

**NORTH CAROLINA DIVISION OF
AIR QUALITY
Application Review**

Issue Date: Date needed

Region: Raleigh Regional Office
County: Franklin
NC Facility ID: 3500067
Inspector's Name: Abdul Kadir
Date of Last Inspection: 04/03/2024
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): K-Flex USA, LLC</p> <p>Facility Address: K-Flex USA, LLC 100 K-Flex Way Youngsville, NC 27596</p> <p>SIC: 3086 / Plastics Foam Products NAICS: 32615 / Urethane and Other Foam Product (except Polystyrene) Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 15A NCAC 02D .0515, .0516, .0521, and .1806 NSPS: IIII NESHAP: ZZZZ PSD: NA PSD Avoidance: VOC NC Toxics: 02D .1100 and 02Q .0711 112(r): Isobutane Other: PFAS Disclosure</p>
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Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 3500067.24A Date Received: 05/13/2024 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 07866/T23 Existing Permit Issue Date: 06/11/2020 Existing Permit Expiration Date: 11/30/2024</p>
Klaus Winterholler Engineering Director 100 K-Flex Way Youngsville, NC 27596	Giuseppe Guarino President (919) 435-5533 100 K-Flex Way Youngsville, NC 27596	Klaus Winterholler Engineering Director 100 K-Flex Way Youngsville, NC 27596	

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.0100	1.69	82.72	6.01	1.13	0.2364	0.0604 [Carbon disulfide]
2021	0.0100	1.75	77.85	8.97	1.82	0.3570	0.0985 [Carbon disulfide]
2020	0.0100	2.23	85.37	9.83	2.13	0.4610	0.1080 [Carbon disulfide]
2019	0.0100	2.36	122.19	10.23	2.19	0.6827	0.2078 [Hexane, n-]
2018	0.0100	1.66	86.76	11.97	2.46	0.4006	0.1261 [Carbon disulfide]

<p>Review Engineer: Jacob Larson</p> <p>Review Engineer's Signature: _____ Date: xx</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue: 07966/T24 Permit Issue Date: Date needed Permit Expiration Date: Date needed</p>
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1. Purpose of Application

K-Flex USA, LLC (K-Flex) currently holds Title V Permit No. 07866T23 with an expiration date of November 30, 2024 for a commercial and industrial pipe insulation manufacturing facility in Youngsville, Franklin County, North Carolina. This permit application is for a permit renewal without modification. The renewal permit was received on May 13, 2024, or at least six months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

2. Facility Description

K-Flex USA, LLC (“K-Flex”) is a manufacturer of commercial and industrial pipe insulation. The pipe insulation products are manufactured using ethylene propylene diene monomer (EPDM), nitrile butadiene rubber (NBR), cross-linked polyethylene (XPE), expanded polyethylene (EPE) mixing, extrusion and curing processes.

3. History/Background/Application Chronology

History/Background

- | | |
|-------------------|---|
| December 06, 2019 | Air Permit No. 07966T22 was issued with an expiration date of November 30, 2024. |
| June 11, 2020 | Administrative amendment Air Permit No. 07866T23 to include ES-11 where it was inadvertently omitted from several sections of the permit. |
| June 26, 2020 | Facility received Notice of Deficiency (NOD) for incomplete visible emission records. NOD was resolved July 20, 2020. |
| March 12, 2024 | Facility received Notice of Violation (NOV) for late Annual Compliance Certificate. NOV was resolved on March 27, 2024 |

Application Chronology

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|---------------|--|
| May 13, 2024 | DEQ received permit application 3600067.24A for Title V renewal. |
| May 24, 2024 | Sent acknowledgment letter indicating that the application for permit renewal was complete. |
| May 30, 2024 | Technical additional information request for PFAS disclosure. Received information on June 26, 2024. |
| June 13, 2024 | Draft permit and review forwarded for comments to Permitting Supervisor. |
| July 02, 2024 | Comments received from Rahul Thaker, Permitting Supervisor. |
| July 02, 2024 | Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received July 15, 2024. |

July 02, 2024 Draft permit and review forwarded to the Raleigh Regional Office for comments. No comments were received July 18, 2024.

