

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1440-AOP-R5 AFIN: 16-00061

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Arkansas Glass Container Corporation  
516 West Johnson  
Jonesboro, Arkansas 72403

3. PERMIT WRITER:

Adam McDaniel

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Glass Container Manufacturing  
NAICS Code: 327213

5. SUBMITTALS:

2/19/2013

6. REVIEWER'S NOTES:

Arkansas Glass Container Corporation owns and operates a glass container manufacturing facility in Jonesboro, Arkansas (Craighead County). This is a renewal of the permit. Due to updated emission factors from stack testing results, the total annual permitted emission rate limit changes associated with this renewal includes: -0.2 tpy PM, -55.9 tpy PM<sub>10</sub>, +32.3 tpy SO<sub>2</sub>, +37.6 tpy VOC, +15.4 tpy CO, +36.8 tpy NO<sub>x</sub>, and +1.90 tpy Hexane.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility was last inspected May 31, 2012 and found to be in compliance.

8. PSD APPLICABILITY:

- a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
- b. Is the facility categorized as a major source for PSD? Y
- *Single pollutant  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  tpy and not on list, or*
  - *CO<sub>2</sub>e potential to emit  $\geq 100,000$  tpy and  $\geq 100$  tpy/ $\geq 250$  tpy of combined GHGs?*

If yes, explain why this permit modification is not PSD.

There won't be any construction, reconstruction, or modification with this renewal.

9. GHG MAJOR SOURCE (TITLE V):

Indicate one:

- Facility is classified as a major source for GHG and the permit includes this designation
- Facility does not have the physical potential to be a major GHG source
- Facility has restrictions on GHG or throughput rates that limit facility to a minor GHG source. Describe these restrictions: \_\_\_\_\_

10. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Combined Sources	NO <sub>x</sub>	PSD (major source status, not subject to PSD review for this renewal)

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. MODELING:

a) NAAQS

There were no new or modified sources in this permit action. However, the permitted emission rates changed due to updated emission factors from stack testing results for SN-01 and SN-03 (Glass Melting Furnace A & C).

The facility did not agree to dispersion modeling and instead offered the following NAAQS evaluation:

The application in question is a Title V renewal. The plant-wide hourly permitted emission rate of one NAAQS pollutant (emitted at greater than 100 tpy) increased as part of this application: NO<sub>x</sub> increased by 10 lb/hr on a plant-wide basis, from 104.9 lb/hr to 114.9 lb/hr. Recent communications with the ADEQ Permit Engineer indicate that the previous NO<sub>x</sub> modeling showed that facility impacts were far below the NAAQS. As such, it is reasonable to assume that the facility's NO<sub>x</sub> emissions will not threaten the NAAQS in the Jonesboro area.

Total PM<sub>10</sub> hourly emissions decreased by 50% to 15.1 lb/hr, and previous air dispersion modeling showed the facility to emit below 50% of the NAAQS. Total NO<sub>x</sub> hourly emissions increased by 9.5% to 114.9 lb/hr, and previous air dispersion modeling for NO<sub>x</sub> showed the facility to emit below 50% of the NAAQS. Total SO<sub>2</sub> hourly emission increased by 49.1% to 26.1 lb/hr and SO<sub>2</sub> wasn't previously modeled. Total CO hourly emission increased by 42% to 14.2 lb/hr, and CO wasn't previously modeled.

b) Non-Criteria Pollutants

1<sup>st</sup> Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value

(mg/m<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Hexane	176.2	19.382	0.297	Y

2<sup>nd</sup> Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m <sup>3</sup> ) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
None			

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01&03	PM- Glass Mfg Handbook PM <sub>10</sub> - Stack Test Data NO <sub>x</sub> - Stack Test Data CO- Stack Test Data VOC- Stack Test Data SO <sub>2</sub> - Stack Test Data HAP-AP-42 1.4	PM= 2.5 lb/ton PM <sub>10</sub> = 1.2 lb/ton NO <sub>x</sub> = 9.43 lb/ton CO= 0.86 lb/ton VOC= 1.71 lb/ton SO <sub>2</sub> =2.23 lb/ton Hexane= 1.8 lb/MMscf	-	-	Uncontrolled Factors
04A	Surrogate AP-42, 11.12-2	PM=0.00099 lb/ton PM <sub>10</sub> = 0.00034 lb/ton	Fabric Sock	90%	Uncontrolled Factors
04B	Surrogate AP-42, 11.12-2	PM=0.00099 lb/ton PM <sub>10</sub> = 0.00034 lb/ton	Fabric Sock	90%	Uncontrolled Factors
04C	Surrogate AP-42, 11.12-2	PM=0.00099 lb/ton PM <sub>10</sub> = 0.00034 lb/ton	Fabric Sock	90%	Uncontrolled Factors
04D	Surrogate AP-42, 11.12-2	PM=0.00099 lb/ton PM <sub>10</sub> = 0.00034 lb/ton	Baghouse	99.5%	Uncontrolled Factors
04E	Surrogate AP-42, 11.12-2	PM=0.00099 lb/ton PM <sub>10</sub> = 0.00034 lb/ton	Baghouse	99.5%	Uncontrolled Factors
04F	Surrogate AP-42, 11.6-4	PM=0.0031 lb/ton PM <sub>10</sub> = 0.001 lb/ton	Baghouse	Not used	Controlled

