

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR DIVISION**

INTRA AGENCY MEMORANDUM

TO: File

FROM: Mary E. Major
Environmental Program Manager

SUBJECT: Meeting Minutes - Technical Advisory Committee Concerning Emergency
Generators General Permit (Rev. Dg)

DATE: August 24, 2010

INTRODUCTION

A meeting of the technical advisory committee concerning the emergency generator general permit was held in the 2nd Floor Conference Room A, Department of Environmental Quality, 629 E. Main Street, Richmond, Virginia. A record of meeting attendees is attached.

Start: 9:35 a.m.
End: 12:00 p.m.

Subcommittee Members Present:

Elizabeth Aiken
Jerome A. Brooks
Michael W. Kendall, R.S.
Mary E. Major
Rebekah Remick
William Scarpinato
Susan Stewart
Joe Suchecki

Subcommittee Members Absent:

Walid M. Daniel, PE, CEM

Public Attendees:

None

SUMMARY OF DISCUSSION

Ms. Major explained that the draft regulation had been forwarded to the DEQ Regional Offices for comment and that several issues raised by the regions needed to be reviewed by the TAC. Ms Rebekah Remick provided a summary of those issues. The TAC reached consensus on the following issues:

Questions for the TAC on DRAFT Generator GPs August 24, 2010

1. Peak Shaver GP: Do we want to add “modification” to the peak shaver generator general permit? Currently, it is only for new sources and Beth has gotten the OK from the powers above to make this change if the TAC wants to.

No. After significant discussion it was determined that under any circumstances it would be more time consuming to obtain a general permit for an existing source than to just reopen an existing permit and modify the permit because of the 99.4 tons CO per year limit in the general permit.

2. Peak Shaver GP: Tier 4 standards: We have that the generators have to meet Tier 4 standards, whether with certification or with controls. In the emission limit tables, we have Tier 4 standards with the respective dates that the standards apply (i.e. 2011+, etc.) What if a 2009 model year engine came in with add-on controls and met Tier 4 standards...could they not get this GP? Is that what we want? Is that possible?

Yes, it is possible. The unit might have been small enough that it was previously an exempt unit. It could then apply for and get a permit to operate with add-on controls that would meet the appropriate *emission standards*, not necessarily the *certification standards* necessary for Tier 4 engines. Certification standards are required by EPA for new engines and are different from emissions standards. The engine could not be “EPA Tier 4 certified” since the Tier 4 standards are only for 2011+ model year engines. Plus, NSPS Subpart IIII will not allow a facility to install a Tier 4 2009 model year engine.

3. Peak Shaver GP: Fuel throughputs: A comment from the regions stated that the fuel throughputs were not correct since we did not consider the efficiency of an engine. Is this something that we want to consider? I did not originally include it in the calculation of the fuel throughputs (and therefore in the equation) since the efficiency of an engine (and engines in general) is variable.

We are not going to consider the efficiency of an engine in these throughputs because it is so variable. If the facility cannot meet the throughputs in the general permit, they always have the choice to choose the “hour throughput” option or get an Article 6 permit.

4. Peak Shaver GP: Testing requirements: For the identical multiple affected units conditions, is there no limit, i.e. even small units have to follow this? I thought we discussed this but couldn't remember the reasoning.

Testing for multiple identical affected units located at the facility shall be conducted as follows:

- a. 50% of CI affected units shall be tested.

b. 100% of SI affected units over 500 hp shall be tested

No size limit will be added since most people are not going to install small units for peak shaving. Most will install larger units that should be tested.

5. Peak Shaver GP: Periodic Monitoring for controls: Did we want to include these conditions for periodic monitoring?

Monitoring: The SCR system on each diesel engine-generator set shall be equipped with a device to continuously measure and record the SCR catalyst bed exhaust temperature, the urea/ammonia injection rate (*if open-loop*) or the NOx emissions measured after the catalyst, expressed in (lbs/hr)(ppm)(*if closed-loop*). The information shall be recorded at a minimum frequency of once every fifteen minutes, and correlated to run date, engine load/kilowatt output, and engine operating hours. Refer to Condition x for record keeping requirements to demonstrate compliance with this condition.

Monitoring: The Diesel Particulate Filter (DPF) on each diesel engine-generator set shall be equipped with a device to continuously measure and record engine backpressure. The information shall be recorded at a minimum frequency of once every fifteen minutes. Refer to Condition x for record keeping requirements to demonstrate compliance with this condition.

Recordkeeping: A monthly log of the monitoring device data required by Condition x, including SCR catalyst bed exhaust temperature, urea injection rate (for an open loop system), NOx emissions measured after the catalyst (for a closed loop system), and engine backpressure.

Yes.

6. Peak Shaver and Emergency GP: Testing requirements: Why do the peak shavers have to test and the emergency generators do not when they are both limited to approximately the same amount of runtime? What is our reasoning for not testing the emergency generators?

The emissions are certified by the engine manufacturer and it does not make economic sense to have every owner and operator of an emergency engine in to do a performance test on certified emergency engines that are not likely to operate more than 30-50 hours per year. Peak shavers will operate more often and therefore, testing is appropriate for those sources.

7. Definitions: Do we want to define terms that are already defined in other regulations (i.e. spell it out and copy/paste) or do we not want to do this (i.e. the public/sources would just have to find the definitions in other regs)? What would be easier for the public/sources?

No need to redefine terms already defined in other parts of the Board's regulations.

8. Definitions: Diesel Fuel (Question for Bill from Dominion) – What does ASTM D975 actually say? We received a comment that D975 does not use the descriptor “ultra low sulfur diesel fuel” and that it uses the grade followed by “S15”, “S500”, or “S5000” to distinguish diesels of different

sulfur contents. We need to be consistent with the ASTM or just reference the ASTM and delete the extra wording.

Bill will provide information about the ASTM.

“Diesel fuel” means any liquid that meets the specifications of ultra-low sulfur diesel fuel as defined by the American Society for Testing and Materials in ASTM D975.

9. Definitions: Biodiesel Blends (Question for Joe from Chicago) - So an engine can't use B21 through B99? (Joe, didn't you say that anything higher than that wouldn't run the engine or wouldn't be good for the engine?)

"Biodiesel Blends" means a blend of biodiesel and petroleum diesel fuel meeting either the requirements of ASTM D975 (blends up to 5%) or ASTM D7467 (blends between 6 and 20% biodiesel) and designated Bxx where xx represents the biodiesel content of the blend, e.g., B20 for a blend of 20% biodiesel and 80% petroleum diesel fuel.