July 02, 2024 Draft permit forwarded to the applicant for comments. Minor comments were received July 03, 2024.

XXXX xx, 2024 Draft permit and permit review forwarded to public notice.

XXXX xx, 2024 Public comment period ends. ___ comments received.

XXXX xx, 2024 EPA comment period ends. ___ comments received.

XXXX xx, 2024 Permit issued.

4. Permit Modifications/Changes and TVEE Discussion

The following table describes the modifications to the current permit as part of the renewal process.

Page No.	Section	Description of Changes
--	Cover page and throughout permit	<ul style="list-style-type: none"> Updated all dates and permit revision numbers.
3	Cover page	<ul style="list-style-type: none"> Added "Notice Regarding The Right To Contest A Division Of Air Quality Permit Decision" page
4	Summary of Changes to Permit	<ul style="list-style-type: none"> Added summary of changes made to Permit No. 07966T23, according to the most recent requirements of the renewal Title V permit
2	Table of Contents	<ul style="list-style-type: none"> Added Section 3.0 as "Insignificant Activities List" Added Section 4.0 as "General Permit Conditions"
3	List of Acronyms	<ul style="list-style-type: none"> Added "List of Acronyms"
4	Section 1 Emission Source Table	<ul style="list-style-type: none"> Updated ES-6A, D, and F emission source descriptions Updated ES-6B and C emission source description
6	2.1 A.1.c	<ul style="list-style-type: none"> Corrected pressure drop to 180 from 120 millimeters of water
6	2.1 A.2	<ul style="list-style-type: none"> Added 15A NCAC 02D .0516 condition
8	2.2 A.1	<ul style="list-style-type: none"> Updated toxics condition and table to current shell language
9	2.2 A.2	<ul style="list-style-type: none"> Updated TPER table to current shell version
12	2.2 A.5	<ul style="list-style-type: none"> Added PFAS disclosure condition
13	Section 3	<ul style="list-style-type: none"> Added Insignificant Activities as Section 3 of the Title V Permit Added fourth boiler to IES-6 with additional 2.1 million btu per hour total capacity. Updated description for IES-8 and IES-14
14-21	Section 4	<ul style="list-style-type: none"> Added General Conditions as Section 4 of the Title V Permit Updated General Conditions to version 7.0, 08/21/2023

The following TVEE changes will be made as a result of this renewal:

- ES-6A updated description to "Hot oil heated continuous curing oven No. 1"
- ES-6B updated description to "Batch curing oven No. 1 (Natural gas-fired 0.88 million Btu per hour maximum heat input capacity)"
- ES-6C updated description to "Batch curing oven No. 2 (Natural gas-fired 0.88 million Btu per hour maximum heat input capacity)"
- ES-6D updated description to "Hot oil heated continuous curing oven No. 2"
- ES-6F updated description to "Hot oil heated continuous curing oven No. 3"
- IES-14 updated description to "continuous oven natural gas-fired hot oil boiler 2 (3.5 million Btu per hour capacity)"

- IES-6 updated description to “Four natural gas-fired hot water boilers (6.31 million Btu per hour total capacity)”
- IES-8 updated description to “continuous oven natural gas-fired hot oil boiler (3.0 million Btu per hour capacity)”

5. Regulatory Review

K-Flex is subject to the following requirements. The facility’s equipment and operations have not changed since the last renewal in 2019. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

- 15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes – This regulation establishes an allowable emission rate for particulate matter (PM) from any stack, vent, or outlet resulting from any industrial process for which no other emission control standards are applicable. The regulation applies to Total Suspended Particulate (TSP) or PM less than 100 micrometers (µm). The allowable emission rate is calculated using the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{(for process rates less than or equal to 30 tons per hour), or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{(for process rates greater than 30 tons per hour)}$$

