



<b>Company Name:</b>	Alpek Polyester USA, LLC	<b>Permit Writer:</b>	Jo Anna Cunningham
<b>Agency Air Number:</b>	0460-0029	<b>Date:</b>	<b>DRAFT</b>
<b>Permit Number:</b>	TV-0460-0029 v1.2		

**DATE APPLICATION RECEIVED:** January 06, 2025; Additional information (updated DHEC Form 2940) received on February 25, 2025

### **PROJECT DESCRIPTION**

This project is a minor permit modification. Alpek is requesting to update Title V Permit Condition C.14 to update the Standard No. 4 maximum process rate for ID 27 - Solid Stating IV (Building 17L11) from 20.2 tons/hr to 23.0 tons/hr. There will be no change in emissions resulting from the correction since the emissions were already calculated using a process rate of 23.0 tons/hr.

This modification is also a re-submittal of the form 2940 which was submitted in the 2020 Title V application, with updated maximum design capacity for Solid Stating IV (Equipment ID's 3202 and 3203 - reference DHEC 2940) to 403.0 million lb/yr and (Equipment ID's 3206 and 3207 - reference updated equipment information) to 403.0 million lb/yr. Previously the maximum design capacity was specified as 385.4 million lb/yr for (Equipment ID's 3202 and 3203) and (Equipment ID's 3206 and 3207), respectively.

This does not constitute a Title I modification because there is no physical change occurring to the process. This modification will not result in new standards and/or limitations. The testing, monitoring, recordkeeping, and reporting requirements to demonstrate compliance will remain unchanged.

#### **Historical Note:**

- Condition C.14 of Alpek's current permit states the Standard No. 4 maximum process weight rate for ID 27 is 20.2 tons/hour, which comes out to 440 mTons (metric tons)/day. This rate may have come from a drawing that was used by Operations as a flow diagram but was not intended to be a limit to that process.
- The calculations that the facility submitted with the 2020 Title V Permit application used a rate of 23,000 lbs/hr for each line for ID27, which comes out to 500 mTons (metric tons)/day for the entire process. All of Alpek's submitted emissions are based on that 23,000 lbs/hr per line. This is the number that Alpek's feels best represents the process and the limits that the facility has established with the 2016 Title V permit application and 2020 permit application update.

### **FACILITY DESCRIPTION**

SIC CODE: 2821 - Plastics Material, Synthetic Resins, and Nonvulcanizable Elastomers; NAICS CODE: 325211 - Plastics Material and Resin Manufacturing

SIC CODE: 2869 - Industrial Organic Chemicals; NAICS CODE: 325110 - Petrochemical Manufacturing

Alpek Polyester USA, LLC - Columbia Site produces Polyethylene Terephthalate (PET) and Terephthalic Acid, which is used in our PET production.

### **SINGLE SOURCE DETERMINATION**



**STATEMENT OF BASIS**  
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BAQ Air Permitting Division

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The Department determined that Eastman and Alpek Polyester USA, LLC (Alpek) (formerly DAK Americas, LLC) are not co-located facilities under PSD, Title V, and Title III of the Clean Air Act. Reference December 6, 2021, Title V Renewal Statement of Basis.

## **EMISSIONS**

<b>FACILITY WIDE EMISSIONS</b>			
<b>Pollutant</b>	<b>Uncontrolled</b>	<b>Controlled</b>	<b>PTE</b>
	<b>TPY</b>	<b>TPY</b>	<b>TPY</b>
PM	1,153.9	160.59	191.9 <sup>1</sup>
PM <sub>10</sub>	1,030.8	122.1	122.1 <sup>1</sup>
PM <sub>2.5</sub>	33.63	26.7	26.7
SO <sub>2</sub>	740.85	8.57	1,504.8 <sup>1</sup>
NO <sub>x</sub>	216.31	--	1,271.3 <sup>1</sup>
CO	6,747.39	--	1,785.0 <sup>1</sup>
VOC	4,436.16	1,367.92	670.4 <sup>1</sup>
Lead (Pb) (H)	1.26E-03	--	1.26E-03
Acetaldehyde (H, T, V)	1135.9	69.5	69.5
Antimony (H, T)	0.09	--	0.09
Benzene (H, T, V)	11.98	11.30	11.30
Biphenyl (H, T, V)	0.65	--	0.65
Cadmium (H, T)	1.16E-04	--	1.16E-04
1,4-Dioxane (H, T, V)	268.4	5.3	5.3
Ethylene Glycol (H, T, V)	409.1	99.3	99.3
HCl (H, T)	0.03	--	0.03
Methanol (H, T, V)	66.07	41.10	41.10
Methyl Bromide (H, T)	417.82	381.25	381.25
Mercury (H, T)	1.20E-04	--	1.20E-04
Toluene (H, T, V)	6.74	5.93	5.93
p-Xylene (H, T, V)	219.19	170.85	170.85
Total HAPs	2,548.06	797.3	797.3

1 – PTE Emissions are based on PSD avoidance permit limits for Emission Units 18, 20, and 32.

H=hazardous air pollutant (HAP), T= SC toxic air pollutant (TAP), V=volatile organic compound (VOC)

Note 1: There is no change in emissions as a result of this project.

Note 2: Facility Wide Emissions are based on the 2021 Title V Operating permit renewal

## **REGULATIONS**

**Applicable - Standard No. 4 (Emissions from Process Industries)**



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Process	Max Process Weight Rate (tons/hr)	PM Allowable at Max (lb/hr)	Uncontrolled Emissions PM (lb/hr)	Controlled Emissions PM (lb/hr)	Monitoring
27 - Solid Stating IV	23.0	33.5	80.92	3.32	See monitoring table

Historical Note: For Section VIII, the facility's past limits appear to have been based on each construction permit. During the Title V operating permit renewal, the facility evaluated how each Process should be defined and submitted an updated grouping of operations. The Process Weight Rate was also provided.

**Applicable - 61-62.6 (Control of Fugitive Particulate Matter)**

Section III is applicable to all sources, statewide.

PERIODIC MONITORING					
ID	Applicable Requirement	Measured Parameter	Required Monitoring Frequency	Reporting Frequency	Monitoring Basis/ Justification
27: 3201, 3212, 3229, 3230	Standard No. 4	Opacity	Monthly Visual Inspections	Semiannually	The facility is going to conduct the monthly visual inspections to demonstrate compliance with limits.
27: 3202, 3203, 3206, 3207, 3208, 3209, 3210, 3211, 3214	Standard No. 4	Opacity	Semiannually Visual Inspections	Semiannually	The facility is going to conduct the semiannual visual inspections to demonstrate compliance with limits.
27: DC3201, DC3212, DC3229, DC3230	Standard No. 4	Pressure Drop	Daily	Semiannually	Proper operation of the Baghouses (C.30) to comply with the PM limit of this Standard

Note: No changes to existing periodic monitoring



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#### **PUBLIC NOTICE**

A public notice was not required for this permit.

#### **SUMMARY AND CONCLUSIONS**

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.