# DEQ Art Glass Permanent Rule

**Fiscal Impact Estimate for proposed rule- Tier 2 CAGM**

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| **Tier 2 (Bullseye and Uroboros)** | | |  |
| 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 Estimates** | |
| **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. |
| Incremental extra cost of Title V application due to are glass rule | $0 | $5,000 |  |
| 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. |
| **Control Device Costs** | | |  |
| Install baghouse | $250,000 | $300,000 | Assume install of 1 additional baghouse, above what would have been installed due to NESHAP 6S. |
| Annual operation | $15,000 | $70,000 | Electricity, bag replacement etc |
| **Reporting Costs** | | |  |
| One-time source test to measure Cr6 emissions when making products containing Cr3 or Cr6 | $60,000 | $65,000 | Assume this requires 16hr runs. At some facilities, may be able to run concurrently with 99% control efficiency test, reducing cost.  $10-15k if test can be done in 1-3hr runs. If 16hr runs, $65k. If 4-day runs, $100k. |
|  |
| 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. |
| **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** | | |  |
| One-time costs | $324,000 | $415,000 |  |
| Annual costs | $27,000 | $82,000 |  |

**DEQ Art Glass Permanent Rule**

**Fiscal Impact Estimate for proposed rule- Tier 1 CAGM**

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| **Tier 1 (Northstar, Trautman and Glass Alchemy)** | | | | | | |
| Requirements summary | Do 1 of these at all furnaces:  Install control device  Source test & modeling to show impact below limits  Request permit condition to not use metal HAPs | | | | | |
|  | **Cost Estimate** | | | | | |
| **If doing source test and modeling only** | | **If installing control device** | | **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 | $300,000 | - | - |
| Annual operation (electricity, bag replacement, etc) | - | - | $15,000 | $70,000 | - | - |
| **Reporting Costs** | | | | | | |
| Annual cost to monitor and report on baghouse to DEQ | - | - | $12,000 | $12,000 | - | - |
| **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) | $0 | $65,000 | If Tier 1 and using control device, don’t have to test for Cr6 | | - | - |
| 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 | $17,200 | $102,200 | $261,200 | $322,200 | $7,200 | $7,200 |
| Annual costs | $4,608 | $4,608 | $31,608 | $86,608 | 50% of facility profit (?) | |