Where: E = allowable emission rate in pounds per hour (lb/hr)
P = process weight rate tons per hour (tph)

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These sources (ID Nos. ES-6A, ES-6B, ES-6C, ES-6D, ES-6F, ES-7, ES-8, ES-9, ES-10 and ES-11) shall be controlled by the filters and scrubbers (ID Nos. B-9, B-10, B-11, C-9A, C-10A, C-11A, C-9B, C-10B, and C-11B). They are subject to monthly monitoring, recordkeeping, and semiannual reporting. During the inspection performed by Abdule Kadir on April 03, 2024, the facility was in compliance with all requirements of this condition. Continued compliance is anticipated.

- 15 NCAC 02D .0516, Sulfur Dioxide Emission from Combustion Sources: This rule limits sulfur dioxide emissions to 2.3 pounds per million BTU heat input from combustion sources. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas and No. 2 fuel oil from curing ovens (ID Nos. ES-6B and ES-6C). Continued compliance is anticipated.
- 15A NCAC 02D .0521, Control of Visible Emissions – Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. This regulation limits visible emissions to no more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in an hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. To ensure compliance, visible emissions from these sources (ID Nos. ES-6A, ES-6B, ES-6C, ES-6D, ES-6F, ES-7, ES-8, ES-9, ES-10 and ES-11) require monthly monitoring, on site record keeping and Semiannual reporting. During the inspection performed by Abdule Kadir on April 03, 2024, the facility was in compliance with all requirements of this condition. Continued compliance is anticipated.
- 15 NCAC 02D .1806, Control and Prohibition of Odorous Emissions (State-enforceable only condition): The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous

emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. Continued compliance is anticipated.

- 15A NCAC 02Q .0308(a); 15A NCAC 02Q .0309(b), Disclosure of Information Relating to Emissions of Fluorinated Chemicals (State-enforceable only condition): Permittee has ongoing duty to disclose the presence of material containing fluorinated chemicals that have the potential to emit fluorinated chemicals into the environment. Disclosers shall be submitted to the regional office supervisor within thirty days of facility becoming aware of such information. As part of the renewal process, the applicant was requested to respond to a series of PFAS related questions developed by the Department. These questions were developed to begin the creation of a database of potential sources of PFAS. DEQ's PFAS questionnaire and applicant responses are included in Appendix.

6. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS

NSPS IIII

The emergency generator (ID No. IES-5) is subject to Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subpart IIII. IES-5 was manufactured in 2009 and installed in 2012 with the EPA family code (8PKXL04.4NJ1). K-Flex complies with NSPS Subpart IIII by purchasing an engine certified to NSPS Subpart IIII for the model year and maximum engine power. This condition has not changed as a result of this renewal. Continued compliance is expected.

NESHAP/GACT

GACT ZZZZ

Emergency generator (ID No. IES-5) has no other requirements under Subpart ZZZZ, except to comply with the requirements of NSPS 40 CFR Part 60, Subpart IIII. The emergency generator is classified as an insignificant activity under 15A NACAC 02Q .0503(8) because it has potential emissions of less than five tons per year of criteria pollutants. This condition has not changed as result of this renewal. Continued compliance is expected.

PSD

K-Flex has requested and accepted a PSD avoidance condition under 15A NCAC 02D .0317 to avoid 15A NCAC 02D .0530 applicability by limiting VOC emissions from the facility to less than 250 tons per year. Since the other existing sources (natural gas combustion sources, emergency generators, and printing/cladding/gluing operations) at the site have potential VOC emissions estimated at 34 tons per year, the EPE extrusion lines will continue to be limited to 216 tons per year to ensure the total facility-wide VOC emissions stay below 250 tons per year. This permit application does not affect the PSD status of the facility as it remains a PSD minor source. Franklin County's minor source baseline has not been triggered.

