The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

December 14, 2022

Kevin Powers, President
PAK Solutions, LLC
16 Page Hill Road
Lancaster, NH 03584

Re: Final VOC Reasonably Available Control Technology (RACT) Order #RO-0007
Minor Amendment to State Permit to Operate SP-0266
PAK Solutions, LLC
16 Page Hill Road, Lancaster, New Hampshire
Facility ID # 3300700091; Applications #22-0149 & 22-0150

Dear Mr. Powers:

The New Hampshire Department of Environmental Services, Air Resources Division (NHDES), has reviewed your requests, received on August 30, 2022, to amend State Permit to Operate SP-0266 and to issue a VOC Reasonably Available Control Technology (RACT) Order (RO-0007).

SP-0266 has been amended to remove the decommissioned catalytic oxidizer (CatOx; PCE01) from the permit, which was replaced by a regenerative thermal oxidizer (RTO; PCE02). NHDES has amended the permit in accordance with New Hampshire Code of Administrative Rules Env-A 612.03, *Minor Permit Amendments: Temporary Permits and State Permits to Operate*, to reflect the change. The amended permit is enclosed. Please note that the expiration date of the permit has not changed.

Additionally, NHDES hereby issues the enclosed VOC RACT Order in accordance with the New Hampshire Code of Administrative Rules Env-A 1205*, RACT Procedures*.

If you have any questions, please contact Patricia North of the Air Resources Division, Permitting and Environmental Health Bureau at (603) 271-0923 or via email at *patricia.r.north@des.nh.gov*.

Sincerely,

Craig A. Wright
Director
Air Resources Division

CAW/prn

By certified mail #7017 1450 0000 1333 6759

Enclosures: Final RACT Order #RO-0007, SP-0166, and Engineering Summary

ec: USEPA Region I
Patrick Judge, PAK Solutions, LLC
Ronald Demers, PAK Solutions, LLC
Ronald Guerin, Calex Environmental, LLC
Town of Lancaster

(all w/enclosures)

PAK SOLUTIONS, LLC 16 Page Hill Road Lancaster, NH 03584	]]]]]	**RACT ORDER** **December 14, 2022** **RO-0007**

A. Introduction

This RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to PAK SOLUTIONS, LLC, pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division ("NHDES"), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 29 Hazen Drive, Concord, NH 03302-0095, telephone number (603) 271-1370.
2. PAK SOLUTIONS, LLC ("PAK") is a New Hampshire corporation, having a mailing address of 16 Page Hill Road, Lancaster, NH 03584, telephone number (603) 788-4784.

C. Statements of Fact and Law

1. PAK conducts commercial printing operations on a variety of plastic and film substrates with Volatile Organic Compounds (VOCs) and solvent-containing inks. PAK owns and operates three printing presses that coat a variety of plastic and film substrates at its facility located on 16 Page Hill Road in Lancaster, NH.
2. Effective October 17, 2019, NHDES re-adopted NH Code of Administrative Rules Env-A 1200 *Volatile Organic Compounds (VOCs) Reasonable Available Control Technology (RACT)*. This part defines the sources that are subject to RACT requirements and specifies the applicable RACT requirements.
3. PAK is subject to Env-A 1215, *Rotogravure and Flexographic Printing,* because the theoretical potential to emit (TPE) exceeds 50 tons of non-exempt VOCs during any consecutive 12-month period.
4. PAK operates a Ship & Shore Regenerative Thermal Oxidizer (RTO) to control VOC emissions from three printing presses.
5. The printing operations, including the RTO, are currently covered under a State Permit to Operate SP-0266 issued March 24, 2020.
6. On August 26 and 27, 2021 PAK conducted stack testing on the Ship & Shore RTO in accordance with State Permit to Operate SP-0266 issued March 24, 2020. The Ship & Shore RTO demonstrated an average destruction efficiency of 98.4% at an average minimum temperature of 1466°F which is higher than the minimum destruction efficiency of 90% set in the permit.
7. On August 24, 2022, PAK submitted an application for a RACT Order (Order) that would allow it to generate and use Discrete Emissions Reductions (DERs) in order to comply with the VOC reduction requirements during periods when the RTO is shut down due to maintenance or malfunction.