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
05	AP-42 Natural Gas 1.4-2 1.4-1	<u>Lb/MMSCF</u> PM/PM <sub>10</sub> =7.6 NO <sub>x</sub> =100 CO=84 VOC=5.5 SO <sub>2</sub> =0.6 Hexane= 1.8	-	-	Uncontrolled Factors
08	Surrogate AP-42, 11.6-4	PM=0.0031 lb/ton PM <sub>10</sub> = 0.001 lb/ton	Baghouse	99.5%	Uncontrolled Factors
09	Conservative Estimate	100% Evaporation of volatiles	-	-	-
10	MSDS, conservative estimate	25% VOC	-	-	HAP free paint

## 14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01 & 03	PM/PM <sub>10</sub>	5	Five (5) year intervals (each furnace shall be tested every five (5) years).	To help ensure ongoing compliance with criteria emission limits
	SO <sub>2</sub>	6C		
	VOC	25A		
	CO	10		
	NO <sub>x</sub>	7E		

Note: Emissions testing was performed on Furnace A (SN-01) on January 9-10, 2008 and on Furnace "C" (SN-03) on October 8, 2008. Both sources were found to be in compliance.

## 15. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
04A, B, C, D, E, F, 08	Manufacturer's recommended specifications for fabric filters.	Procedure and Inspection	Routine inspection once per month.	N
04A, B, C, D, E, F, 08	Visible Emissions	Visual observation and Method 9 as needed.	At each loading event	N
08	Visible Emissions	Visual observation and Method 9 as needed.	Weekly	N

16. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01, 03	Combined Raw Materials	280 ton/day 85,500 ton/yr	Daily	Y
04A, 04B, 04C, 04F	Feldspar/Nephelene	5,400 tons/yr	Monthly	Y
	Soda Ash	24,400 tons/yr		
	Cullet	46,400 tons/yr		
04D	Sand Storage	7,000 tons/yr	Monthly	Y
04E	Limestone Storage	16,000 tons/yr	Monthly	Y
04A, 04B, 04C, 04D, 04E, 04F	Control Equipment Quality Inspections	Manufacturer's Specifications	As Performed (no less than once per month)	N
09	Forming Machine Lubricant	100,000 lb/yr	Daily	Y
01, 03, 04A, 04B, 04C, 04D, 04E, 04F	VE Observation Results	Opacity Limit As Assigned	See PW Condition 8	N
10	Paint VOC content	2.0 lb/gal	Monthly	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 03	20	Previous Limit	Daily VE observations
04A, 04B, 04C	10	Previous Limit	VE observations-each loading event
04D, 04E	5	Department Guidance	VE observations-each loading event
04F	5	Department Guidance	Weekly VE observations
05	5	Department Guidance	Inspector's observation
08	5	Department Guidance	Weekly obsrvation

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
320 gal Diesel Storage Tank	3	0	0	0.002	0	0	0	0
Cooling Towers	13	3.550	0	0	0	0	0	0
Cullet Jaw Crusher	13	0.0014	0	0	0	0	0	0
Bottle Breaker	13	0.35	0	0	0	0	0	0
Refractory Shaker Screen	13	0.045	0	0	0	0	0	0

Permit #: 1440-AOP-R5

AFIN: 16-00061

Page 6 of 6

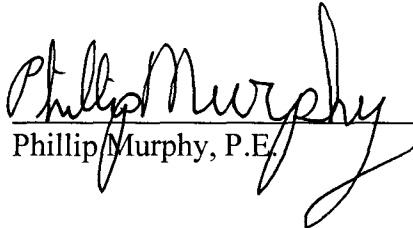
20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1440-AOP-R4

21. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

  
\_\_\_\_\_  
Phillip Murphy, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 08-20-12

Facility Name: Arkansas Glass Container Corporation  
 Permit Number: 1440-AOP-R5  
 AFIN: 16-00061

\$/ton factor	22.97	Annual Chargeable Emissions (tpy)	761.3
Permit Type	Renewal No Changes	Permit Fee \$	0

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500

Check if Facility Holds an Active Minor Source or Minor Source General Permit

If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	106.5

Initial Title V Permit Fee Chargeable Emissions (tpy)

*HAPs not included in VOC or PM: Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride*

*Air Contaminants: All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)*

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM	<input checked="" type="checkbox"/>	109.6	109.4	-0.2	-0.2	109.4
PM <sub>10</sub>	<input type="checkbox"/>	109.6	53.7	-55.9		
SO <sub>2</sub>	<input checked="" type="checkbox"/>	63.3	95.6	32.3	32.3	95.6
VOC	<input checked="" type="checkbox"/>	94	131.6	37.6	37.6	131.6
CO	<input type="checkbox"/>	39.5	54.9	15.4		
NO <sub>x</sub>	<input checked="" type="checkbox"/>	387.9	424.7	36.8	36.8	424.7
Hexane	<input type="checkbox"/>	0	1.9	1.9		