EPE is a non-crosslinked, closed-cell polyethylene foam made from low density polyethylene (LDPE) resins. EPE is manufactured using an extrusion process involving injection of a blowing agent to achieve the desired closed-cell structure and physical properties. Raw materials, including LDPE pellets and additives, are loaded into a hopper and processed through a blending/extrusion line, where a blowing agent is injected near the head of the extruder. The blowing agent, isobutane, will be emitted as a volatile organic compound (VOC) with a permit restriction to limit potential facility-wide VOC emissions to less than the PSD major source threshold.

The VOC emissions are directly from isobutane use, that is all (100%) assumed to be emitted to the atmosphere after extrusion as well as during cooling/cutting/storage of EPE. Each extrusion line is identical, and each utilizes 0.4 liter per minute (l/min) pumps. The maximum isobutane injection rate per pump is 29.7 lb/hr based on an isobutane density of 4.686 lb/gal and other basic unit conversions. As a result, the maximum isobutane daily usage for both pumps is 1,426 lb/day resulting in a potential of 519,064 lb/year or 260 tpy of VOCs. The existing facility sources (natural gas combustion sources, emergency generators, and printing/cladding/gluing operations) already potentially emit 34 tpy of VOCs, so the VOC/isobutane emissions will be limited to less than 216 tpy to keep total facility-wide VOC emissions to less than 250 tpy. Therefore, the isobutane usage shall be limited to 432,000 pounds over a 12-month rolling period. Compliance is expected with actual use of isobutane being estimated at 191,100 lb/yr based on anticipated actual isobutane usage of 735 lb/day with 2 lines/pumps running 5 days/week and 24 hours/day. The facility conservatively monitors the total isobutane usage each month by performing a mass balance calculation (see below) of total isobutane shipments received while subtracting out the isobutane storage tank weight. Continued compliance is expected.

The use of isobutane in extrusion lines shall be limited such that VOC emissions shall not exceed 216 tons for any consecutive 12-month period. Calculations shall be made monthly and recorded in a logbook (written or in electronic format), according to the following formula for total isobutane usage:

$$V = X + Y - Z$$

Where: V = the total actual emissions of VOC/isobutane in pounds per month
X = the previous month-end isobutane storage tank weight in pounds
Y = the total isobutane shipments received during the month in pounds
Z = the current month-end isobutane storage tank weight in pounds

112(r)

K-Flex utilizes isobutane as a blowing agent for the EPE extrusion process. Isobutane is a regulated substance under Section 112(r) and has a threshold quantity of 10,000 pounds. K-Flex stores the isobutane in a 12,000-gallon capacity storage tank that results in an equivalent of 56,232 pounds. Therefore, K-Flex is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in 15A NCAC 02D .2100, "Risk Management Program," as promulgated in 40 CFR Part 68.

K-Flex shall comply with following Recordkeeping/Reporting Requirements:

- a. The Permittee shall submit an update to the Risk Management Plan (RMP) to EPA pursuant to 40 CFR 68.150 or as specified in 40 CFR 68.10.
- b. The Permittee shall revise and update the RMP submitted under 40 CFR 68.150 at least every five years from the date of the most recent update required by 40 CFR 68.190(b)(2) through (b)(7) and 68.195.
- c. When the Permittee submits the Annual Compliance Certification required by General Condition P, the Permittee shall include a statement that the facility is in compliance with all requirements of 15A NCAC 02D .2100, including the registration and submission of the risk management plan.

K-Flex appeared to be in compliance based on the Section 112(r) inspection by Mr. Abdul Kadir of the Raleigh Regional Office on April 03, 2024. Continued compliance is expected.

CAM

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) located at a facility required to obtain a Title V permit that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre-November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at major facilities that have pre-controlled emissions above the major source threshold and use a control device to meet an applicable standard. Each controlled source was evaluated for CAM applicability, and it has determined that the sources either do not have a control device to meet compliance with an emission limit or a standard for a federally regulated pollutant or the sources have uncontrolled potential emission of less than 100 tons. Therefore, CAM does not apply to this facility at this time.