Correct. The engine manufacturers will not use greater than B20 in their engines for warranty purposes since biodiesel breaks down and can harm the engine.

10. Transfer for authorizations: It was suggested to delete the last part of this condition from the general permit since the GP is only for the affected units. What other “pieces of equipment” would there be? The only thing that we could think of was control equipment. Can control equipment be moved i.e. is it add on or internal?

No person shall transfer an authorization to operate under the general permit from one affected unit to another or from one piece of equipment to another.

Yes

11. General Question: LPG, liquid propane gas (wording comes from legislation), and liquid petroleum gas (what LPG actually means), propane...which one do we want?

Liquid petroleum gas

12. General Question: What happens if the source starts out non-major, gets the GP, and then becomes a major source in the future. Is the General Permit no longer valid?

The facility would have to get an individual permit that supersedes the GP and the GP would be invalid.

The group also reviewed the draft regulation and identified many areas that need modification based upon the above-mentioned issues as well as other formatting and editorial changes. A revised draft will be distributed to the TAC.

NEXT MEETING DATE

No additional meetings are scheduled at this time.

DOCUMENT DISTRIBUTION

The following documents were distributed to the committee prior to or at the meeting:

1. Copy of Meeting attendees
2. Copy of email from Jed Brown, Regional Air Permit Manager
3. Copy of email from Janardan Pandey, Regional Air Permit Manager
4. Peak Shaving Generator General Permit Draft # 6

TEMPLATES\GEN-PERMIT\GP08
REG\GEN-DEV\Dg-GP08-6

Attachments

Jed Email:

A couple general comments from me . . .

1. As understood from review, thresholds for applicability were derived using Article 6 permit exemption rates from 1320 C and 1320 D including the 1320 C & D distinction between new and modified. However, use of the terms “new facility” and “modified facility” in the applicability section, as defined in the proposed regulations, is not consistent with the 1320 C & D concept of new & modified. The same underlying issue exists in the current Article 6 and was subject of considerable attention and discussion during the Article 6 revision process. Changes were developed to make it clear that the definitions of “new source” and “modified source” (as found in the current Article 6) are not used for implementation of 1320 C & D. The new language and associated new definitions make it clear that 1320 C is used for greenfield sources and 1320 D is used for changes to sources already in existence at the time of the change.

The concern, when using the definition of “new facility” and “modified facility”, is that units added to a source already in existence not only meet the definition of “modified source” but also “new facility” (“any stationary source (or portion of it), the construction of which commenced on or after March 17, 1972”). At present this may not seem to be an issue we can’t address through guidance but the proposed changes going to the Board next month will redefine “modification” and make it less apparent that the addition of a unit to a source in existence would be evaluated as a “modified source” (modification will become a change to an emissions unit . . . not change or addition to a source). There appears to be a couple ways this could be addressed:

- Take out the minimum applicability thresholds along with the definitions of new and modified facility. This would leave a single upper threshold that would apply to either Greenfield or modification situations. The lower threshold values are problematic (see comments in attachments & below) and don’t appear to be necessary. We could include a generic statement restricting applicability to actions that would otherwise be subject to permitting under Article 6. Note that sources already must provide demonstration that they are not major . . . along with this they could submit demonstration showing that they would be subject to permitting under Article 6 absent use of the GP. This approach would also cover us in the event that we do accept delegation of NSPS IIII but are not successful in getting 5-80-1100 E removed from Article 6. If we don’t wish to place the additional burden on the source to present an Article 6 applicability determination we could allow units which might not otherwise be subject to Article 6 to be covered by the GP if the owner would rather accept the permit than justify they don’t need one.

- Use same fix developed to address this issue in Article 6 . . . “new stationary source” for Greenfield sources, “project” for modifications and additions and add all the associated definitions (or reference the definitions in Article 6 if we’re confident the revisions will be approved prior to the GP).

Note I have not directly discussed “reconstruction” in either option above . . . under Article 6, reconstruction is exempt so long as it doesn’t increase PTE. If PTE is increased, the project is also a modification and evaluated/treated as such for the purpose of minor NSR. So, for the purpose of the GP, reconstruction shouldn’t be covered (if it is, it should not be lumped with the Greenfield thresholds).

2. As understood, NSPS emissions limitations, along with 1320 C & D thresholds were used to derive applicability thresholds for the GP. This implies a direct correlation between case-by-case applicability under Article 6 and applicability to the GP. If this was the intent, it should be noted, for purpose of 1320 C or D, emission factors used are presumed to be representative of the worst case short term emissions under normal operating conditions. As understood the NSPS emissions limitation is not representative

of the worst case normal operating conditions but is the maximum emissions allowed using a testing regime over various prescribed load conditions. Implications . . . some sources may incorrectly conclude that being less than the GP applicability threshold means they are also exempt from Article 6 or that we are not able to cover all the facilities we intended to cover under the GP. Given this issue and the unknowns surrounding NSPS IIII delegation/removal of 5-80-1100E, it is suggested that we consider removing the lower applicability thresholds from the GP

Here is Janardan's email that I mentioned for the TAC (along with some responses). This may also go with Jed's email... ☺

Rebekah Remick

Minor NSR Coordinator

VA-DEQ Central Office

phone (804) 698-4424

NEW email: Rebekah.Remick@deq.virginia.gov

From: Brown, Jed (DEQ)

Sent: Friday, August 13, 2010 2:33 PM

To: Remick, Rebekah (DEQ); Pandey, Janardan (DEQ)

Cc: Darton, Terry (DEQ); Feagins, Rob (DEQ); Kyle, James (DEQ); Workman, Jane (DEQ)

Subject: RE: General Permit - Emergency Generators

BRRO looked into this once before . . . I believe compliance with the NTE numbers is determined using the same testing approach used for certification. If so, EPA's statement is true but it still does not mean testing at 100% load would not give a number greater than NTE and still be in compliance with NSPS standards.

Full BRRO comments are coming later but I'm not sure this is really an issue for the GP anyway . . . if I understand correctly the GP thresholds only need to be linked to Article 6 to the extent necessary to support a demonstration that the use of the GP is not a relaxation of the SIP . . . so it's more of a question as to whether this approach is close enough to render the same general rate of applicability as would continuation of individual case-by-case determinations under Article 6.

My suggestion is that we can avoid discussing or justifying most ramifications of this issue by just removing the lower applicability thresholds. Along with this change we could either include in applicability section a statement that the GP does apply to new stationary sources or projects that are otherwise exempt from Article 6 or just let the source decide if they want to be covered by the GP (regardless of whether Article 6 would apply) in lieu of presenting an Article 6 applicability determination.

