

**Proposed State Implementation Plan (SIP) Revision Concerning  
Adopted Amendments to 20 DCMR 705 Stage II Vapor Recovery and  
110(l) Demonstration.**

**October 28, 2021**

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# 1.0 Background

## 1.1 Stage II Vapor Recovery Requirements

Stage II gasoline Vapor Recovery Systems (VRS) capture gasoline vapors displaced during transfer of gasoline from the gasoline dispensing unit to the motor vehicle fuel tank during vehicle refueling at a gasoline dispensing facility (GDF). Stage II involves use of special refueling nozzles and coaxial hoses for vapor collection at each gasoline pump at a subject GDF. Gasoline vapors belong to a class of pollutants known as volatile organic compounds (VOC). These compounds along with nitrogen oxides (NO<sub>x</sub>) are precursors to the formation of ground-level ozone. Stage II gasoline VRSs have been a required emission control measure in areas classified as moderate, serious, severe, and extreme for the ozone National Ambient Air Quality Standards (NAAQS).

With the amendment of the Clean Air Act (CAA) in 1990, Stage II controls were required for moderate ozone areas, under CAA section 182(b)(3). However, under section 202(a)(6) of the CAA, 42 U.S.C. 7521(a)(6), the requirements of section 182(b)(3) no longer apply in moderate ozone nonattainment areas after the Environmental Protection Agency (EPA) promulgated standards for onboard refueling vapor recovery (ORVR) as part of new motor vehicles' emission control systems. However, some moderate ozone areas retained Stage II requirements to provide a control method to comply with rate-of-progress targets or other emission reduction planning goals.

ORVR is a mechanism employed by vehicles to re-use the vapors in their gas tanks instead of allowing them to escape. Over time, as non-ORVR vehicles continue to be replaced by ORVR- equipped vehicles, the benefits of Stage II vapor recovery programs diminish. ORVR equipment has been phased in for new passenger vehicles beginning with model year 1998, and starting in 2001 for light-duty trucks and most heavy-duty gasoline-powered vehicles. ORVR equipment has been installed on nearly all (~99%) new gasoline-powered light-duty vehicles, light-duty trucks and heavy-duty vehicles since 2006.

Congress recognized that ORVR and Stage II would eventually become largely redundant technologies, and provided authority to EPA to allow states to remove Stage II from their SIPs after EPA finds that ORVR is in widespread use. On May 16, 2012, EPA determined that ORVR technology is in widespread use throughout the U.S. vehicle fleet and waived the requirement for states to implement Stage II vapor recovery at GDFs in nonattainment areas classified as Serious or above for the ozone NAAQS (77 FR 28772). EPA determined that emission reductions from ORVR-equipped vehicles are essentially equal to and will soon surpass the emission reductions achieved by Stage II alone (77 FR 28772). In fact, in areas where certain types of vacuum-assist Stage II control systems are used, the limited compatibility between ORVR and some configurations of this Stage II hardware may ultimately result in an area-wide emissions disbenefit. Therefore, EPA also exercised its authority under CAA section 202(a)(6) to waive certain federal statutory requirements for Stage II gasoline vapor recovery at GDFs. EPA determined that a state previously required to implement a Stage II vapor recovery program may take appropriate action to remove the measure from its SIP (77 FR 28772).

States wishing to phase out SIP-approved Stage II programs must submit a SIP revision to EPA requesting removal of the program from the SIP. The SIP must demonstrate that the program does not interfere with progress towards any area in the state achieving compliance with any NAAQS. States in the Ozone Transport Region

(OTR) defined by the CAA remain obligated under CAA section 184(b)(2) to implement either a Stage II program or other measures capable of achieving emissions reductions comparable to those achievable by Stage II, statewide. EPA issued guidance on this OTR comparability demonstration requirement in 1995, and updated that guidance as part of its August 7, 2012 guidance on removing Stage II programs, in light of the EPA ORVR Widespread Use Determination and the decreasing role of Stage II as a means of controlling vehicle refueling emissions.

## **1.2 The District's Stage II Vapor Recovery Program**

The District portion of the Washington DC-MD-VA area was designated as serious under the 1990 1-hour ozone NAAQS. On January 24, 2003 (68 FR 3410), EPA reclassified the Washington, DC 1-hour ozone nonattainment area from serious to severe due to failure to meet attainment deadlines. Under the 1997 8-hour ozone NAAQS, the Washington DC-MD-VA area was designated as a moderate nonattainment area.

The District adopted Stage II vapor recovery regulations (20 DCMR 705) for the District portions of the Washington nonattainment area on July 30, 1993 (D.C. Law 10-24, 40 DCR 5474, 5486). EPA approved that rule as part of the District SIP via a rule published in the *Federal Register* on October 27, 1999 (64 FR 57777).

EPA's implementation rule for the 1997 8-hour ozone NAAQS (70 FR 71612, November 29, 2005) retained Stage II requirements under CAA section 182(b)(3), but only as they applied to the nonattainment areas for the area's classification for the 1-hour ozone NAAQS designation and for the 8-hour ozone NAAQS. *See* 40 CFR 51.900(f). Therefore, the attainment and maintenance plans for both NAAQS contain provisions for the implementation of Stage II.