D. Order

Based on the above findings and determinations, NHDES hereby orders PAK to implement the following requirements as RACT:

1. Except as provided in a. and b. below, PAK shall comply with the VOC control standards specified in Env-A 1215 *Rotogravure and Flexographic Printing*, specifically:

   a. In accordance with the provisions of Env-A 1215.03, *Control Equipment Standards for Rotogravure and Flexographic Printing*, the Facility shall install and operate incineration control equipment which reduces the rate of VOC emissions delivered from the capture system to the incineration inlet by at least 90% by weight.

   b. In accordance with the provisions of Env-A 1215.04, *Capture System Standards for Rotogravure and Flexographic Printing*, a capture system shall be used in conjunction with the emission control system selected pursuant to Env-A 1215.03 and have a design and operation that will provide for an overall reduction in VOC emissions from each printing press of at least 60% where a flexographic printing process is employed.

2. Monitoring

   a. PAK shall conduct the following monitoring and testing activities of the RTO:

      i. Minimum destruction efficiency of the RTO shall be at least 90% and the RTO combustion temperature shall not drop below the minimum temperature, based on a one-hour block average, at which PAK has demonstrated compliance through the most recent NHDES approved stack test demonstrating at least 90% destruction efficiency.

      ii. PAK shall conduct compliance stack testing once every 5 years within the same calendar quarter of the anniversary of the most recent compliance stack test. For stack testing purposes only, PAK shall be allowed to operate at a lower temperature than identified in Item 2.a.i. above in an effort to demonstrate compliance with the RACT Order RTO 90% destruction efficiency requirement. In the event PAK does not meet the provisions of the RACT Order during the stack test, then PAK shall be allowed to use DERs as described in D.3. below for RACT compliance during the stack testing period.

      iii. PAK shall maintain copies of the most recent NHDES approved compliance stack test records on site. These records shall be made available to NHDES/US EPA upon request.

   b. PAK shall operate and maintain equipment to continuously monitor the temperature of the combustion chamber of the RTO.

   c. PAK shall maintain the RTO in a manner consistent with manufacturer's recommendations.

   d. For times that the capture and control system is unable to meet the 60% capture and 90% reduction requirement specified in Env-A 1215.03(b) and Env-A 1215.04(b)(3) due to a malfunction or during routine maintenance of the RTO, PAK shall be allowed to use DERs in accordance with D.3. of this Order, for the purpose of complying with the VOC RACT requirements.

3. Generation and Use of DERs

PAK shall be allowed to generate DERs for VOC emission reductions that exceed the reductions required in D.1. of this Order. PAK shall be allowed to use these DERs for RACT compliance in accordance with D.3. of this Order. PAK shall also be allowed to sell DERs to other entities within the State of New Hampshire. The following calculations shall be used to determine the amount of DERs generated and/or used over any given period, but at least monthly:

a. Calculation of allowable VOC emissions

For the purposes of complying with the VOC RACT requirement specified in Env-A 1215.03(b), PAK shall calculate the allowable VOC emissions as follows:

"E_{al}" means the allowable VOC emission rate

"A" means the actual, uncontrolled emissions from the three presses

E_{al} shall be calculated as in the following equation:

$$E_{al} = (A) \times (1 - 0.90)$$

b. Emission Credit Use and Generation Calculations

To determine if PAK will either generate DERs or need to use DERs for compliance with RACT, PAK shall subtract the actual controlled VOC emissions (E_{ac}) from the three presses, from the allowable VOC emissions (E_{al}) as calculated in accordance with D.3.a. of this order.

i. Generation of DERs:

If the result of the subtraction is a positive number, then the actual emissions are below the requirements of RACT and the amount equal to the difference between E_{al} and E_{ac} will count towards the generation of DERs. The generated DERs shall be calculated by taking the amount of credited emission and multiplying them by a safety factor of 0.9 and shall be calculated as in the following equation:

$$DERs = (E_{al} - E_{ac}) \times 0.9$$

ii. Use of DERs:

If the result of the subtraction is a negative number, then the actual emissions exceed the VOC RACT requirements and emission credits equal to the difference between E_{al} and E_{ac} shall be used to offset these excess emissions. The DERs required to offset the excess emissions shall be calculated by dividing the excess emissions by an environmental benefit factor of 0.9 and shall be calculated as in the following equation:

$$DERs = \frac{(El_{al} - E_{ac})}{0.9}$$

4. Recordkeeping

PAK shall maintain the following records:

a. Records of the calculations related to the generation and use of DERs as specified in D.3. in order to demonstrate compliance with this Order and shall keep the records for a period of at least five years.

b. Records of the calibration and temperature readings for the RTO on site for inspection.

c. Maintain product formulations furnished by the material supplier documenting the lbs VOC/gallon of material, as applied, excluding water and exempt compounds.

5. Reporting

PAK shall submit the following reports to NHDES to demonstrate compliance with this Order:

a. Annually by November 30, PAK shall submit a report to NHDES on the projected use of credits for the upcoming year. This report shall meet the requirements of Env-A 3104.08, *Notice of Intent to Use DERs*, including the following information:

i. The name and location of the user.

ii. A copy of the Notice and Certification of Generation submitted by the generator source to the State or a certified statement that the notice is on file with NHDES.

iii. The protocols that will be used to document the amount of DERs needed to demonstrate compliance.

iv. The estimated amounts of toxic air pollutants, as defined in Env-A 1400, and hazardous air pollutants, as defined in section 112 of the 1990 Clean Air Act Amendments, expected to be emitted to the air as the result of the use of the DERs to meet the otherwise applicable requirements.

b. Annually by April 15, PAK shall submit a report to NHDES on the balance of credits for the previous calendar year. This report shall meet the requirements of Env-A 3103.08, *Notice and Certification of Generation* and Env-A 3104.09, *Notice and Certification of Use*, including the following information:

i. The name and location of the owner or operator of the source.

ii. A brief description of the generation activity.

iii. A list of the source's applicable allowable emission rates.

iv. The amount of DERs generated each month.

v. A calculation of the amount of DERs generated.

vi. The amount of DERs used each month.

vii. A calculation of the amount of DERs required to demonstrate compliance with the emission limits stated in Part D.3. above.

viii. A statement that the reductions were calculated in accordance with Env-A 3103.02.

ix. A statement that the DERs were not generated in whole or in part from actions prohibited pursuant to Env-A 3103.07.

x. A statement that due diligence was made to verify that the DERs were not previously used, and not generated as a result of actions prohibited under the regulations or other provisions of law.

xi. A statement that the DERs were not used in a manner prohibited under the regulation or other provisions of law; and

xii. The report shall contain a certification by a responsible official that states:

1. Based on information and belief formed after reasonable inquiry, the statements

and information in the document are true, accurate and complete; and

2. The user source is in compliance with all National Ambient Air Quality Standards, except ground level ozone, and all Ambient Air Limits for Regulated Toxic Air Pollutants.

6. Creditable Emissions Reductions

The Order grants approval to PAK to quantify any DERs that are generated after December 14, 2022, in accordance with this Order, as being available to sell to other entities within the State of New Hampshire.

Please address any correspondence and communication in reference to this Order to:

Operating Permits Program Manager
NHDES, Air Resources Division
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095
(603) 271-6796

Please address any correspondence and communications in reference to Emission Reduction Credits (ERCs) or DERs to:

Technical Programs Manager
NHDES, Air Resources Division
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095
(603) 271-6794

Craig A. Wright COPY

Craig A. Wright
Director
Air Resources Division

cc: John Duclos, NHDES, PIP Office
Air Division Director, US EPA Region 1
Town of Lancaster Selectboard