David J. (Jed) Brown
Regional Air Permit Manager
Virginia Department of Environmental Quality
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(434)582-6210

From: Remick, Rebekah (DEQ)

Sent: Friday, August 13, 2010 1:16 PM

To: Pandey, Janardan (DEQ)

Cc: Brown, Jed (DEQ); Darton, Terry (DEQ); Feagins, Rob (DEQ); Kyle, James (DEQ); Workman, Jane (DEQ)

Subject: RE: General Permit - Emergency Generators

Janardan,

When we get together with the TAC, I can bring this up with them. You may have a good point since I actually asked this question to EPA almost 1 ½ years ago and this was their response:

The NSPS describes in 60.4212(b) and (c) the "not to exceed" (NTE) limits that apply to certified engines in-use. These NTE are about 25% higher than the certification limits and are expected to be complied with in-use.

But this was their only response...vagueness at its best ☺

Rebekah Remick

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NEW email: Rebekah.Remick@deq.virginia.gov

From: Pandey, Janardan (DEQ)

Sent: Friday, August 13, 2010 1:05 PM

To: Remick, Rebekah (DEQ)

Cc: Brown, Jed (DEQ); Darton, Terry (DEQ); Feagins, Rob (DEQ); Kyle, James (DEQ); Workman, Jane (DEQ)

Subject: General Permit - Emergency Generators

The main comment I have is emission factors used for calculating engine size that would be subject to General Permit. As I understand, emission calculations were conducted to determine the range of engine size so that the deciding pollutant (NOx) emissions are greater than 10 tpy and less than 40 tpy (for modified facilities).

The emission factors used were based on NSPS standards. The NSPS standards specified in Subpart IIII are measured using the procedures in Subpart E of 40 CFR 89. The test procedures are described in Subpart E (89.404), The test cycles consist of *various steady state operating modes* that include different combinations of engine speeds and loads. These procedures require the determination of the concentration of pollutant, exhaust volume, the fuel flow and the power output during each mode. The measured values are weighted and used to calculate emissions in g/kW-hr (See Table 2 of Appendix B, Subpart E, 40 CFR 89 for weighting factors).

If I understand correctly, the emissions from an individual engine at 100% load can exceed the NSPS standards specified in Subpart IIII. As mentioned in the general permit procedure document (and NSPS), when testing is required, the emissions must not exceed the Not to Exceed (NTE) emission standards which is 1.25 times the standards specified in NSPS.

I was wondering whether NTE emission standards should be used as emission factors rather than NSPS standards for calculating emissions to determine the range of engine size subject to General Permit.

I will have other comments in the separate email.

Thanks.

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NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5 CHAPTER 530.
NONEMERGENCY PEAK SHAVING GENERAL PERMIT

Part I Definitions.

- 9VAC5-530-10. General.
- 9VAC5-530-20. Terms defined.

Part II General Provisions.

- 9VAC5-530-30. Basis.
- 9VAC5-530-40. Applicability and designation of affected emissions unit.
- 9VAC5-530-50. General.
- 9VAC5-530-60. Circumvention, suspension or revocation.
- 9VAC5-530-70. Compliance.
- 9VAC5-530-80. Enforcement of a general permit.

Part III General Permit Administrative Procedures.

- 9VAC5-530-90. Requirements for granting an authorization to operate under the general permit.
- 9VAC5-530-100. Applications for coverage under the general permit.
- 9VAC5-530-110. Required information for initial applications.
- 9VAC5-530-120. Granting an authorization to operate under the general permit.
- 9VAC5-530-130. Transfer of authorization to operate under the general permit.

Part IV General Permit Terms and Conditions for Electric Generating Units Using Fuel Throughput for Compliance Demonstration.

- 9VAC5-530-140. General permit.
- 9VAC5-530-150. General terms and conditions.
- 9VAC5-530-160. Monitoring requirements.
- 9VAC5-530-170. Operating schedule.
- 9VAC5-530-180. Emission limits.
- 9VAC5-530-190. Testing requirements.
- 9VAC5-530-200. Recordkeeping requirements.
- 9VAC5-530-210. Reporting requirements.

Part V General Permit Terms and Conditions for Electric Generating Units Using Hours of Operation for Compliance Demonstration.

- 9VAC5-530-220. General permit.
- 9VAC5-530-230. General terms and conditions.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

- 9VAC5-530-240. Monitoring requirements.
- 9VAC5-530-250. Operating schedule.
- 9VAC5-530-260. Emission limits.
- 9VAC5-530-270. Testing requirements.
- 9VAC5-530-280. Recordkeeping requirements.
- 9VAC5-530-290. Reporting requirements.

PART I.
Definitions.

9VAC5-530-10. General.

A. Unless specifically defined in the Virginia Air Pollution Control Law or in this chapter, terms used shall have the meaning given them by **9VAC5-80-1110 (definitions, Permits for New and Modified Stationary Sources)**, 9VAC5-10-20 (general definitions, Regulations for the Control and Abatement of Air Pollution), 9VAC5-170-20 (definitions, Regulation for General Administration), or commonly ascribed to them by recognized authorities, in that order of priority.

9VAC5-530-20. Terms defined.

"Affected unit" means an electric generating unit subject to the provisions of this Chapter.

"Aggregate rated electrical power output" means the sum or total rated electrical power output for all engines involved in the initial application. It does not include all existing electric generating units at the source.

"Attainment area" means any area (other than an area identified as a nonattainment area) that meets the national ambient air quality standards for any pollutant as designated under § 107 of the federal Clean Air Act.

"Bio-diesel fuel" means a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable or animal fats, designated B100, and meeting the requirements of ASTM D 6751.

"Biodiesel Blends" means a blend of biodiesel and petroleum diesel fuel meeting either the requirements of ASTM D975 (blends up to 5 percent) or ASTM D7467 (blends between 6 percent and 20 percent biodiesel) and designated Bxx where xx represents the biodiesel content of the blend, e.g., B20 for a blend of 20 percent biodiesel and 80 percent petroleum diesel fuel.

"Compression ignition (CI) engine" means a type of stationary internal combustion engine that is not a spark ignition engine.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

"Demand response" means measures aimed at shifting time of use of electricity from peak-use periods to times of lower demand by inducing retail customers to curtail electricity usage during periods of congestion and higher prices in the electrical grid. Demand response actions are typically undertaken by the source owner in response to a request from a utility or electrical grid system operator or in response to market prices.