## **2.0 Summary of SIP Revision**

Under CAA section 110(l), EPA cannot approve a SIP revision if it would interfere with attainment of the NAAQS, reasonable further progress toward attainment, or any other applicable requirement of the Clean Air Act. Therefore, a SIP revision requesting removal of an approved Stage II program from the SIP may only be approved if there is a basis in the state's submittal for concluding that approval of the revision would not interfere with attainment or maintenance with any NAAQS, including the 2008 ozone NAAQS. In evaluating whether a given SIP revision would interfere with attainment or maintenance, as required by section 110(l), EPA generally considers whether the SIP revision will allow for an increase in actual emissions into the air over what is allowed under the existing EPA-approved SIP. EPA has not required that a state produce a new complete attainment demonstration for every SIP revision, provided that the status quo air quality is preserved. *See, e.g., Kentucky Resources Council, Inc., v. EPA*, 467 F.3d 986 (6th Cir. 2006); *see also*, 61 FR 16,050, 16,051 (April 11, 1996) (actions on which the *Kentucky Resources Council* case were based).

The analysis submitted in this SIP amendment addresses the benefits and therefore the effects of removing Stage II from the District portions of the Washington nonattainment area. In accordance with section 110(l) of the CAA, the analysis demonstrates that the removal of Stage II from the Washington nonattainment area will not interfere with the attainment or maintenance of the NAAQS and Stage II VRS in-use control efficiency of the

NAAQS if reductions from other measures can be substituted for the loss in benefits from Stage II or if Stage II no longer provides any emission reduction benefits.

In this demonstration, DOEE followed the requirements provided by EPA: “Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures.” (Stage II Removal Guidance) The Stage II Removal Guidance provides a method in which states could provide modeling analysis showing that increased emissions from non-ORVR compatible Stage II would eventually reduce the benefits from the implementation of Stage II. Also, the guidance gave the states flexibility to provide additional or alternate analyses to EPA for consideration.

To calculate the 110(l) increment the following formula was used from the Stage II Removal Guidance.

$$increment_i = (Q_{SII})(1 - Q_{ORVRI})(\eta_{iuSII}) - (Q_{SIIva})(CF_i)$$

The variable  $CF_i$  was calculated in two ways using the following two formulae from the Stage II Removal Guidance.

$$CF_i = (0.07645)(VMT_{ORVRI})$$

$$CF_i = (0.0777)(Q_{ORVRI})$$

The District used the MOVES model to estimate the percentage of fuel consumed and Vehicle Miles Travelled (VMT) by vehicles equipped with ORVR based on input data from the 2019 Constrained Long-range transportation plan (CLRP).<sup>1</sup> The District used a combination of enforcement data, self-reported testing, and an in-person survey to calculate the vacuum-assist fuel dispensing fraction (summary statistics of the data sources are in Table 1). The District relied on default values provided in EPA’s guidance for other variables.

**Table 1: GDF Stage II equipment data sources**

Data Source	Count	Percentage
Non-Public	10	8%
Enforcement Visit	39	32%
Self-Reported Stage II Testing	64	53%
In-Person Survey	8	7%
<b>Total GDFs</b>	<b>121</b>	<b>100%</b>

The analysis found that if a low value of 60% for Stage II VRS in-use control efficiency is assumed, the increment is negative starting in 2019, and if a high value of 75% is assumed for Stage II VRS in-use control efficiency, the increment is negative starting in 2021. EPA states in its guidance that “this would indicate that removing Stage II would not increase the refueling emissions inventory because the higher efficiency from ORVR and the

<sup>1</sup> National Capital Region Transportation Planning Board, *Financially Constrained Long-Range Transportation Plan for the National Capital Region - 2016 CLRP Amendment Documentation*, (November 16, 2016).

incompatibility emissions offset the increment due to non-ORVR vehicles being refueled at Stage II GDFs.”<sup>2</sup> As a result, decommissioning of Stage II VRS can be implemented without triggering the need for comparable measures.

The effectiveness assumptions upon which DOEE relies for this analysis can be viewed in Table 2.

**Table 2: Emissions impact effectiveness assumptions**

Variable	Description	Data Source	Value
$Cf_i (VMT_{ORVRi})$	ORVR compatibility factor	From Stage II Removal Guidance	0.07645
$Cf_i (Q_{ORVRi})$	ORVR compatibility factor	From Stage II Removal Guidance	0.0777
$Q_{SII}$	Stage II fuel dispensing fraction	From Stage II Removal Guidance & 20 DCMR § 705.3	90%
$\eta_{iuSII} (low)$	Stage II VRS in-use control efficiency	Low Estimate from Stage II Removal Guidance (Scenario 1)	60%
$\eta_{iuSII} (high)$	Stage II VRS in-use control efficiency	High Estimate from Guidance (Scenario 2)	75%
$\eta_{ORVR}$	ORVR control efficiency	From Stage II Removal Guidance	98%
$Q_{SIIva}$	Vacuum-assist fuel dispensing fraction	District Data Sources <sup>3</sup>	100%
$VMT_{ORVR2019}$	Fraction of VMT by vehicles with ORVR	Calculated from DOEE MOVES2014bMOVES2014b run based on 2019 CLRP	96.1%
$Q_{ORVR2019}$	Fraction of gasoline dispensed to vehicles with ORVR	Calculated from DOEE MOVES2014bMOVES2014b run based on 2019 CLRP	94.3%
$VMT_{ORVR2021}$	Fraction of VMT by vehicles with ORVR	Calculated from DOEE MOVES2014bMOVES2014b run based on 2019 CLRP	97.3%
$Q_{ORVR2021}$	Fraction of gasoline dispensed to vehicles with ORVR	Calculated from DOEE MOVES2014bMOVES2014b run based on 2019 CLRP	94.3%

