

DEQ Art Glass Permanent Rule

Fiscal Impact Estimate for proposed rule- Bullseye Glass Company

Bullseye- Tier 2		
Requirements summary	Install control device on all furnaces using metal HAPs. If using chrome: source test & modeling to develop daily & annual max usage Then follow the max usage limits	
	Cost Estimate	
	low	high

Permitting costs

NESHAP 6S applies?	Y		
Needs Title V permit because of 6S?	Y		
Cost of Title V application (including DEQ fees + consultant to prepare	\$25,000	\$100,000	If a facility needs a Title V due to NESHAP 6S, that is independent of this art glass rule, so this cost isn't included in the totals.
Annual DEQ Title V permit costs	\$10,310	\$11,510	If a facility needs a Title V due to NESHAP 6S, that is independent of this art glass rule, so this cost isn't included in the totals.
Incremental extra cost of Title V application due to art glass rule	\$0	\$5,000	Assume preparing the permit application would cost 0% to 5% more because of the incremental addition of the proposed rules.
Incremental extra cost of Title V annual permit fees due to art glass rule	\$0	\$0	The proposed rules would not increase the annual permit fees if the facility would have a Title V anyway.

Number of Control Devices

# of additional baghouses installed, over and above what would have been installed due to NESHAP 6S alone	0	2	This is uncertain because changes to comply with NESHAP 6S are happening at the same time as efforts to comply with this rule.
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Costs Per Control Device

install baghouse	\$250,000	\$400,000	
One-time source test to demonstrate 99% PM control efficiency	\$4,000	\$15,000	Assume length of run depends on detection limits, does not have to be entire production run to show capture efficiency.
annual operation	\$15,000	\$70,000	electricity, bag replacement etc
Annual cost to monitor and report on baghouse to DEQ	\$12,000	\$17,000	
Total one-time costs per baghouse	\$254,000	\$415,000	
Total annual costs per baghouse	\$27,000	\$87,000	

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Fiscal Impact Estimate for proposed rule- Bullseye Glass Company

Bullseye- Tier 2		
Requirements summary	Install control device on all furnaces using metal HAPs. If using chrome: source test & modeling to develop daily & annual max usage Then follow the max usage limits	
	Cost Estimate	
	low	high

Source Testing Costs

One-time source test to measure Cr6 emissions when making products containing Cr3 or Cr6	\$60,000	\$65,000	Assume 16 hr test runs. May be able to run concurrently with 99% control efficiency test, reducing cost.
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Modeling Costs

One-time modeling to find max production rate that results in acceptable source impact level		
AERSCREEN model only	\$10,000	-
AERSCREEN followed by AERMOD model	-	\$30,000

Total Costs

If 0 additional baghouses installed

One-time costs	\$70,000	\$100,000
Annual costs	\$0	\$0

If 2 additional baghouses installed

One-time costs	\$578,000	\$930,000
Annual costs	\$54,000	\$174,000

DEQ Art Glass Permanent Rule

Fiscal Impact Estimate for proposed rule- Uroboros Glass Studios, Inc.

Uroboros- Tier 2		
Requirements summary	Install control device on all furnaces using metal HAPs. If using chrome: source test & modeling to develop daily & annual max usage Then follow the max usage limits	
	Cost Estimate	
	low	high

Permitting costs

NESHAP 6S applies?	Y		
Needs Title V permit because of 6S?	Y		
Cost of Title V application (including DEQ fees + consultant to prepare	\$15,000	\$55,000	If a facility needs a Title V due to NESHAP 6S, that is independent of this art glass rule, so this cost isn't included in the totals.
Annual DEQ Title V permit costs	\$8,500	\$8,500	If a facility needs a Title V due to NESHAP 6S, that is independent of this art glass rule, so this cost isn't included in the totals.
Incremental extra cost of Title V application due to art glass rule	\$0	\$3,000	Assume preparing the permit application would cost 0% to 5% more because of the incremental addition of the proposed rules. (Rounded to the nearest thousand.)
Incremental extra cost of Title V annual permit fees due to art glass rule	\$0	\$0	The proposed rules would not increase the annual permit fees if the facility would have a Title V anyway.