"Diesel fuel" means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius and that complies with the specifications for diesel fuel oil number 1 or number 2, as defined by the American Society for Testing and Materials in ASTM D975.

"Distillate oil" means fuel oil that complies with the specifications for diesel fuel oil number 1 or number 2, as defined by the American Society for Testing and Materials in ASTM D975.

"Electric generating unit" means a stationary internal combustion engine that participates in a nonemergency voluntary demand response program (i.e. load curtailment, demand response, peak shaving or like program).

"Emergency" means a condition that arises from sudden and reasonably unforeseeable events where the primary energy or power source is disrupted or disconnected due to conditions beyond the control of an owner or operator of a source including:

- a. A failure of the electrical grid,
- b. On-site disaster or equipment failure,
- c. Public service emergencies such as flood, fire, natural disaster, or severe weather conditions,
- d. An ISO-declared emergency, where an ISO emergency is:
 - (1). An abnormal system condition requiring manual or automatic action to maintain system frequency, to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property.
 - (2). Capacity deficiency or capacity excess conditions.
 - (3). A fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel.
 - (4). Abnormal natural events or man-made threats that

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

would require conservative operations to posture the system in a more reliable state.

(5). An abnormal event external to the ISO service territory that may require ISO action.

"Facility"....

"Identical electric generating units" mean electric generating units that have the same make, manufacturer, model, year, size, and fuel specifications.

"Independent system operator" or "ISO" means a person that may receive or has received, by transfer pursuant to **§56-576 of the Code of Virginia**, any ownership or control of, or any responsibility to operate, all or part of the transmission systems in the Commonwealth.

"Integration operational period" means that period of time beginning with the first time the electric generating unit is started on site and ending when the electric generating unit is fully integrated with the source's electrical system. In no case shall this period exceed 30 days.

"Kilowatt (kW) to **break** horsepower (bhp)" means the conversion of 1 kW = 1.341 bhp.

"Load curtailment" means an action similar to demand response, with the specific removal or reduction of electrical loads for a limited period of time from a utility grid system in response to a request from the utility or electrical grid system operator.

"Major new source review (major NSR) program" means a preconstruction review and permit program (i) for new major stationary sources or major modifications (physical changes or changes in the method of operation), (ii) established to implement the requirements of §§ 112, 165 and 173 of the federal Clean Air Act and associated regulations, and (iii) codified in Article 1 (9VAC5-80 -50 et seq.), Article 3 (9VAC5-360 et seq.) Article 7 (9VAC5-80-1400 et seq.), Article 8 (9VAC5-80-1605 et seq.) and Article 9 (9VAC5-80-2000 et seq.) of Part II of 9VAC5-80 (Permits for Stationary Sources).

"Model year" means either (i) the calendar year in which the engine was originally produced, or (ii) the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

"Nonattainment area" means any area that does not meet the national ambient air quality standards for any pollutant as designated under § 107 of the federal Clean Air Act and listed in 9 VAC 5-20-204 . Jed: means any location listed in 9VAC5-20-204 for any one pollutant. For purposes of this general permit, a location cannot be classified as both nonattainment and attainment.

"Operation" means the burning of fuel regardless of whether electricity is generated.

"Peak shaving" means measures aimed solely at shifting time of use of electricity from peak-use periods to times of lower demand by inducing retail customers to curtail electricity usage during periods of congestion and higher prices in the electrical grid. Peak shaving is typically undertaken at a source owner's discretion in order to reduce maximum electrical usage and, therefore, cost of electrical service to the source owner.

"Spark ignition engine (SI)" means a natural gas or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

"Startup" means the date on which each electric generating unit completes the integration period, unless an extension is approved by the department. An extension request must be submitted seven days prior to the end of the 30-day integration operational period.

"Tier 4 engine or equivalent means a compression ignition electric generating unit that meets Tier 4 standards of 40 CFR Part 1039, or for engines greater than 10 liters per cylinder, 40 CFR Part 1042, whether by Tier 4 certification or by add-on controls to meet the applicable emission standards for the model year and size of the engine.

"Virginia Air Pollution Control Law" means chapter 13 (§10.1-1300 et seq.) of Title 10.1 of the Code of Virginia.

"Volatile organic compound" or "VOC" means volatile organic compound as defined in 9VAC5-10.

PART II.
GENERAL PROVISIONS.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5-530-30. Basis.

This general permit is being issued under the authority of §10.1-1308.1 of the Code of Virginia and 9VAC5-80-1250.

9VAC5-530-40. Applicability and designation of affected emissions unit.

A. The affected unit to which this chapter applies is each electric generating unit for which construction, installation, or operation is commenced on or after insert effective date of this chapter ~~the date of this general permit~~ and that meets the requirements stated below:

1. For compression ignition (CI) engines: Tier 4 engines (or equivalent) with an aggregate rated electrical power output greater than or equal to 2,959 kW (3,968 bhp) and less than 73,610 kW (98,711 bhp).

2. For spark ignition (SI) engines located in an attainment area with an aggregate rated electrical power output greater than or equal to 3,091 kW (4,145 bhp) and less than 76,200 kW (102,184 bhp).

3. For SI engines located in a nonattainment area with an aggregate rated electrical power output greater than or equal to 3,091 kW (4,145 bhp) and less than 47,200 kW (63,295 bhp).

B. This chapter applies throughout the Commonwealth of Virginia.

C. The following electric generating unit or units shall not be eligible for this general permit:

1. Any electric generating unit that is a major source or is located at a major source, and subject to the provisions of the major new source review program and codified in as defined in Articles 1, 7, 8, or 9 of Part II of 9 VAC 5-80(Permits for Stationary Sources) shall not be eligible for this general permit.

2. Any electric generating unit that is an emergency generator ~~or participates in an ISO Emergency Load Response Program.~~

9VAC5-530-50. General.

A. Any owner requesting authority to operate an affected unit shall comply with the requirements of 9VAC5-80 (Permits for Stationary Sources) and register with the department as required under 9VAC5-20-160. Not all parts of the general permit will apply to every owner. The determination of which parts apply will be based on where the unit is located and method of compliance determination. Parts I, II and III apply to

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

all owners. Part IV will apply to units using fuel throughput for compliance determination. Part V will apply to units using hours of operation for compliance determination.

B. The existence of a permit under this chapter shall not constitute a defense of a violation of the Virginia Air Pollution Control Law or the regulations of the board and shall not relieve any owner of the responsibility to comply with any applicable regulations, laws, ordinances and orders of the governmental entities having jurisdiction.