Based on these assumptions, expressing the incompatibility assumption between certain Stage II systems in use in the District and ORVR, the results of the analysis for the Stage II increments for 2019 and 2021 are provided in Table 3. These results demonstrate that in 2021 there will be minimal excess emissions from Stage II based on the calculations outlined in EPA’s Stage II Removal Guidance, which are based on a range of variables for  $\eta_{iuSII}$  and two differing techniques for calculating the percentage of ORVR.

<sup>2</sup> “Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures”, U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, 27711, EPA-457/B-12-001, August 7, 2012

<sup>3</sup> The District relied on data collected during inspections, reports provided by an independent vendor on Stage II system tests, and site visits to determine the percentage of gas stations that had each type of vapor control technology.

**Table 3: 110(l) increments for 2019, 2021, 2025, and 2030 based on VMT and fuel- based ORVR percentage calculations and low and high values of  $\eta_{iuSII}$**

	2019	2021	2025	2030
<b>increment<sub>i</sub> (VMT<sub>ORVR</sub>) – low <math>\eta_{iuSII}</math></b>	-0.0427	-0.0518	-0.0577	-0.0620
<b>increment<sub>i</sub> (VMT<sub>ORVR</sub>) – high <math>\eta_{iuSII}</math></b>	-0.0350	-0.0461	-0.0534	-0.0586
<b>increment<sub>i</sub> (Q<sub>ORVR</sub>) – low <math>\eta_{iuSII}</math></b>	-0.0425	-0.0518	-0.0578	-0.0622
<b>increment<sub>i</sub> (Q<sub>ORVR</sub>) – high <math>\eta_{iuSII}</math></b>	-0.0348	-0.0462	-0.0535	-0.0588

Based on this analysis, beginning in 2019 the emissions benefits from the Stage II program, in conjunction with ORVR, were overwhelmed by the emissions disbenefit associated with the excess emissions caused by the incompatibility between certain ORVR-incompatible vacuum-assist type Stage II systems in use in the District and ORVR systems on cars in the District. For this reason, DOEE has elected to allow decommissioning of vacuum assist Stage II equipment beginning on January, 1 2022.

### 3.0 Comparable Measures Demonstration and Section 193

All areas of the OTR, both attainment and nonattainment, are subject to the requirements of CAA section 184(b)(2), commonly referred to as the “comparable measures requirement.” Section 184(b)(2) directs these areas to adopt and implement either Stage II controls meeting the general requirements for Stage II gasoline vapor recovery programs under CAA section 182(b)(3), or “control measures capable of achieving emissions reductions comparable to those achievable” by Stage II.

The District has demonstrated in its CAA 110(l) noninterference demonstration found in Section 2 that Stage II VRS no longer yields positive VOC benefits beginning in 2019 when done in conjunction with ORVR. Therefore, since Stage II benefits became negative beginning in 2019, the District believes that the requirement for a CAA section 184(b)(2) comparability analysis have been met.

Section 193 applies to any current nonattainment area that adopted a Stage II control program into its SIP prior to November 15, 1990. The District did not have a Stage II control program prior to November 15, 1990, therefore, section 193 does not apply.

### 4.0 MOVES2014b Assumptions

The analysis results apply solely to determining the total fuel consumed and VMT in the analysis years of 2019, 2021, 2025, and 2030 for the purposes of calculating the District specific values for the variables VMT<sub>ORVR</sub> and Q<sub>ORVR</sub> that are required to compute the increment according to the formulae in the Stage II Removal Guidance. The specific tables of note required by MOVES that affect these calculations are Source Type Population (Table 4), HPMS Vehicle Type Year (Table 5), and Source Age Distribution (Table 6).



