Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0052868**
Facility Type	**Industrial**	APS ID	**1125208**
Major / Minor	**Minor**	Authorization ID	**1505550**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**BAE Systems**	Facility Name	**BAE Systems GWCU**
Applicant Address	144 DW Highway, MNH25-2-2G4-1	Facility Address	305 Richardson Road
	Merrimack, NH 03054-4898		Lansdale, PA 19446-1495
Applicant Contact	John LeFebvre	Facility Contact	John LeFebvre
Applicant Phone	(603) 885-0629	Facility Phone	(603) 885-0629
Client ID	133835	Site ID	254607
SIC Code	4959	Municipality	Montgomery Township
SIC Description	Trans. & Utilities - Sanitary Services	County	Montgomery
Date Application Received	October 21, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal

Summary of Review

The applicant requests renewal of an NPDES permit to discharge treated groundwater from a groundwater remediation system to an UNT to West Branch Neshaminy Creek.

In the late 1970's, TCE/PCE groundwater contamination was detected at the site. The facility signed a consent decree with the Department in 1981, and a groundwater cleanup system commenced operation in 1986. This site had an on-site tank that leaked TCE/PCE. This site is also within a regional North Penn NPL (superfund) area.

The site is currently owned by CAES Systems, LLC. BAE Systems retains ownership and responsibility of the groundwater treatment system at the site. BAE does not maintain responsibility for the stormwater at the site.

The air stripping tower is used to treat groundwater impacted by chlorinated solvents, primarily Trichloroethene (TCE). Groundwater was historically generated (from 1986-2010) through a continuous pump and treat process. Groundwater is currently generated (2010-present) in intermittent batches coinciding with periodic groundwater monitoring activities, the last of which occurred in 2021.

The planned proposed upgrades within the next five years are the installation of a new groundwater extraction and treatment system at an anticipated continuous initial design flow of 91 gallons per minute and a maximum future expansion design flow of 150 gallons per minute. The new treatment system will treat volatile organic compounds, including TCE, through a new air stripping unit and treat PFAS substances, including PFOA and PFOS through ion exchange resin vessels prior to discharge at a location located slightly downstream of the current discharge location. The treatment system will return to operating on a continuous basis within the next 5 years.

This permit is required to be amended for the proposed upgrades since the upgrades involve the relocation of the current Outfall 001.

Approve	Deny	Signatures	Date
X		*Sara Abraham* Sara Reji Abraham, E.I.T. / Project Manager	December 3, 2024
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	12/3/2024

Summary of Review

Review of sampling results shows the discharge is in compliance with the existing permit.
No comments received from Operations section or Environmental Cleanup Program.

Effluent Limitation Guidelines (ELGs) have not been developed for Discharges from Chlorinated Solvent Product Contaminated Groundwater Remediation Systems.

This is an existing discharge to a dry swale. Therefore, the discharge is subject to requirements under the 'Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales and Storm Sewers (391-2000-014)'. Generally, the effluent limits will ensure protection of groundwater for drinking water use, using the following considerations: (i) if the maximum contaminant level (MCL) has been promulgated for the chemical in question, the MCL is the permit limit (ii) if no MCL has been finalized, the effluent limit will be set equal to the human health based criterion developed specifically for groundwater.

Trichloroethylene (TCE) was selected as the indicator pollutant, because it is the one compound that is consistently detected in the groundwater at concentrations significantly above relevant cleanup standards.
The effluent limit established in the current permit for TCE, 0.005 mg/l (MCL) is recommended to carry over to the draft permit. Standard pH limit, 6.0 to 9.0 and a TSS limit of 30 mg/l (secondary treatment standard / DRBC) are also carried over to the draft permit.

Per- and polyfluoroalkyl substances (PFAs) were discovered in the local groundwater during a Federal EPA Unregulated Contaminant Rule (UCMR3) sampling effort. Current ground water treatment system includes a granular activated carbon treatment for PFOA and PFOS.

The current permit has a limit of 0.07 ug/l (70 ng/l) for Total PFOA and PFOS. This was based on the drinking water health advisories at the time. There were no published drinking water MCLs for these contaminants at the last permit renewal. However, currently we have drinking water MCLs established (Chapter 109, Safe Drinking Water) as follows: 14 ng/l for PFOA and 18 ng/l for PFOS. Therefore, it is recommended to include these MCLs as average monthly limits for PFOA and PFOS in the draft permit. Instantaneous maximum limits are also included in the permit with a multiplier of 2.5. Review of the sampling results from 2020 and 2021 shows the facility is able to achieve these proposed limits.
According to our current guidance monitoring for the parameters HFPO-DA and PFBS are also included in the draft permit.

Our guidance give permittee an option to discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detect results for all of these parameters at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. Since permit limits are included for PFOA and PFOS in the permit, if the permittee wants to discontinue monitoring based on this option the permittee must submit amendment application based on the sampling results.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Act 14 Notifications:

Montgomery Township - September 30, 2024
Montgomery County - September 30, 2024

Summary of Review
Permit Conditions: A. Acquire Necessary Property Rights B. Proper Sludge Disposal C. WQM Requirement D. BAT/ELG Reopener E. Dry Stream F. No Stripper Tower Wastewater

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.1
Latitude	40º 15' 59.86"	Longitude	-75º 14' 46.38"
Quad Name	Doylestown	Quad Code	1644
Wastewater Description:	Groundwater Cleanup Discharge		
Receiving Waters	Unnamed Tributary of West Branch Neshaminy Creek (WWF, MF)	Stream Code	02878
NHD Com ID	25479138	RMI	0.2500
Q_{7-10} Flow (cfs)	0.0*	Q_{7-10} Basis	Dry Swale/Intermittent Stream
Watershed No.	2-F	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	flow regime modification, siltation		
Source(s) of Impairment	site clearance (land development or redevelopment), urban runoff/storm sewers		
TMDL Status	Final, 04/09/2003**	Name	Neshaminy Creek

* From previous fact sheet.
**Nutrient portion of Neshaminy Creek TMDL was withdrawn.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30.0	XXX	75.0	1/month	Grab
Trichloroethylene	XXX	XXX	XXX	0.005	XXX	0.013	1/month	Grab
PFOA (ng/L)	XXX	XXX	XXX	14	XXX	35	1/month	Grab
PFOS (ng/L)	XXX	XXX	XXX	18	XXX	45	1/month	Grab
PFBS (ng/L)	XXX	XXX	XXX	Report	XXX	Report	1/month	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	Report	XXX	Report	1/month	Grab