



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

August 4, 2016

Barnstable County Commissioners
ATTN: Mr. Jack Yunits, County Administrator
3195 Main Street, Superior Courthouse
Barnstable, Massachusetts 02630

RE: **BARNSTABLE - HYANNIS**
Release Tracking Number (RTN) 4-0026179
Barnstable Fire/Rescue Training Academy
Off Mary Dunn Road
**NOTICE OF RESPONSIBILITY/
REQUEST FOR IMMEDIATE RESPONSE
ACTION/INTERIM DEADLINE**

**This is an important notice.
Failure to take appropriate action in response
to this notice could result in serious legal consequences**

Dear Mr. Yunits:

The Massachusetts Department of Environmental Protection (MassDEP or the Department), Bureau of Waste Site Cleanup is tasked with ensuring the cleanup of oil and hazardous material releases pursuant to the Massachusetts Oil and Hazardous Material Release Prevention and Response Act (M.G.L. Chapter 21E). This law is implemented through regulations known as the Massachusetts Contingency Plan (310 CMR 40.0000 et seq. – the MCP). Both M.G.L. c. 21E and the MCP require the performance of response actions to provide for the protection of harm to health, safety, public welfare and the environment which may result from releases and/or threats of releases of oil and/or hazardous material (OHM) at disposal sites.

MassDEP has reason to believe that there has been a release to the environment which has resulted in designating the Barnstable Fire/Rescue Training Academy (BFTA) as a disposal site as defined by the MCP. Specifically, perfluoroalkyl substances (PFAS), including perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) and other related compounds that are contained in aqueous film-forming foam (AFFF) have been released to the soil and groundwater at the BFTA (the Site) and thereby impacted the groundwater source which supplies the Mary Dunn Public Water Supply Wells located to the east of the BFTA. The Site is defined by M.G.L. c. 21E and the MCP as any place where OHM have come to be located. MassDEP has assigned Release Tracking Number (RTN) 4-0026179 to this release/Site.

Further, MassDEP has reason to believe that you (as used in this letter, "you" refers to the Barnstable Fire/Rescue Training Facility) are a Potentially Responsible Party (PRP) with liability under M.G.L. c.21E §5, for response action costs. The purpose of this notice is to inform you of your legal responsibilities under State law for assessing and/or remediating the release at the Site. For purposes of this Notice of Responsibility (NOR), the terms and phrases used herein shall have the meaning ascribed to such terms and phrases by the MCP unless the context clearly indicates otherwise.

BACKGROUND INFORMATION

In May 2012, the United States Environmental Protection Agency (EPA) published the final rule "Revisions to the Unregulated Contaminant Monitoring Rule (UCMR3) for Public Water Systems" indicating that thirty chemical constituents, that have not historically been considered as drinking water contaminants, would be analyzed in samples collected from wells serving large public water systems and a representative number of public water systems serving less than 10,000 people from 2013 to 2015.

The contaminants to be analyzed included, among other compounds, PFAS, including PFOS and PFOA. Collectively, PFAS are considered "emerging contaminants" which are contaminants that were previously unregulated by any state or the federal government but due to increasing concerns about their widespread use, reports of their presence in public water supplies, and a growing body of information that the toxicity, mobility and bioaccumulation potential of these compounds have the potential to pose adverse effects to human health and the environment, the EPA included PFAS in their UCMR3 sampling program.

In May 2016, the EPA promulgated a Health Advisory (HA) for PFAS of 0.07 micrograms per liter ($\mu\text{g}/\text{L}$) for PFOS and PFOA combined. The EPA "*Fact Sheet, PFOS and PFOA Drinking Water Health Advisories*" states that if both PFOS and PFOA are detected, the combined concentrations should be compared to the 0.07 $\mu\text{g}/\text{L}$ lifetime HA. The EPA HA is based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice), and was also informed by epidemiological studies of human populations that have been exposed to PFAS. These studies indicate that exposure to PFOA and PFOS above certain concentrations may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).

PFAS have been widely used in industrial and consumer applications, including stain- and water-resistant coatings for fabrics and carpets, oil-resistant coating for paper products approved for food contact, mining and oil well surfactants, floor polishes, insecticide formulations and AFFF.