C. The owner shall, upon request of the department, reduce the level of operation or shut down a unit, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

D. This general permit to construct, install, **modify** or operate each affected unit shall become invalid, unless an extension is granted by the department, if:

1. A program of continuous construction is not commenced within the latest of the following:

a. Eighteen months from the date that this general permit is issued to the owner;

b. Nine months from the date that the last permit or other authorization was issued from any other governmental entity;

c. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

2. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a department-approved period between phases of a phased construction project.

E. At all times, including periods of start-up, shutdown, and malfunction, the owner shall, to the extent practicable, maintain and operate the affected unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

F. The owner shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to process equipment which affect such emissions:

1. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

2. Maintain an inventory of spare parts.

G. The owner shall have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

H. The owner shall train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment.

1. The owner shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

I. Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to department personnel upon request.

J. The owner shall keep a copy of this permit on the premises of the affected unite to which it applies.

9VAC5-530-60. Circumvention, suspension or revocation.

A. No owner shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air pollutants emitted, conceals or dilutes an emission of air pollutants which would otherwise violate this chapter.

B. This general permit may be suspended or revoked if the owner:

1. Knowingly makes material misstatements in the permit application or any amendments to it.

2. Fails to comply with the conditions of this general permit.

3. Fails to comply with any emission standards applicable to a permitted emissions an affected unit unit.

4. Causes emissions from the stationary source which result in violations of, or interfere with the attainment and maintenance of any ambient air quality standard.

5. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, or applicable regulations of the board in effect at the time an application for this permit is submitted

9VAC5-530-70. Compliance.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

A. Whenever it is necessary for the purpose of the regulations of the board, the board or an agent authorized by the board may at reasonable times enter an establishment or upon property, public or private, for the purpose of obtaining information or conducting surveys or investigations as authorized by §10.1-1315 or § 46.2-1187.1 of the Code of Virginia.

B. The time for inspection shall be deemed reasonable during regular business hours or whenever the source is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

C. Upon presentation of credentials and other documents as may be required by law, the owner shall allow the department to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of this permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring equipment), practices, or operations regulated or required under this permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

9VAC5-530-80. Enforcement of a general permit.

A. The following general requirements apply:

1. Pursuant to § 10.1-1322, failure to comply with any term or condition of the general permit shall be considered a violation of the Virginia Air Pollution Control Law.

2. An owner who violates or fails, neglects or refuses to obey any provision of this chapter or the Virginia Air Pollution Control Law, any applicable requirement, or any permit term or condition, knowingly makes any false statement, representation or certification in any form, in any notice or report required by a permit, or who knowingly renders inaccurate any required monitoring device or method shall be subject to the provisions of §§ 10.1-1307, 10.1-1309, 10.1-1316, 10.1-1318 and 10.1-1320 of the Virginia Air Pollution Control Law.

B. Violation of this permit is subject to the enforcement provisions including, but not limited to, those contained in 9VAC5-170 (Regulation for General Administration)

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

and §§ 10.1-1309, 10.1-1309.1, 10.1-1311 and 10.1-1316 of the Virginia Air Pollution Control Law.

C. If any condition, requirement or portion of this permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of this permit.

D. The owner shall comply with all applicable conditions of this permit. Any noncompliance with this permit constitutes a violation of the Virginia Air Pollution Control Law and is grounds (i) for enforcement action, or (ii) for suspension or revocation of the authorization to operate under this permit.

E. It shall not be a defense for an owner in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

F. The authorization to operate under this permit may be suspended or revoked for cause as specified in 9VAC5-530-80. The filing by an owner of a (i) request for reauthorization to operate under this permit, or (ii) notification of termination, planned changes or anticipated noncompliance does not stay any condition of this permit.

H. This permit does not convey any property rights of any sort, or any exclusive privilege.

I. The owner shall furnish to the department, within 30 days of notification, any information that the department may request in writing to determine whether cause exists for suspending or revoking the authorization to operate under this permit or to determine compliance with this permit. Upon request, the owner shall also furnish to the department copies of records required to be kept by this permit and, for information claimed to be confidential, the owner shall furnish such records to the department along with a claim of confidentiality meeting the requirements of 9VAC5-170-60.

PART III. GENERAL PERMIT ADMINISTRATIVE PROCEDURES.

9VAC5-530-90. Requirements for granting an authorization to operate under the general permit.

A. The department may grant an authorization to operate under the general permit for an affected unit that meets the applicability criteria in 9VAC5-530-40 and the operating limitations in 9VAC5-530-170 or 9VAC5-530-250.

B. The general permit will be issued in accordance with § 2.2-4006 A 8 of the Administrative Process Act.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5-530-100. Applications for coverage under the general permit.

A. The application for an affected unit shall meet the requirements of this chapter and include all information necessary to determine qualification for and to assure compliance with the general permit.

B. Any application form, report, compliance certification, or other document required to be submitted to the department under this chapter shall meet the requirements of 9VAC5-20-230.

C. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in an application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

9VAC5-530-110. Required information for initial applications.

A. The department will make application forms available to applicants. The information required by this section shall be determined and submitted according to procedures and methods acceptable to the department.

B. Each initial application for coverage under the general permit shall include, but not be limited to, the following:

1. Information specified in the appropriate air permit application form for an electric generating unit as determined by the regional office

2. A document certification ~~with all applicable requirements completed~~ signed by a responsible official.

9VAC5-530-120. Granting an authorization to operate under the general permit.

A. The department may grant authorization to operate under the conditions and terms of the general permit to sources that meet the applicability criteria set forth in 9VAC5-530-40.

B. Granting an authorization to operate under the general permit to a unit covered by the general permit is not subject to the public participation procedures of 9VAC5-80-1170.

9VAC5-530-130. Transfer of authorizations to operate under the general permit.

A. No person shall transfer an authorization to operate under the general permit from one electric generating unit to another or from one piece of equipment to another.

B. In the case of a transfer of ownership of an electric generating unit, the new

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

owner shall comply with any permit issued or authorization to operate under the general permit granted to the previous owner. The new owner shall notify the department of the change in ownership within 30 days of the transfer.

C. In the case of a name change of an electric generating unit, the owner shall comply with any permit issued or authorization to operate under the general permit granted under the previous source name. The owner shall notify the department of the change in source name within 30 days of the name change.

