

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
New Castle County Airport Removal Assessment - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #5
Final POLREP
New Castle County Airport Removal Assessment

New Castle, DE

To:
From: Kelley Chase, On-Scene Coordinator
Date: 6/27/2018
Reporting Period: 6/23/2015 through 6/27/2018

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type:
Response Lead: EPA	Incident Category: Removal Assessment
NPL Status: Non NPL	Operable Unit:
Mobilization Date: 8/19/2014	Start Date: 7/11/2014
Demob Date:	Completion Date: 6/27/2018
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

Removal Assessment

1.1.2 Site Description

Water samples collected from public water supply wells located in New Castle County, Delaware were found to contain perfluorinated chemicals (PFCs) including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). PFOS and PFOA are organic chemicals used in repellants for stains, water, oil, and grease. Commercial and consumer products containing or degrading to these compounds were first introduced in the 1950s. They have been used in a variety of products such as the fabric of upholstered furniture, carpets, nonstick cookware, floor wax, and the lining of microwave popcorn bags. Certain firefighting foams also contain these chemicals.

In 2009, EPA issued provisional health advisory levels (HALs) for PFOS and PFOA. The provisional HAL values were 0.2 micrograms per liter of water ($\mu\text{g/L}$) for PFOS and 0.4 $\mu\text{g/L}$ for PFOA. There are no drinking water standards for these chemicals. From 2013 through 2015, pursuant to the federal Unregulated Contaminant Monitoring Rule 3 (UCMR3), EPA required public water systems that serve more than 10,000 people to sample for a group of 28 unregulated contaminants, including certain PFCs including PFOS and PFOA.

Samples taken by the Artesian Water Company (Artesian) as part of the federal UCMR3 requirements showed levels of PFOS above EPA's provisional health advisory level (HAL) in one public water supply well. The City of New Castle Municipal Services Commission (MSC) voluntarily sampled three of its supply wells in the area. PFOS and PFOA were detected in the City of New Castle wells above the provisional HALs. Artesian and the City of New Castle MSC removed the affected wells from service after consultation with the Delaware Division of Public Health (DPH). Artesian and New Castle MSC are working with the state to determine the potential source(s) of contamination and expect to return the affected wells to service once the appropriate treatment for PFCs is installed.

The Delaware Department of Natural Resources and Environmental Control (DNREC) requested EPA's assistance in determining whether private drinking water wells and monitoring wells in the vicinity of the New Castle County Airport have been impacted by PFCs.

EPA is coordinating with DNREC, DPH, the Delaware Air National Guard, the Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR), the City of New Castle

MSC and Artesian to ensure that public health is protected.

1.1.2.1 Location

The Site is located in New Castle, New Castle County, Delaware.

1.1.2.2 Description of Threat

EPA worked to identify private drinking water wells in the area of the New Castle County Airport (NCCA) to determine if they have been impacted by perfluorinated chemicals (PFCs), including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), and to determine if additional actions are needed to protect human health and the environment.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA worked with DNREC, the City of New Castle MSC and Artesian to identify any private drinking water wells in the area of the NCCA. EPA reviewed DNREC's well permit information and customer service information from the City of New Castle MSC and Artesian. Based on this review, the majority of the residences and business in the vicinity of the airport (an area covering a radius of roughly one to one and a half miles around the airport) were found to be served by public drinking water. Only one property in the area was found to have an active private drinking water well.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 19, 2014, with the permission of the property owner, EPA and its contractor, Weston Solutions, Inc. collected water samples from five ground water monitoring wells located at the New Castle County Airport (NCCA). The monitoring wells were installed by DNREC as part of a previous investigation. The samples were analyzed for six PFCs that are included under UCMR3. PFOS was detected in one monitoring well at concentrations just above the provisional health advisory level of 0.2 µg/L.

On September 23, 2014, with the permission of the property owner, EPA and its contractor collected water samples from a private drinking water well located near the NCCA. The sample results from the private drinking water well did not exceed EPA's provisional health advisory levels.