**Table 4: Source Type Population data used in MOVES2014b from 2019 CLRP**

Source Type		Population			
Name	ID	2019	2021	2025	2030
Motorcycle	11	4,181	4,292	4,515	4,795
Passenger Car	21	189,253	194,307	204,415	217,050
Passenger Truck	31	89,583	91,975	96,759	102,740
Light Commercial Truck	32	29,568	30,358	31,937	33,911
Intercity Bus	41	564	579	609	647
Transit Bus	42	1,692	1,737	1,828	1,941
School Bus	43	356	365	384	408
Refuse Truck	51	33	33	35	37
Single Unit Short-haul Truck	52	1,172	1,203	1,266	1,344
Single Unit Long-haul Truck	53	88	90	95	101
Motor Home	54	105	108	113	120
Combination Short-haul Truck	61	506	519	546	580
Combination Long-haul Truck	62	378	388	409	434

**Table 5: HPMS Base Year VMT data used in MOVES2014b from 2019 CLRP**

HPMSV Type		Base Year VMT			
Name	ID	2019	2021	2025	2030
Motorcycles	10	20,839,168	20,846,450	20,788,488	20,980,308
Light Duty Vehicles	25	3,627,306,148	3,636,750,197	3,640,723,082	3,688,225,941
Buses	40	27,767,168	27,767,168	27,767,168	27,767,168
Single Unit Trucks	50	62,380,230	63,524,804	65,699,901	69,421,606
Combination Trucks	60	14,797,171	15,068,674	15,584,628	16,467,451

**Table 6: Source Age Distribution data used in MOVES2014b from 2019 CLRP for Source Types with ORVR compatibility issues**

Age	Source ID	Age Fraction				Source ID	Age Fraction			
		2019	2021	2025	2030		2019	2021	2025	2030
0	11	0.0392	0.0392	0.0392	0.0392	51	0.0617	0.0613	0.0611	0.0611
1	11	0.0511	0.0511	0.0511	0.0511	51	0.026	0.0258	0.0258	0.0257
2	11	0.0533	0.0533	0.0533	0.0533	51	0.0373	0.0371	0.037	0.0369
3	11	0.0686	0.0686	0.0686	0.0686	51	0.0291	0.0289	0.0288	0.0288
4	11	0.0521	0.0521	0.0521	0.0521	51	0.0721	0.0716	0.0714	0.0714
5	11	0.0297	0.0297	0.0297	0.0297	51	0.0341	0.0339	0.0338	0.0337
6	11	0.0275	0.0275	0.0275	0.0275	51	0.0257	0.0255	0.0255	0.0254
7	11	0.0896	0.0896	0.0896	0.0896	51	0.0369	0.0366	0.0365	0.0365
8	11	0.0608	0.0608	0.0608	0.0608	51	0.0318	0.0316	0.0315	0.0315
9	11	0.0771	0.0771	0.0771	0.0771	51	0.033	0.0328	0.0327	0.0327
10	11	0.0638	0.0638	0.0638	0.0638	51	0.0504	0.0501	0.0499	0.0499
11	11	0.0545	0.0545	0.0545	0.0545	51	0.0417	0.0414	0.0413	0.0412
12	11	0.045	0.045	0.045	0.045	51	0.0198	0.0196	0.0196	0.0196
13	11	0.0492	0.0492	0.0492	0.0492	51	0.0417	0.0415	0.0414	0.0413