Given the above, PFAS are therefore considered a hazardous material pursuant to the MCP, specifically 310 CMR 40.0342(1)(a), and is therefore subject to the requirements of M.G.L. c. 21E and the MCP.

RELEASE/SITE SPECIFIC INFORMATION

On November 30, 2013, water samples were collected from the three Mary Dunn Public Water Supply Wells in Hyannis and analyzed for PFAS under the EPA UCMR3 program. At that time, the samples from Mary Dunn Wells #1, #2 and #3 had 0.19 microgram per liter ($\mu\text{g}/\text{L}$), 0.17 $\mu\text{g}/\text{L}$ and 0.11 $\mu\text{g}/\text{L}$ of PFOS, respectively, and the sample from Mary Dunn Well #2 had 0.02 $\mu\text{g}/\text{L}$ of PFOA.

Samples from the Mary Dunn Wells were collected on several occasions and analyzed for PFOS. The results are as follows:

Date/Location	Mary Dunn #1	Mary Dunn #2	Mary Dunn #3
1/9/2015	0.33 µg/L	0.96 µg/L	0.04 µg/L
3/19/2015	0.28 µg/L	1.6 µg/L	Not sampled
4/6/2015	Not sampled	Not sampled	0.11 µg/L

At the time the above samples were collected and analyzed, the EPA Provisional Health Advisory (PHA) was 0.2 µg/L for PFOS. Based on the above information, the Hyannis Water Division removed Mary Dunn Wells #1 and #2 from service and procured treatment for these wells to meet summer water supply demand. Treatment of the water using granulated activated carbon (GAC) from the Mary Dunn Wells #1 and #2 began in July 2015. The treated water was blended with water from Mary Dunn Well #3 to provide water to the distribution system to below the PHA of 0.2 µg/L. After the EPA revised the PHA to the current Health Advisory of 0.07 µg/L in May 2016, the Hyannis Water Division removed Mary Dunn Well #3 from service and procured GAC treatment for this well. The GAC treatment system for Mary Dunn Well #3 was completed and the well was returned to service in July 2016.

Given the fact that AFFF containing PFAS was used at the BFTA (which is located approximately 1,000 feet west of the Mary Dunn Wells), you initiated a subsurface environmental investigation in November 2013 to determine if the PFAS has impacted the groundwater at the BFTA. Results of groundwater sampling conducted in November 2013 indicated that PFOS was detected in the groundwater at concentrations up to 3.9 µg/L. Subsequent analysis indicated that PFOS was detected in the groundwater up to 320 µg/L and that the extent of PFOS detected in the groundwater extended to the Mary Dunn Wells. In addition, soil samples collected from the BFTA contained PFOS at concentrations ranging from 0.002 to 4.9 milligrams per kilogram (mg/kg) and PFOS was detected in both the surface water and the sediment in Flintrock Pond immediately adjacent to the BFTA.

On July 17, 2015 you re-activated recovery well PRW-4 of the pre-existing groundwater recovery and treatment system to reduce the concentration of PFAS in the groundwater upgradient of the Mary Dunn Wells. The groundwater was pumped from PRW-4 at approximately 60 gallons per minute (gpm) and treated with GAC and re-injected upgradient of the recovery well. The groundwater recovery and treatment system has been operating since and has treated approximately 15 million gallons of groundwater.

Given that PFAS have been detected at elevated concentrations in the soil and groundwater at the BFTA, that groundwater flow direction is from the BFTA to the Mary Dunn Wells, and that PFOS has been detected in the samples collected from the Mary Dunn Wells, MassDEP has determined that releases of PFAS from the use of AFFF at the BFTA is a source of PFAS detected in the Mary Dunn Wells.

STATUTORY LIABILITIES

M.G.L. c. 21E and the MCP require the performance of response actions to prevent harm to health, safety, public welfare and the environment which may result from this release and/or threat of release and govern the conduct of such actions.