Number of Control Devices

# of additional baghouses installed, over and above what would have been installed due to NESHAP 6S alone	0	1	This is uncertain because changes to comply with NESHAP 6S are happening at the same time as efforts to comply with this rule.
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Costs Per Control Device

install baghouse	\$355,000	\$610,000	
One-time source test to demonstrate 99% PM control efficiency	included in source testing cost below		Assume length of run depends on detection limits, and does not have to be entire production run to show capture efficiency.
annual operation	\$15,000	\$70,000	electricity, bag replacement etc
Annual cost to monitor and report on baghouse to DEQ	\$12,000	\$17,000	
Total one-time costs per baghouse	\$355,000	\$610,000	
Total annual costs per baghouse	\$27,000	\$87,000	

DEQ Art Glass Permanent Rule**Fiscal Impact Estimate for proposed rule- Uroboros Glass Studios, Inc.**

Uroboros- Tier 2		
Requirements summary	Install control device on all furnaces using metal HAPs. If using chrome: source test & modeling to develop daily & annual max usage Then follow the max usage limits	
	Cost Estimate	
	low	high

Source Testing Costs

One-time source test to measure Cr6 emissions when making products containing Cr3 or Cr6	\$56,000	\$56,000
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Modeling Costs

One-time modeling to find max production rate that results in acceptable source impact level		
AERSCREEN model only	\$10,000	-
AERSCREEN followed by AERMOD model	-	\$30,000

Total Costs**If 0 additional baghouses installed**

One-time costs	\$66,000	\$89,000
Annual costs	\$0	\$0

If 1 additional baghouse installed

One-time costs	\$421,000	\$699,000
Annual costs	\$27,000	\$87,000

DEQ Art Glass Permanent Rule
Fiscal Impact Estimate for proposed rule- Tier 1 CAGM

Tier 1 (Northstar, Trautman and Glass Alchemy)						
Requirements summary	Do 1 of these at all furnaces: install control device OR source test & modeling to show impact below limits OR request permit condition to not use metal HAPs					
	Cost Estimate					
	If installing control device		If doing source test and modeling only		If taking permit condition to stop using metal HAPs	
	low	high	low	high	low	high
Permitting costs						
NESHAP 6S applies?	N		N		N	
Rule would require facility to get new permit	Yes, ACDP		Yes, ACDP		Yes, ACDP	
Application Fee	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200
Consultant to prepare application	-	-	-	-	-	-
Annual Permit Fee (applies at time of application and each year after)	\$ 4,608	\$ 4,608	\$ 4,608	\$ 4,608	\$ 4,608	\$ 4,608
Control Device Costs						
Install baghouse	\$250,000	\$400,000	-	-	-	-
Annual operation (electricity, bag replacement etc)	\$15,000	\$70,000	-	-	-	-
Reporting Costs						
Annual cost to monitor and report on baghouse to DEQ	\$12,000	\$17,000	-	-	-	-
Source Testing Costs						
One-time source test to measure metal emissions including total Cr. (Total Cr can be used as a proxy for Cr6)			\$15,000	\$25,000		
One-time source test to measure Cr6 emissions when making products containing Cr3 (optional)	If Tier 1 and using control device, don't have to test for Cr6.		\$0	\$65,000	-	-
One-time source test to demonstrate 99% PM control efficiency	\$4,000	\$15,000	-	-	-	-
Modeling Costs						
One-time modeling to find max production rate that results in acceptable source impact level						
AERSCREEN model only	-	-	\$10,000	-	-	-
AERSCREEN followed by AERMOD model	-	-	-	\$30,000	-	-
Cost of reduced production						
Stopping production of materials containing Cr6 (required to take source test + modeling exemption)	-	-	unknown	unknown	About 1/2 of products contain metal HAPs. There may not be workable substitute formulations. Facilities may choose to phase out one or a few metal HAPs but are likely to choose source test & modeling or installation of a control device.	
Reduced production if source testing shows it's needed to meet receptor conc limits	-	-	unknown	unknown		
Total Costs						
One-time costs	\$261,200	\$422,200	\$32,200	\$127,200	\$7,200	\$7,200
Annual costs	\$31,608	\$91,608	\$4,608	\$4,608	50% of facility profit (?)	
One-time costs (rounded)	\$261,000	\$422,000	\$32,000	\$127,000	\$7,000	\$7,000
Annual costs (rounded)	\$32,000	\$92,000	\$5,000	\$5,000	50% of facility profit (?)	