14	11	0.0382	0.0382	0.0382	0.0382	51	0.0437	0.0434	0.0433	0.0432
15	11	0.0319	0.0319	0.0319	0.0319	51	0.0842	0.0836	0.0834	0.0833
16	11	0.0183	0.0183	0.0183	0.0183	51	0.0314	0.0312	0.0311	0.0311
17	11	0.0168	0.0168	0.0168	0.0168	51	0.0215	0.0213	0.0213	0.0213
18	11	0.0095	0.0095	0.0095	0.0095	51	0.0166	0.0165	0.0164	0.0164
19	11	0.0346	0.0346	0.0346	0.0346	51	0.0218	0.0217	0.0216	0.0216
20	11	0.008	0.008	0.008	0.008	51	0.0135	0.0134	0.0134	0.0134
21	11	0.0071	0.0071	0.0071	0.0071	51	0.0218	0.0216	0.0216	0.0216
22	11	0.0219	0.0219	0.0219	0.0219	51	0.026	0.0258	0.0258	0.0257
23	11	0.0097	0.0097	0.0097	0.0097	51	0.0191	0.019	0.019	0.0189
24	11	0.0043	0.0043	0.0043	0.0043	51	0.0144	0.0144	0.0144	0.0144
25	11	0.0019	0.0019	0.0019	0.0019	51	0.0108	0.0113	0.0113	0.0113
26	11	9.00E-04	9.00E-04	9.00E-04	9.00E-04	51	0.0089	0.009	0.0091	0.0091
27	11	4.00E-04	4.00E-04	4.00E-04	4.00E-04	51	0.0072	0.0071	0.0075	0.0075
28	11	2.00E-04	2.00E-04	2.00E-04	2.00E-04	51	0.0063	0.0062	0.0064	0.0064
29	11	1.00E-04	1.00E-04	1.00E-04	1.00E-04	51	0.0053	0.0052	0.0055	0.0055
30	11	0.035	0.035	0.035	0.035	51	0.1061	0.1115	0.1126	0.1135
0	21	0.072	0.072	0.072	0.072	52	0.067	0.067	0.067	0.067
1	21	0.0719	0.0719	0.0719	0.0719	52	0.0339	0.0339	0.0339	0.0339
2	21	0.0669	0.0669	0.0669	0.0669	52	0.0521	0.0521	0.0521	0.0521
3	21	0.0747	0.0747	0.0747	0.0747	52	0.0359	0.0359	0.0359	0.0359
4	21	0.0678	0.0678	0.0678	0.0678	52	0.0714	0.0713	0.0713	0.0713
5	21	0.0552	0.0552	0.0552	0.0552	52	0.0271	0.0271	0.0271	0.0271
6	21	0.0549	0.0549	0.0549	0.0549	52	0.0175	0.0175	0.0175	0.0175
7	21	0.047	0.047	0.047	0.047	52	0.0262	0.0262	0.0262	0.0262
8	21	0.0545	0.0545	0.0545	0.0545	52	0.0247	0.0247	0.0247	0.0247
9	21	0.0578	0.0578	0.0578	0.0578	52	0.0353	0.0352	0.0352	0.0352
10	21	0.0515	0.0515	0.0515	0.0515	52	0.033	0.033	0.033	0.033
11	21	0.0467	0.0467	0.0467	0.0467	52	0.0351	0.0351	0.0351	0.0351
12	21	0.042	0.042	0.042	0.042	52	0.0192	0.0192	0.0192	0.0192
13	21	0.0407	0.0407	0.0407	0.0407	52	0.0323	0.0323	0.0323	0.0323
14	21	0.0334	0.0334	0.0334	0.0334	52	0.0397	0.0397	0.0397	0.0397
15	21	0.0296	0.0296	0.0296	0.0296	52	0.065	0.0649	0.0649	0.0649
16	21	0.0276	0.0276	0.0276	0.0276	52	0.0332	0.0331	0.0331	0.0331
17	21	0.0206	0.0206	0.0206	0.0206	52	0.0209	0.0209	0.0209	0.0209
18	21	0.0166	0.0166	0.0166	0.0166	52	0.0173	0.0173	0.0173	0.0173
19	21	0.0134	0.0134	0.0134	0.0134	52	0.0128	0.0128	0.0128	0.0128
20	21	0.0093	0.0093	0.0093	0.0093	52	0.0095	0.0095	0.0095	0.0095
21	21	0.0083	0.0083	0.0083	0.0083	52	0.0271	0.027	0.027	0.027
22	21	0.0064	0.0064	0.0064	0.0064	52	0.0271	0.0271	0.0271	0.0271
23	21	0.0046	0.0046	0.0046	0.0046	52	0.0225	0.0225	0.0225	0.0225
24	21	0.0033	0.0033	0.0033	0.0033	52	0.0191	0.0191	0.0191	0.0191
25	21	0.0024	0.0024	0.0024	0.0024	52	0.0164	0.0165	0.0165	0.0165