As a current owner of the property where a release has occurred, you are a Potentially Responsible Party (PRP) with liability under M.G.L. c.21E §5, for response action costs. Section 5 makes the following parties liable under the Commonwealth of Massachusetts: current owners or operators of a site from or at which there is or has been a release or threat of release of oil and/or hazardous material; any person who has owned or operated a site at the time hazardous material was stored or disposed of; any person who

arranged for the transport, disposal, storage or treatment of hazardous material to or at a site; any person who transported hazardous material to a transport, storage or treatment site from which there is or has been a release or threat of release of such material; and any person who otherwise caused or is legally responsible for a release or threat of release of oil or hazardous material at a site.

This liability is "strict", meaning that it is not based on fault, but solely on your status as owner, operator, generator, transporter, disposer or other person specified in M.G.L. c.21E §5. This liability is also "joint and several", meaning that you may be liable for all response action costs incurred at a disposal site regardless of the existence of any other liable parties.

The MCP requires PRPs to take necessary response actions at properties where there is, or has been, a release and/or threat of release of oil and/or hazardous material. If you do not take the necessary response actions, or fail to perform them in an appropriate and timely manner, MassDEP is authorized by M.G.L. c. 21E to perform the work. By taking such actions, you can avoid liability for response action costs incurred by MassDEP in performing these response actions and any sanctions that may be imposed for failure to perform response actions under the MCP.

The MCP requires PRPs and any other person undertaking response actions to perform Immediate Response Actions (IRAs) in response to sudden releases, Imminent Hazards (IH) and Conditions of Substantial Release Migration (SRM). Such persons must continue to evaluate the need for IRAs and notify MassDEP immediately if such a need exists.

If you are a PRP and you have reason to believe that your performance of the necessary response actions is beyond your technical, financial or legal ability, you should promptly notify MassDEP in writing of your inability in accordance with M.G.L. c. 21E , subsection 5(e), and 310 CMR 40.0172. If you assert or demonstrate in compliance therewith that performing or paying for such response action is beyond your ability, subsection 5(e) provides you with a limited defense to an action by the Commonwealth for recovery of two to three times MassDEP's response action costs and 310 CMR 40.0172 provides you with a limited defense to MassDEP's assessment of civil administrative penalties.

You should be aware that you may have claims against third parties for damages, including claims for contribution or reimbursement for the costs of cleanup. Such claims do not exist indefinitely but are governed by laws that establish the time allowed for bringing litigation. MassDEP encourages you to take any action necessary to protect any such claims you may have against third parties.

You must employ or engage a Licensed Site Professional (LSP) to manage, supervise or actually perform the necessary response actions at this site. You may obtain a list of the names and addresses of licensed professionals from the Board of Registration of Hazardous Waste Site Cleanup Professionals by calling (617) 556-1091, or visiting <http://www.state.ma.us/lsp>.

Response actions at the Site will not be deemed to be completed unless and until a level of No Significant Risk as defined at 310 CMR 40.0900 exists or has been achieved in compliance with the MCP. The MCP requires persons undertaking response actions at a disposal site to submit to MassDEP a Permanent Solution Statement prepared by a LSP upon determining that a level of No Significant Risk exists or has been achieved at the Site. You will be required to pay Annual Compliance Assurance Fees for the Site until a Permanent Solution is achieved.

NECESSARY IMMEDIATE RESPONSE ACTIONS AND INTERIM DEADLINE

The detection of PFAS in the samples collected from the Mary Dunn Wells has been addressed by the GAC treatment systems installed by the Hyannis Water Department. However, additional public and private water supply wells are located downgradient of the BFTA. Releases of oil and/or hazardous materials (OHM) that impact public and private water supplies are releases that could pose an Imminent Hazard and, pursuant to 310 CMR 40.0311(7), require notification to MassDEP within two hours. As such these releases require that an Immediate Response Action (IRA) be conducted pursuant to 310 CMR 40.0412(1).