On April 29, 2015, with the permission of the property owner, EPA and its START contractor, Weston Solutions, Inc. collected water samples from nine ground water monitoring wells located at the NCCA. Wells sampled included the five wells (MW-01, MW-02, MW-03, MW-10, MW-11) sampled last year and four additional wells (MW-12, MW-13, MW-14, MW-17). While on-site, START also checked wells MW-16 and MW-18, but found both wells to be dry.

During the reporting period beginning May 1, 2015 through June 22, 2015, the OSC received and reviewed the validated results of the monitoring well sampling conducted on April 29, 2015 at the NCCA. Low levels of PFCs were detected in all the monitoring wells sampled. PFOS was detected in MW-17 at a concentration of 0.85 µg/L which exceeded EPA's provisional health advisory level of 0.2 µg/L for PFOS in drinking water. None of the other samples collected exceeded EPA's provisional health advisory levels for PFOS or PFOA. PFOS was detected at a concentration of 0.181 µg/L in MW-1. During the initial sampling event, conducted in August 2014, PFOS was detected in MW-1 at a concentration of 0.268 µg/L.

Activities discussed below were completed during this reporting period (June 23, 2015 through June 25, 2018).

The OSC coordinated with DNREC and other EPA programs regarding the ongoing investigation of potential sources of the PFOS/PFOA groundwater contamination in the vicinity of the NCCA. Additional existing monitoring wells were identified for potential sampling both at the NCCA and in the surrounding area. The OSC and other EPA representatives met DNREC representatives and with representatives from the Delaware Air National Guard to discuss sampling of monitoring wells on the Guard's base located at the NCCA. Pursuant to these discussions, the Delaware Air National Guard began investigations to determine the extent of PFOS/PFOA contamination at the base. The OSC sought access to sample existing monitoring wells located on two privately owned properties located near the NCCA. The property owners would not agree to access for sampling. Since the properties were not suspected sources of PFOS/PFOA, the OSC did not pursue further attempts to gain access. Several other monitoring wells, previously installed at other nearby locations, were found to have been abandoned and therefore, were no longer available for sampling.

In May 2016, EPA replaced the provisional health advisories discussed above with more conservative levels that accounted for a life-time of exposure to PFOA and PFOS. EPA established the life-time health advisory levels at 0.070 µg/L which is equivalent to 0.070 parts per billion or 70 parts per trillion. The new health advisories apply to each individual chemical or, if both PFOA and PFOS are present, the combined concentrations of each chemical.

In response to the lowering of the health advisory levels, the OSC requested permission to resample the residential well located near the NCCA. With the owner's permission, the well was resampled on November 17, 2016. Two water samples were collected from the well. PFOA was detected at a concentration of 57.1 nanograms per liter (ng/L) or 57.1 parts per trillion in the first sample and at a concentration of 75.5 ng/L or 75.5 parts per trillion in the second sample. PFOS was not detected. The OSC mailed the sampling results to the property owner and requested permission to conduct further investigations. The OSC made several attempts to reach the owner, however, the owner did not respond. DNREC has also attempted to

contact the owner.

2.1.2 Response Actions to Date

In 2015, the City of New Castle installed a carbon filtration system and returned the affected public water wells to service. Artesian had shut down two wells in 2014 and has since returned one well to service after installing a carbon filtration system.

No EPA response actions were conducted.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

No further activities are planned under this Removal Assessment.

2.2.1.1 Planned Response Activities

No EPA response activities are currently planned.

2.2.1.2 Next Steps

The Removal Assessment will be closed out.

DNREC, under a cooperative agreement with EPA, is conducting additional investigations to determine the source and extent of PFOS/PFOA contamination in the vicinity of the NCCA.

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Delaware Department of Natural Resources and Environmental Control (DNREC)
Delaware Division of Public Health (DPH)
Delaware Air National Guard
Delaware River and Bay Authority (DRBA)
New Castle County
City of New Castle Municipal Services Commission (MSC)
Artesian Water Company (Artesian)
Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR)

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.