26	21	0.0017	0.0017	0.0017	0.0017	52	0.0144	0.0144	0.0144	0.0144
27	21	0.0012	0.0012	0.0012	0.0012	52	0.0128	0.0128	0.0128	0.0128
28	21	9.00E-04	9.00E-04	9.00E-04	9.00E-04	52	0.0115	0.0114	0.0115	0.0115
29	21	6.00E-04	6.00E-04	6.00E-04	6.00E-04	52	0.0103	0.0103	0.0104	0.0104
30	21	0.0166	0.0166	0.0166	0.0166	52	0.1297	0.13	0.1301	0.1302
0	31	0.0852	0.0852	0.0852	0.0852	53	0.066	0.0656	0.0654	0.0653
1	31	0.0774	0.0774	0.0774	0.0774	53	0.0342	0.034	0.0339	0.0338
2	31	0.0677	0.0677	0.0677	0.0677	53	0.0515	0.0511	0.051	0.0509
3	31	0.0709	0.0709	0.0709	0.0709	53	0.0368	0.0366	0.0365	0.0364
4	31	0.0587	0.0587	0.0587	0.0587	53	0.0713	0.0708	0.0706	0.0705
5	31	0.0558	0.0558	0.0558	0.0558	53	0.0272	0.027	0.0269	0.0269
6	31	0.0495	0.0495	0.0495	0.0495	53	0.0173	0.0172	0.0172	0.0171
7	31	0.031	0.031	0.031	0.031	53	0.0262	0.026	0.0259	0.0259
8	31	0.0483	0.0483	0.0483	0.0483	53	0.0248	0.0246	0.0245	0.0245
9	31	0.0492	0.0493	0.0492	0.0492	53	0.0354	0.0352	0.0351	0.035
10	31	0.0475	0.0475	0.0475	0.0475	53	0.0328	0.0326	0.0325	0.0325
11	31	0.05	0.05	0.05	0.05	53	0.0354	0.0352	0.0351	0.035
12	31	0.0464	0.0464	0.0464	0.0464	53	0.0192	0.0191	0.019	0.019
13	31	0.0462	0.0462	0.0462	0.0462	53	0.0331	0.0328	0.0327	0.0327
14	31	0.0409	0.0409	0.0409	0.0409	53	0.0408	0.0405	0.0404	0.0403
15	31	0.0315	0.0315	0.0315	0.0315	53	0.0652	0.0647	0.0645	0.0645
16	31	0.0246	0.0246	0.0246	0.0246	53	0.0338	0.0335	0.0334	0.0334
17	31	0.0244	0.0244	0.0244	0.0244	53	0.021	0.0208	0.0208	0.0208
18	31	0.0187	0.0187	0.0187	0.0187	53	0.0175	0.0174	0.0173	0.0173
19	31	0.016	0.016	0.016	0.016	53	0.0128	0.0127	0.0127	0.0127
20	31	0.01	0.01	0.01	0.01	53	0.0093	0.0093	0.0093	0.0092
21	31	0.0063	0.0063	0.0063	0.0063	53	0.028	0.0278	0.0277	0.0277
22	31	0.0048	0.0048	0.0048	0.0048	53	0.0278	0.0276	0.0275	0.0275
23	31	0.0037	0.0037	0.0037	0.0037	53	0.0233	0.0231	0.023	0.023
24	31	0.0031	0.0031	0.0031	0.0031	53	0.0197	0.0197	0.0197	0.0197
25	31	0.0028	0.0029	0.0029	0.0029	53	0.0167	0.0172	0.0171	0.0171
26	31	0.0027	0.0027	0.0027	0.0027	53	0.015	0.015	0.0151	0.0151
27	31	0.0026	0.0026	0.0026	0.0026	53	0.0131	0.013	0.0135	0.0135
28	31	0.0025	0.0025	0.0026	0.0026	53	0.012	0.0119	0.0121	0.0121
29	31	8.00E-04	8.00E-04	8.00E-04	8.00E-04	53	0.0109	0.0107	0.011	0.011
30	31	0.0206	0.0205	0.0205	0.0206	53	0.1219	0.1275	0.1286	0.1295
0	32	0.0814	0.0814	0.0814	0.0814	54	0.0736	0.0754	0.0761	0.0763
1	32	0.0736	0.0736	0.0736	0.0736	54	0.0388	0.0397	0.0401	0.0402
2	32	0.0663	0.0663	0.0663	0.0663	54	0.0647	0.0663	0.0669	0.0671
3	32	0.0699	0.0699	0.0699	0.0699	54	0.0383	0.0392	0.0396	0.0397
4	32	0.0607	0.0607	0.0607	0.0607	54	0.071	0.0728	0.0734	0.0737
5	32	0.0547	0.0547	0.0547	0.0547	54	0.022	0.0225	0.0227	0.0228
6	32	0.0484	0.0484	0.0485	0.0485	54	0.0122	0.0125	0.0126	0.0126

7	32	0.0309	0.0309	0.0309	0.0309	54	0.0188	0.0192	0.0194	0.0195
8	32	0.0496	0.0496	0.0496	0.0496	54	0.0196	0.02	0.0202	0.0203
9	32	0.0478	0.0478	0.0478	0.0478	54	0.0364	0.0373	0.0376	0.0377
10	32	0.0496	0.0496	0.0496	0.0496	54	0.0212	0.0217	0.0219	0.022
11	32	0.0486	0.0486	0.0486	0.0486	54	0.0294	0.0301	0.0304	0.0305
12	32	0.0454	0.0454	0.0454	0.0454	54	0.0186	0.0191	0.0192	0.0193
13	32	0.0451	0.0451	0.0451	0.0452	54	0.0233	0.0238	0.024	0.0241
14	32	0.0399	0.0399	0.0399	0.0399	54	0.0338	0.0346	0.0349	0.0351
15	32	0.0323	0.0323	0.0323	0.0323	54	0.0506	0.0518	0.0523	0.0525
16	32	0.0258	0.0258	0.0258	0.0258	54	0.0326	0.0334	0.0337	0.0338
17	32	0.0255	0.0255	0.0255	0.0255	54	0.0202	0.0207	0.0209	0.021
18	32	0.0206	0.0206	0.0206	0.0206	54	0.0171	0.0175	0.0177	0.0177
19	32	0.0165	0.0165	0.0165	0.0165	54	0.0064	0.0066	0.0067	0.0067
20	32	0.0102	0.0102	0.0102	0.0102	54	0.0069	0.0071	0.0071	0.0071
21	32	0.0066	0.0066	0.0066	0.0066	54	0.0283	0.029	0.0292	0.0293
22	32	0.0055	0.0054	0.0054	0.0055	54	0.0261	0.0267	0.027	0.027
23	32	0.0042	0.0042	0.0042	0.0042	54	0.0228	0.0233	0.0235	0.0236
24	32	0.0036	0.0035	0.0035	0.0035	54	0.0205	0.0205	0.0207	0.0208
25	32	0.0033	0.0033	0.0033	0.0033	54	0.0198	0.0182	0.0183	0.0184
26	32	0.0032	0.0032	0.0032	0.0032	54	0.0167	0.0166	0.0164	0.0164
27	32	0.0028	0.0028	0.0028	0.0028	54	0.0157	0.0162	0.0147	0.0147
28	32	0.0027	0.0027	0.0027	0.0027	54	0.0135	0.0139	0.0133	0.0133
29	32	0.001	0.001	0.001	0.001	54	0.0125	0.0132	0.012	0.0121
30	32	0.0243	0.0246	0.0245	0.0243	54	0.1686	0.1511	0.1476	0.1445
0	41	0.1104	0.1104	0.1104	0.1104	61	0.0613	0.061	0.0609	0.0609
1	41	0.0524	0.0524	0.0524	0.0524	61	0.0246	0.0245	0.0244	0.0244
2	41	0.036	0.036	0.036	0.036	61	0.0352	0.0351	0.035	0.035
3	41	0.0302	0.0302	0.0302	0.0302	61	0.0275	0.0274	0.0274	0.0274
4	41	0.0494	0.0494	0.0494	0.0494	61	0.0723	0.0719	0.0718	0.0718
5	41	0.0503	0.0503	0.0503	0.0503	61	0.0352	0.0351	0.035	0.035
6	41	0.0473	0.0473	0.0473	0.0473	61	0.0272	0.027	0.027	0.027
7	41	0.0544	0.0544	0.0544	0.0544	61	0.0386	0.0385	0.0384	0.0384
8	41	0.0458	0.0458	0.0458	0.0458	61	0.033	0.0328	0.0328	0.0327
9	41	0.0316	0.0316	0.0316	0.0316	61	0.0326	0.0324	0.0324	0.0323
10	41	0.0665	0.0665	0.0665	0.0665	61	0.0534	0.0531	0.053	0.053
11	41	0.0528	0.0528	0.0528	0.0528	61	0.0426	0.0424	0.0423	0.0423
12	41	0.0508	0.0508	0.0508	0.0508	61	0.0198	0.0197	0.0197	0.0197
13	41	0.0243	0.0243	0.0243	0.0243	61	0.0429	0.0427	0.0426	0.0426
14	41	0.0395	0.0395	0.0395	0.0395	61	0.0438	0.0436	0.0435	0.0435
15	41	0.0377	0.0377	0.0377	0.0377	61	0.0872	0.0868	0.0867	0.0866
16	41	0.0384	0.0384	0.0384	0.0384	61	0.0308	0.0307	0.0306	0.0306
17	41	0.0265	0.0265	0.0265	0.0265	61	0.0215	0.0214	0.0214	0.0214
18	41	0.0145	0.0145	0.0145	0.0145	61	0.0163	0.0163	0.0163	0.0162