7. Facility Wide Air Toxics

15A NCAC 02D .1100, CONTROL OF TOXIC AIR POLLUTANTS

The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated June 05, 2017 for the facility's toxic air pollutant emissions as listed in the table below. The original modeling analysis was reviewed and approved by the AQAB on June 26, 2017. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

Note: Continuous hot oil boiler oven 1 (ID No. IES-8) and 3 hot water heaters (ID No. IES-6) are not included in the modeling since they meet the definition of a combustion source per Rule 02Q .0703 and were originally permitted prior to July 10, 2010. The boiler oven 1 and the three hot water heaters emissions are low, and the impact on the modeling should be minimal.

The two heat generators (ID Nos. IES-16 and IES-17) were not included in the modeling since these heaters will not be operational unless the curing ovens are not running, and the associated natural gas-fired hot oil boilers are not burning natural gas.

Affected Sources	Toxic Air Pollutant (CAS)	Emission Limits*
Continuous oven curing operation 1 (ES-6A), Batch oven curing operation 1 (ES-6B), Batch oven curing operation 2 (ES-6C), Continuous oven curing operation 2 (ES-6D), Continuous curing oven	Acrolein (107-02-8)	0.0949 pounds per hour
	Acrylonitrile (107-13-1)	5.07 pounds per hour combined and 25.4 pounds per day combined
	Ammonia (7664-41-7)	37.9 pounds per hour combined

No. 3 (ES-6F)	Benzene (71-43-2)	254 pounds per year combined
Mixing operations (ES-7, ES-8 and ES-10), and Dosing operation (ES-9 and ES-11), and continuous oven hot oil boiler 2 (IES-14), continuous curing oven No. 3 natural gas-fired hot oil boiler 2 (IES-15), diesel-fired emergency generator (IES-5), and propane-fired emergency generator (IES-9)	Acrolein (107-02-8)	0.12 pounds per hour combined
	Acrylonitrile (107-13-1)	1.11 pounds per hour combined and 5.56 pounds per day combined
	Ammonia (7664-41-7)	3.03 pounds per hour combined
	Benzene (71-43-2)	11.2 pounds per year combined

Compliance with the optimized TAP limits is expected with the proper operation of the scrubbers (C-11A and C-11B) for the control of ammonia as below:

A monthly visual inspection of the system ductwork and material collection units for leaks including inspection of the scrubbers' pressure drop (maximum of 180 millimeters of water for cleaning), spray nozzles, packing material, chemical feed system, and the cleaning/calibration of all associated instrumentation.

15A NCAC 02Q .0711, EMISSION RATES REQUIRING A PERMIT

The permit lists several NC toxic air pollutants (TAPs) and their respective toxic permit emission rates (TPERs) as established in 15A NCAC 02Q .0711, "Emission Rates Requiring a Permit". K-Flex has demonstrated its facility-wide actual emissions do not exceed the TPER limits listed below. The permit requires K-Flex to operate and maintain the facility so that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed the TPER limits listed below; and to maintain records that demonstrate compliance with each TPER. Continued compliance is expected.

Pollutant	CAS No.	Carcinogens (lb/yr)	Chronic Toxicant (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Acetaldehyde	75-07-0				6.8
Aniline	62-53-3			.25	
Arsenic and inorganic Arsenic Compounds	7440-38-2	0.053			
Benzidine & salts	92-87-5	0.01			
Benzo(a)pyrene	92-87-5	2.2			
Beryllium Metal	7440-41-7	0.28			
Butadiene, 1,3	106-99-0	11			
Cadmium Metal	7440-43-9	0.37			
Carbon disulfide	75-15-0		3.9		
Carbon tetrachloride	56-23-5	460			
Chlorobenzene	108-90-7		46		
Chloroform	67-66-3	290			
1,4-Dichlorobenzene	106-46-7				16.8
Ethylene dibromide	106-93-4	27			
Formaldehyde	50-00-0				0.04
n-Hexane	110-54-3		23		
Hydrogen chloride	7647-01-0				0.18
2-butanone	78-93-3		78		22.4
Manganese & compounds	MNC		0.63		