PART IV.
GENERAL PERMIT TERMS AND CONDITIONS FOR ELECTRIC GENERATING
UNITS USING FUEL THROUGHPUT FOR COMPLIANCE DEMONSTRATION.

9VAC5-530-140. General permit.

A. Any owner whose application is approved by the director shall receive the following permit and shall comply with the requirements in it and be subject to all requirements of this chapter and the regulations of the board.

B. In compliance with the provisions of the Virginia Air Pollution Control Law and regulations adopted pursuant to it, owners of affected units are authorized to operate under the authority of this permit, except those where board regulations or policies prohibit such operation.

C. The authorization to operate under this permit shall be in accordance with the cover letter to this permit, 9VAC5-530-150 (General terms and conditions), 9VAC5-530-160 (Monitoring requirements) 9VAC5-530-170 (Operating limits), 9VAC5-530-180 (Emissions limits), 9VAC5-530-190 (Testing requirements), 9VAC5-530-200 (Recordkeeping requirements), and 9VAC5-530-210 (Reporting requirements).

9VAC5-530-150. General terms and conditions.

A. The owner is authorized to operate an affected unit located within the boundaries of the Commonwealth of Virginia, in accordance with the approved permit application and conditions of this permit except where board regulations or policies prohibit such activities.

B. The owner shall comply with the terms and conditions of this permit prior to commencing any physical or operational change or activity that will result in making the source subject to the new source review program. **Only appropriate if allowing modifications.**

9VAC5-530-160. Monitoring requirements

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

A. The owner shall install and use a fuel flow meter to monitor the ~~monthly and yearly~~ fuel throughput for each affected unit, calculated monthly as the sum of each consecutive 12-month period. Each fuel flow meter shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations.

B. The fuel flow meter used to continuously measure the monthly and yearly fuel throughput for each affected unit shall be observed by the owner with a frequency of not less than once per month ~~to ensure good performance~~. The owner shall keep a log of the observations from the fuel flow meter, **including the date of observation and throughput value**. *Different from emergency. Are differences necessary?*

9VAC5-530-170. Operating limits.

A. The approved fuels for each affected compression ignition unit are diesel fuel, biodiesel fuel and biodiesel blends. These fuels shall meet the following specifications:

1. Diesel fuel which meets the ASTM D975 specification for number 1 or number 2 fuel oil; maximum sulfur content per shipment, 0.0015%.

2. Bio-diesel fuel which meets ASTM specification D6751; maximum sulfur content per shipment, 0.0015%.

B. The approved fuels for each spark ignition affected unit are natural gas and **liquid propane gas (LPG)**. These fuels shall meet the following specifications:

1. Natural gas with a minimum heat content of 1,000 Btu/scf HHV as determined by ASTM D1826, D2382, or an equivalent method approved by the department.

2. LPG, including butane and propane, which meets ASTM specification D1835 **or an equivalent method approved by the department**.

C. The CI affected unit or units located in either an attainment or nonattainment area, combined, shall consume no more than 628,478 gallons of diesel fuel or 692,811 gallons of bio-diesel fuel per year, calculated monthly as the sum of each consecutive 12-month period.

1. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. For units using any combination of the two fuels, the quantities of distillate oil and bio-diesel, calculated monthly as the sum of each consecutive 12-month period, shall not exceed values that will allow the following equation to hold true:

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

$$(A) * (140,000 \text{ Btu/gal}) + (B) * (127,000 \text{ Btu/gal}) \leq 87,987 \times 10^6 \text{ Btu/yr}$$

where:

A = Number of gallons of distillate oil burned during any consecutive 12-month period

B = Number of gallons of bio-diesel burned during any consecutive 12-month period.

D. The SI affected unit or units combined located in an attainment area shall consume no more than 968,966 gallons of LPG or 91.08×10^6 cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period.

1. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. For units using any combination of the two fuels, the quantities of natural gas and propane, calculated monthly as the sum of each consecutive 12-month period, shall not exceed values that will allow the following equation to hold true:

$$(A) * (1,000 \text{ Btu/ft}^3) + (B) * (94,000 \text{ Btu/gal}) \leq 91,083 \times 10^6 \text{ Btu/yr}$$

where:

A = Number of cubic feet of natural gas burned during any consecutive 12-month period

B = Number of gallons of propane burned during any consecutive 12-month period.

E. The SI affected unit or units combined located in a nonattainment area shall consume no more than 60,200 gallons of LPG or 56.42×10^6 cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period.

1. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. For units using any combination of the two fuels, the quantities of natural gas and LPG, calculated monthly as the sum of each consecutive 12-month period, shall not exceed values that will allow the following equation to hold true:

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

$$(A) * (1,000 \text{ Btu/ft}^3) + (B) * (94,000 \text{ Btu/gal}) \leq 56,419 \times 10^6 \text{ Btu/yr}$$

where:

A = Number of cubic feet of natural gas burned during any consecutive 12-month period

B = Number of gallons of propane burned during any consecutive 12-month period.

F. For units using diesel fuel or bio-diesel fuel, the owner shall obtain a certification from the fuel supplier with each shipment of diesel fuel or bio-diesel fuel. Each fuel supplier certification shall include the following:

1. The name of the fuel supplier.
2. The date on which the distillate oil or bio-diesel was received.
3. The quantity of distillate oil or bio-diesel delivered in the shipment.
4. A statement that the diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D975) for number 1 or number 2 fuel oil.
5. A statement that the bio-diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D6751), and
6. The sulfur content of the diesel fuel or bio-diesel fuel.

9VAC5-530-180. Emissions limits.

A. Emissions from the operation of each CI affected unit shall not exceed the limits specified in Table IV-1.

TABLE IV-1.
Emissions Limits for CI Engines

Engine Year	Emission Limits g/kW-hr (g/bhp-hr)					
	PM	PM ₁₀	PM _{2.5}	CO	VOC	NO _x
2011-2014 (g/kW-hr)	0.10	0.10	0.10	3.5	0.40	0.67
2011-2014 (g/bhp-hr)	(0.075)	(0.075)	(0.075)	(2.6)	(0.30)	(0.50)

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

2015+ (g/kW-hr)	0.03	0.03	0.03	3.5	0.19	0.67
2015 + (g/bhp-hr)	(0.022)	(0.022)	(0.022)	(2.6)	(0.14)	(0.50)

B. Emissions from the operation of each SI affected unit shall not exceed the limits specified in Table IV-2.

TABLE IV-2.
Emissions Limits for SI Engines

Engine Year	Emission Limits					
	g/kW-hr (g/bhp-hr)					
	PM	PM ₁₀	PM _{2.5}	CO	VOC	NO _x
2011+(g/kW-hr)	0.015	0.015	0.015	2.68	0.94	1.34
2011 + (g/bhp-hr)	(0.011)	(0.011)	(0.011)	(2.0)	(0.7)	(1.0)

C. Combined emissions from the operation of either CI or SI affected units shall not exceed the limits specified in Table IV-3.