19	41	0.0222	0.0222	0.0222	0.0222	61	0.0233	0.0232	0.0232	0.0232
20	41	0.0084	0.0084	0.0084	0.0084	61	0.0143	0.0142	0.0142	0.0142
21	41	0.0081	0.0081	0.0081	0.0081	61	0.0205	0.0204	0.0203	0.0203
22	41	0.0114	0.0114	0.0114	0.0114	61	0.0255	0.0254	0.0253	0.0253
23	41	0.006	0.006	0.006	0.006	61	0.0182	0.0181	0.0181	0.0181
24	41	0.0031	0.0031	0.0031	0.0031	61	0.0133	0.0133	0.0133	0.0133
25	41	0.0016	0.0016	0.0016	0.0016	61	0.0098	0.0101	0.0101	0.0101
26	41	9.00E-04	9.00E-04	9.00E-04	9.00E-04	61	0.0077	0.0078	0.0079	0.0079
27	41	4.00E-04	4.00E-04	4.00E-04	4.00E-04	61	0.0061	0.006	0.0063	0.0063
28	41	2.00E-04	2.00E-04	2.00E-04	2.00E-04	61	0.0051	0.0051	0.0052	0.0052
29	41	1.00E-04	1.00E-04	1.00E-04	1.00E-04	61	0.0042	0.0042	0.0044	0.0044
30	41	0.0786	0.0786	0.0786	0.0786	61	0.1063	0.1097	0.1104	0.111
0	42	0.1104	0.1104	0.1104	0.1104	62	0.0604	0.0603	0.0603	0.0602
1	42	0.0524	0.0524	0.0524	0.0524	62	0.0221	0.022	0.022	0.022
2	42	0.036	0.036	0.036	0.036	62	0.0314	0.0313	0.0313	0.0313
3	42	0.0302	0.0302	0.0302	0.0302	62	0.025	0.0249	0.0249	0.0249
4	42	0.0494	0.0494	0.0494	0.0494	62	0.0725	0.0724	0.0723	0.0723
5	42	0.0503	0.0503	0.0503	0.0503	62	0.0372	0.0371	0.0371	0.0371
6	42	0.0473	0.0473	0.0473	0.0473	62	0.0297	0.0296	0.0296	0.0296
7	42	0.0544	0.0544	0.0544	0.0544	62	0.0418	0.0417	0.0417	0.0416
8	42	0.0458	0.0458	0.0458	0.0458	62	0.035	0.0349	0.0349	0.0349
9	42	0.0316	0.0316	0.0316	0.0316	62	0.0318	0.0317	0.0317	0.0317
10	42	0.0665	0.0665	0.0665	0.0665	62	0.0585	0.0584	0.0584	0.0584
11	42	0.0528	0.0528	0.0528	0.0528	62	0.0443	0.0442	0.0442	0.0442
12	42	0.0508	0.0508	0.0508	0.0508	62	0.02	0.0199	0.0199	0.0199
13	42	0.0243	0.0243	0.0243	0.0243	62	0.0451	0.045	0.045	0.045
14	42	0.0395	0.0395	0.0395	0.0395	62	0.0443	0.0442	0.0441	0.0441
15	42	0.0377	0.0377	0.0377	0.0377	62	0.0926	0.0925	0.0924	0.0924
16	42	0.0384	0.0384	0.0384	0.0384	62	0.0299	0.0298	0.0298	0.0298
17	42	0.0265	0.0265	0.0265	0.0265	62	0.0217	0.0216	0.0216	0.0216
18	42	0.0145	0.0145	0.0145	0.0145	62	0.016	0.016	0.016	0.016
19	42	0.0222	0.0222	0.0222	0.0222	62	0.026	0.0259	0.0259	0.0259
20	42	0.0084	0.0084	0.0084	0.0084	62	0.0155	0.0155	0.0155	0.0155
21	42	0.0081	0.0081	0.0081	0.0081	62	0.0183	0.0183	0.0183	0.0183
22	42	0.0114	0.0114	0.0114	0.0114	62	0.0248	0.0247	0.0247	0.0247
23	42	0.006	0.006	0.006	0.006	62	0.0167	0.0167	0.0167	0.0167
24	42	0.0031	0.0031	0.0031	0.0031	62	0.0115	0.0115	0.0115	0.0115
25	42	0.0016	0.0016	0.0016	0.0016	62	0.008	0.0081	0.0081	0.0081
26	42	9.00E-04	9.00E-04	9.00E-04	9.00E-04	62	0.0058	0.0058	0.0058	0.0058
27	42	4.00E-04	4.00E-04	4.00E-04	4.00E-04	62	0.0042	0.0042	0.0043	0.0043
28	42	2.00E-04	2.00E-04	2.00E-04	2.00E-04	62	0.0032	0.0032	0.0032	0.0032
29	42	1.00E-04	1.00E-04	1.00E-04	1.00E-04	62	0.0025	0.0024	0.0025	0.0025
30	42	0.0786	0.0786	0.0786	0.0786	62	0.1045	0.106	0.1063	0.1065