Therefore, MassDEP hereby requests that you submit an IRA Plan prepared in compliance with 310 CMR 40.0424 to evaluate whether Imminent Hazards exist relative to public and private water supply wells downgradient of the BFTA. The IRA Plan should identify all public and private water supply wells located downgradient of the BFTA and provide any analytical data for any of these wells that have been sampled and analyzed for PFAS. If any public or private water supply well has not been sampled and analyzed for PFAS, the IRA Plan should include a schedule for conducting this work. The IRA Plan should also include the measures that BFTA will conduct to prevent, eliminate, and/or abate any hazards associated with consumption of the drinking water impacted by PFAS above the HA of 0.07 µg/L. Such measures can include, but are not limited to, provision of bottled water, installation of GAC system(s), or connection of private water supply wells to public water. A schedule for implementing these measures should be included in the IRA Plan.

In addition, MassDEP is of the opinion that reducing the mass of PFAS detected in the soil and groundwater at the BFTA is necessary to prevent, eliminate, or minimize harm to health, safety, public welfare or the environment and, pursuant to 310 CMR 40.0412(4), requests that the IRA Plan include a proposal designed to reduce the concentration of PFAS in the groundwater migrating off the BFTA Site including, but not limited to:

1. Excavating the soil "hot spot" contaminated with PFAS that is acting as an on-going source of groundwater contamination; and/or
2. Expanding the existing groundwater recovery and treatment system to include additional recovery wells or an increased pumping rate to decrease the mass of PFAS in the groundwater at the BFTA.

MassDEP hereby requests that you submit the IRA Plan on or before **September 15, 2016**.

INTERIM DEADLINE

The date established above constitutes an Interim Deadline established pursuant to 310 CMR 40.0167. Failure to comply with an Interim Deadline may result in enforcement actions by the MassDEP, including, but not limited to, the issuance of a Notice of Noncompliance, an Administrative Penalty, and/or Enforcement Orders, or, referral to the Massachusetts Attorney General's Office.

ADDITIONAL RESPONSE ACTIONS

Additional submittals are necessary with regard to this notification, including, but not limited to, the filing of a written IRA Plan, IRA Completion Statement and/or a Permanent Solution Statement (PSS). The MCP requires that a fee of \$1,200.00 be submitted to the Department when a Permanent Solution Statement is filed greater than 120 days from the date of initial notification. Specific approval is required from the

Department for the implementation of all IRAs and may be required for Release Abatement Measures (RAMs). RAMs may not be conducted until a RAM Plan is submitted pursuant to 310 CMR 40.0443. Assessment activities, the construction of a fence and/or the posting of signs are actions that are exempt from this approval requirement.

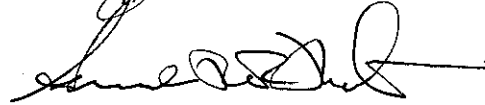
The MCP requires persons undertaking response actions to perform IRAs in response to sudden releases, IHS and Conditions of SRM. In accordance with 310 CMR 40.0426, an IH Evaluation shall be performed as part of an IRA within 14 days of obtaining knowledge of such a condition and shall be submitted to the Department within 60 days.

In addition to verbal notification, 310 CMR 40.0333 requires that a completed Release Notification Form (RNF) be submitted to MassDEP **within sixty (60) calendar days of receipt of this Notice of Responsibility.**

This site shall not be deemed to have had all the necessary and required response actions taken unless and until all substantial hazards presented by the release and/or threat of release have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP.

If you have any questions relative to this Notice, please contact Angela Gallagher at the letterhead address or by calling (508) 946-2790. All future communication regarding this release must reference the following Release Tracking Number: **4-0026179.**

Sincerely,



Gerard M.R. Martin
Deputy Regional Director
Bureau of Waste Site Cleanup

M/AG/ag

CERTIFIED MAIL # 7016 0750 0000 1748 8462
RETURN RECEIPT

ec: Town of Barnstable
Board of Health
Selectmen's Office

Barnstable Department of Public Works, Water Supply Division
Dan Santos, DPW Director, Daniel.Santos@town.barnstable.ma.us
Hans Keijser, Water Superintendent, Hans.Keijser@town.barnstable.ma.us

DEP – SERO

Millie Garcia-Serrano, Regional Director
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Notice of Responsibility/Request for Immediate Response Action/Interim Deadline

DEP – Boston

Paul Locke, BWSC Assistant Commissioner

LSP

Tom Cambareri

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cc:

DEP - SERO

Regional Enforcement Office