TABLE IV-3.
Combined Emissions Limits for Both CI or SI Engines

Pollutant	Nonattainment Areas Emissions (tons/year)	Attainment Areas Emissions (tons/year)
PM	2.8	2.8
PM ₁₀	2.8	2.8
PM _{2.5}	2.8	2.8
NO _x	24.4	39.4
CO	99.4	99.4
VOC	17.1	27.6

*SO₂ has been deleted

D. Visible emissions from each affected unit shall not exceed 5% opacity as determined by the Reference Method 9. This condition applies at all times except during startup, shutdown, and malfunction.

9VAC5-530-190. Testing requirements.

A. Each affected unit shall be constructed and installed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.

B. No affected unit shall be used for the purposes of preventative maintenance

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

purposes before 5 p.m. any day during the ozone season of May 1 through September 30.

C. Initial performance tests shall be conducted for NO_x, CO, PM₁₀, and PM_{2.5} from the affected unit using EPA-approved reference methods to determine compliance with the emission limits contained in 9VAC5-530-180.

1. The tests shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the affected unit or units will be operated but in no event later than 180 days after start-up of the permitted source.

2. Test shall be conducted in accordance with EPA methods or an alternative method approved by department.

3. The details of the tests are to be arranged with the regional office and the owner shall submit a test protocol at least 30 days prior to testing.

4. One copy of the test results shall be submitted to the department regional office within 45 days after test completion and shall conform to the test report format in 9VAC5-530-210.

5. Testing for multiple identical affected units located at the source shall be conducted as follows:

a. 50% of CI affected units shall be tested.

b. 100% of SI affected units over 500 bhp shall be tested.

6. The owner shall conduct additional performance testing every 3 years for NO_x, CO, PM₁₀, and PM_{2.5} to demonstrate compliance with the emission limits contained in 9VAC5-530-180. The details of the tests shall be arranged with the regional office. Additional performance testing for multiple identical affected units located at the source shall be conducted as follows:

a. 20% of CI affected units shall be tested.

b. 100% of SI affected units over 500 bhp shall be tested

D. The test report format for non-visible emissions evaluations shall include the following:

1. A report cover containing:

a. The plant name;

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

- b. The plant location;
 - c. Units tested at the source identified by the agency that have been issued reference numbers (including unit reference # if assigned);
 - d. Test dates;
 - e. The name of the individual conducting the test;
 - f. The address of the individual conducting the test; and
 - g. The report date.
2. A certification, including the date certified, which has been signed by:
 - a. A test team leader or a certified observer;
 - b. The test reviewer; and
 - c. A responsible company official.
 3. A copy of approved test protocol.
 4. A summary including:
 - a. The reason for testing;
 - b. Test dates;
 - c. Identification of the unit tested including the maximum rated capacity for each unit.
 - d. For each emission unit, a table showing:
 - (1) The operating rate;
 - (2) Test methods;
 - (3) The pollutants tested; and
 - (4) Test results for each run, including the run average.
 - e. Process and control equipment data for each run and the average, as required by the test protocol;
 - f. A statement that the test was conducted in accordance with the

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

test-protocol, or identification and discussion of deviations, including the likely impact on results; and

office.

g. Any other important information as determined by the regional

5. A description of source operation including:

a. A description of the process;

b. A description of control devices, if necessary;

c. A process and control equipment flow diagram; and

d. A description of sampling port location and a dimensioned cross section. A protocol shall be attached that includes a sketch of the stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions.

6. Test results, including:

a. Detailed test results for each run;

b. Sample calculations; and

applicable .

c. A description of collected samples, including audits, when

7. An appendix, including:

a. Raw production data;

b. Raw field data;

c. Laboratory reports;

d. Chain of custody records for laboratory samples;

e. Calibration procedures and results;

f. Project participants and contact information;

affiliation),

g. Observers' names (including their industry and agency

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

h. Related correspondence; and

i. Standard procedures.

E. Initial Visible Emission Evaluations (VEE) in accordance with Reference Method 9 shall be conducted on each affected unit.

1. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the affected unit or units will be operated but in no event later than 180 days after start-up of the permitted source.

2. Should conditions prevent concurrent opacity observations, the regional office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days.

3. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests.

4. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a 6-minute average.

5. The details of the tests are to be arranged with the regional office and the owner shall submit a test protocol at least 30 days prior to initial testing.

6. One copy of the test results shall be submitted to the department regional office within 45 days after test completion and shall conform to the test report format in 9VAC5-530-210.

7. Initial VEE testing for multiple identical affected units located at the source shall be conducted as follows:

a. 50% of CI affected units shall be tested.

b. 100% of SI affected units over 500 bhp shall be tested.

8. The owner shall conduct additional VEE testing every 3 years for NO_x, CO, PM₁₀, and PM_{2.5} to demonstrate compliance with the opacity limit contained in 9VAC5-530-180 D. The details of the tests shall be arranged with the regional office. Additional VEE testing for multiple identical affected units located at the source shall be conducted as follows:

a. 20% of CI affected units shall be tested.

b. 100% of SI affected units over 500 bhp shall be tested.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5-530-200. Recordkeeping requirements.

A. The owner shall maintain on site records of emission data and operating parameters as necessary to demonstrate compliance with this general permit.

B. The owner shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the affected unit or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the following: (i) date, (ii) time, (iii) duration, (iv) description (emission unit, pollutant affected, cause), (v) corrective action, (vi) preventive measures taken and (vii) name of person generating the record.

C. The content and format of such records shall be arranged with the regional office. These records shall include, but are not limited to:

1. Total combined annual throughput of fuel consumed for the affected unit or units, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. Total annual heat input values to show compliance with subsections C, D, and E of 9VAC5-530-170.

3. All fuel supplier certifications.

4. Engine information including make, model, serial number, model year, maximum engine power, and engine displacement for each affected unit.

5. Written manufacturer specifications or written standard operating procedures prepared by the owner for each affected unit. The written standard operating procedures prepared by the owner cannot be less stringent than the written manufacturer specifications.