0	43	0.0745	0.0748	0.0749	0.0749
1	43	0.0331	0.0332	0.0333	0.0333
2	43	0.0345	0.0346	0.0346	0.0346
3	43	0.0584	0.0586	0.0586	0.0587
4	43	0.0327	0.0329	0.0329	0.0329
5	43	0.0269	0.027	0.027	0.027
6	43	0.0101	0.0101	0.0101	0.0101
7	43	0.0309	0.031	0.031	0.0311
8	43	0.0215	0.0216	0.0216	0.0217
9	43	0.0307	0.0308	0.0309	0.0309
10	43	0.0538	0.0539	0.054	0.054
11	43	0.0539	0.0541	0.0542	0.0542
12	43	0.0413	0.0415	0.0415	0.0416
13	43	0.0218	0.0218	0.0219	0.0219
14	43	0.0129	0.013	0.013	0.013
15	43	0.054	0.0542	0.0543	0.0543
16	43	0.0185	0.0186	0.0186	0.0186
17	43	0.0073	0.0073	0.0073	0.0073
18	43	0.0348	0.0349	0.0349	0.035
19	43	0.0178	0.0179	0.0179	0.0179
20	43	0.0051	0.0051	0.0051	0.0051
21	43	0.0185	0.0185	0.0185	0.0186
22	43	0.0097	0.0097	0.0098	0.0098
23	43	0.0053	0.0053	0.0053	0.0053
24	43	0.0031	0.0031	0.0031	0.0031
25	43	0.0022	0.0019	0.0019	0.0019
26	43	0.0014	0.0013	0.0012	0.0012
27	43	0.0011	0.0011	9.00E-04	9.00E-04
28	43	8.00E-04	8.00E-04	7.00E-04	7.00E-04
29	43	7.00E-04	7.00E-04	6.00E-04	6.00E-04
30	43	0.2827	0.2806	0.2803	0.2799

## 5.0 Proposed Regulatory Actions and Decommissioning Procedures

The proposed action provides new and existing GDFs a regulatory option to either not install or decommission Stage II vapor recovery equipment.

The proposed regulation is developed in accordance with EPA's "Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures" (Guidance) EPA-457/B-12-001, August 7, 2012.

The District is proposing the following amendments to 20 DCMR 705:

1. Allow GDFs constructed after the effective date of the regulation the option to not install and operate Stage II systems;
2. Allow existing GDFs to decommission vacuum assist Stage II systems after the effective date of the regulation;
3. An owner or operator of a GDF that decommissions a Stage II vacuum assist vapor recovery system shall perform the decommissioning of the Stage II vapor recovery system in accordance with the “Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Refueling Sites” of the Petroleum Equipment Institute, Section 14, 2009; and
4. Clarify the testing procedures require for GDFs with and without Stage II systems.