Mercury	7439-97-6		0.013		
Nickel	7440-02-0		0.13		
Nitrobenzene	98-95-3		1.3	0.13	
N-Nitrosodimethylamine	62-75-9	3.4			
Pentachlorophenol	87-86-5		0.063	0.0064	
Phenol	108-95-2			0.24	
Styrene	100-42-5			2.7	
Toluene	108-88-3		98		14.4
Vinyl Chloride	75-01-4	26			
Xylene	1330-20-7		57		16.4

8. Facility Emissions Review

The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2018 through 2022 are provided in the header of this permit review.

9. Compliance Status

DAQ has reviewed the compliance status of K-Flex. During the most recent inspection, conducted on April 03, 2024 by Abdul Kadir of RRO, the facility appeared to be in compliance with all applicable requirements.

The facility has had the following air quality violations in the last five years:

June 26, 2020 Facility received Notice of Deficiency (NOD) for incomplete Visual Emission records. NOD was resolved July 20, 2020.

March 12, 2024 Facility received Notice of Violation (NOV) for late Annual Compliance Certificate. NOV was resolved on March 27, 2024

The facility's Annual Compliance Certification was received on March 12, 2024 and indicated compliance with all applicable requirements in 2023.

10. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

11. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A permit fee is NOT required for this renewal application.
- EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions¹. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses² and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

12. Recommendations

The permit renewal application for K-Flex USA, LLC. Located in Youngsville, Franklin County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 07866T24.

¹ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

² In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

13. APPENDIX

Questions concerning air emissions of PFAS (Facility response in red)

- a. Will your facility use any material or products in your operations that contain fluorinated chemicals? If so, please identify such materials or products and the fluorinated chemicals they contain.
No
- b. Will your facility formulate/create products or byproducts (directly or indirectly) that contain fluorinated chemicals (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.
No
- c. Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing fluorinated chemicals? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.
No
- d. Do your facility's processes or operations use equipment, material, or components that contain fluorinated chemicals (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?
No
- e. List the fluorinated chemicals identified (i.e., through testing or desktop review) above in your response under the appropriate methods/approaches? If one is not, are they on any other known US or International target lists?
- OTM-45 (air emissions)
 - Methods 533 & 537.1 (drinking water)
 - SW-846: Method 8327 (water)
 - Draft Method 1633 (water, solids, tissue)
 - "Total PFAS" Draft Method 1621 for Adsorbable Organic Fluorine (wastewater)
 - Non targeted analytical methods
 - Qualitative approach through suspect screening
- N/A
- f. Are there other facilities or operations in the U.S. or internationally engaged in the same or similar activities involving fluorinated chemicals addressed in your response to the above questions? If so, please provide facility identification information? In addition, are there any ISO (International Organization for Standardization) certification requirements?
N/A
- g. Do you plan to store AFFF on site, use it in fire training at the site, use it for fighting fires at the facility, or include it in a fire fighting system at the site?
No

- h. Are other emerging contaminants (e.g., 1,4-dioxane, bromine, perchlorate, 1,2,3-Trichloropropane) used in some capacity within your facility or operations?

No

- i. Do you need technical assistance to answer the above questions?

No

In identifying any fluorinated chemicals or emerging contaminants in response to any of the above questions, please use CAS numbers (if available) and specify the relevant quantities of any such chemicals. If your answers to any of the above questions rely on assumptions or, if information necessary to respond to any of these questions is unavailable, please state. If any of the information requested is deemed a “trade secret” under N.C.G.S. § 66-152(3) and subject to confidential treatment under N.C.G.S. § 132-1.2(1) as required under the Public Record Act, please contact us to discuss proper designation of this information.