS from non-AFFF sources (*e.g.*, landfilled waste). Air Force instead proposes Fiscal Year 2023 Preliminary Assessment activities at installations, including Hanscom, (subject to availability of funds) to evaluate potential non-AFFF releases of PFAS. The resultant multi-year delay in achieving final decisions regarding PFAS at the site is unacceptable. Moreover, Air Force continues to claim no responsibility to investigate releases from other parties, despite acknowledgement that these releases are likely commingled with historic Air Force releases at Hanscom.

The lack of clear and enforceable future progress on the PFAS RI is an issue that affects the protectiveness of the OU1 remedy in the long term. In order for the remedy to be protective in the long-term, Air Force must complete its PFAS RI and address the nature and extent of contamination throughout the site, regardless of source. EPA also notes that while Air Force intends to initially address PFAS administratively in a separate Remedial Investigation, since PFAS is present in media with other chemical contaminants, cumulative risk and treatment options must be assessed holistically. By this letter, EPA determines that the specific milestone date for Air Force to complete this work is September 30, 2025.

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<sup>2</sup> EPA does not agree with this "reporting period" and instead requested that any information received during the entire statutorily-defined five-year review period be addressed in the FYR.

## **Operable Unit 2 (IRP Site 4 Landfill)**

While OU2 (IRP Site 4 Landfill) has been included in prior FYRs, there has never been a CERCLA remedy for this OU, therefore no CERCLA protectiveness statement is appropriate, and Air Force notes in its FYR Report that its review of OU2 is discretionary. Air Force believes that its low-permeability landfill cover is functioning as intended by its 1988 Remedial Action Plan, implemented prior to the listing of the site on the NPL. As outlined in its November 9, 2021, letter, and acknowledged in its FYR Report, Air Force has agreed to follow the CERCLA process, issue a Record of Decision, and implement a CERCLA remedy for the site. Air Force intends to initiate a streamlined Remedial Investigation for OU2 in the coming months. Air Force's FYR Report did not specify an exact date to complete this milestone. By e-mail dated September 22, 2022, Air Force indicated that its milestone date for this work is December 18, 2025. By this letter, EPA agrees with this determination and accepts this milestone date.

## **Operable Unit 3 (IRP Sites 6 and 21)**

EPA agrees with the protectiveness statement in Air Force's Final FYR Report for Operable Unit (OU) 3 (IRP Sites 6 and 21) that the remedies are protective.

EPA will report in the annual Report to Congress its independent finding of short-term protective for the overall site, as required by CERCLA § 121(c). The statutory deadline for the Seventh Hanscom FYR Report is September 27, 2027.

Please feel free to contact Anni Loughlin at 617-918-1273 with any questions.

Sincerely,

**BRYAN  
OLSON**

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