6. Results of all stack tests, VEE and performance evaluations.

7. Operation and control device monitoring records for the fuel flow meter.

8. Scheduled and unscheduled maintenance, testing and operator training.

D. These records shall be available for inspection by the department and shall be current for the most recent five years.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5-530-210. Reporting requirements.

A. The owner shall furnish written notification to the regional office of the following:

1. The actual date on which construction of each affected unit commenced within 30 days after such date.

2. If necessary, the actual date on which the integration operational period of each affected unit commenced within 15 days after such date

3. The anticipated start-up date of each affected unit postmarked not more than 60 days nor less than 30 days prior to such date.

4. The actual start-up date of each affected unit within 15 days after such date.

5. The anticipated date of performance tests of each affected unit postmarked at least 30 days prior to such date.

B. The owner shall furnish notification to the regional office of malfunctions of the affected unit or related air pollution control equipment that may cause excess emissions for more than one hour.

1. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered.

2. The owner shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction.

3. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the regional office.

PART V.

GENERAL PERMIT TERMS AND CONDITIONS FOR ELECTRIC GENERATING
UNITS USING HOURS OF OPERATION FOR COMPLIANCE DEMONSTRATION.

9VAC5-530-220. General permit.

A. Any owner whose application is approved by the director shall receive the following permit and shall comply with the requirements in it and be subject to all requirements of this chapter and the regulations of the board.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

B. In compliance with the provisions of the Virginia Air Pollution Control Law and regulations adopted pursuant to it, owners of electric generating units are authorized to operate under the authority of this permit, except those where board regulations or policies prohibit such operation.

C. The authorization to operate under this permit shall be in accordance with the cover letter to this permit, 9VAC5-530-2300 (General terms and conditions), 9VAC5-530-240 (Monitoring requirements) 9VAC5-530-250 (Operating limits), 9VAC5-530-260 (Emissions limits), 9VAC5-530-270 (Testing requirements), 9VAC5-530-280 (Recordkeeping requirements), and 9VAC5-530-290 (Reporting requirements).

9VAC5-530-230. General terms and conditions.

A. The owner is authorized to operate an affected unit located within the boundaries of the Commonwealth of Virginia, in accordance with the approved permit application and conditions of this permit except where board regulations or policies prohibit such activities.

B. The owner shall comply with the terms and conditions of this permit prior to commencing any physical or operational change or activity that will result in making the source subject to the new source review program.

9VAC5-530-240. Monitoring requirements

A. The owner shall install and use a non-resettable hour metering device to monitor the monthly and yearly operating hours for each affected unit, calculated monthly as the sum of each consecutive 12-month period. Each fuel flow meter shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations.

B. The hour meter used to continuously measure the monthly and yearly fuel throughput for each electric generating unit shall be observed by the owner with a frequency of not less than once per month to ensure good performance. The owner shall keep a log of the observations from the hour meter.

C. Each affected unit shall comply with the odor standards Article 2 of Part II of 9VAC5-50 (New and Modified Stationary Sources). Under no circumstances shall the unit operate in such a manner as to cause an odor objectionable to individuals of ordinary sensibility.

9VAC5-530-250. Operating limits.

A. The approved fuels for each compression ignition affected unit are diesel fuel, biodiesel fuel and biodiesel blends. These fuels shall meet the following specifications:

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

1. Diesel fuel which meets the ASTM D975 specification for number 1 or number 2 fuel oil; maximum sulfur content per shipment, 0.0015%.

2. Bio-diesel fuel which meets ASTM specification D6751; maximum sulfur content per shipment, 0.0015%.

B. The approved fuels for each spark ignition affected unit are natural gas and liquid propane gas (LPG). These fuels shall meet the following specifications.

1. Natural gas with a minimum heat content of 1,000 Btu/scf HHV as determined by ASTM D1826, D2382, or **an equivalent method approved by the department.**

2. **LPG**, including butane and propane, which meets ASTM specification D1835.

C. Each affected unit shall not operate more than 350 hours per year, calculated monthly as the sum of each consecutive 12-month period.

1. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. Total emissions for any consecutive 12-month period, calculated as the sum of all emissions from operations under this condition, shall not exceed the limits stated in subsection C of 9VAC5-530 260.

D. For units using diesel fuel or bio-diesel fuel the owner shall obtain a certification from the fuel supplier with each shipment of diesel fuel or bio-diesel fuel. Each fuel supplier certification shall include the following:

1. The name of the fuel supplier.

2. The date on which the distillate oil or bio-diesel was received.

3. The quantity of distillate oil or bio-diesel delivered in the shipment.

4. A statement that the diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D975) for number 1 or number 2 fuel oil.

5. A statement that the bio-diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D6751), and

6. The sulfur content of the diesel fuel or bio-diesel fuel.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

9VAC5-530-260. Emissions limits.

A. Emissions from the operation of each CI affected unit shall not exceed the limits specified in Table V-1:

TABLE V-1.

Emissions Limits for CI Engines

Engine Year	Emission Limits g/kW-hr (g/bhp-hr)					
	PM	PM ₁₀	PM _{2.5}	CO	VOC	NO _x
2011-2014 (g/kW-hr)	0.10	0.10	0.10	3.5	0.40	0.67
2011-2014 (g/bhp-hr)	(0.075)	(0.075)	(0.075)	(2.6)	(0.30)	(0.50)
2015+ (g/kW-hr)	0.03	0.03	0.03	3.5	0.19	0.67
2015 + (g/bhp-hr)	(0.022)	(0.022)	(0.022)	(2.6)	(0.14)	(0.50)

B. Emissions from the operation of each SI affected unit shall not exceed the limits specified in Table V-2.

TABLE V-2.

Emissions Limits for SI Engines

Engine Year	Emission Limits g/kW-hr (g/bhp-hr)					
	PM	PM ₁₀	PM _{2.5}	CO	VOC	NO _x
2011+(g/kW-hr)	0.015	0.015	0.015	2.68	0.94	1.34
2011 + (g/bhp-hr)	(0.011)	(0.011)	(0.011)	(2.0)	(0.7)	(1.0)

C. Combined emissions from the operation of either CI or SI affected units shall not exceed the limits specified in Table V-3.

TABLE V-3.

Combined Emissions Limits for Both CI or SI Engines

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

Pollutant	Nonattainment Areas Emissions (tons/year)	Attainment Areas Emissions (tons/year)
PM	2.8	2.8
PM ₁₀	2.8	2.8
PM _{2.5}	2.8	2.8
NO _x	24.4	39.4
CO	99.4	99.4
VOC	17.1	27.6

D. Visible emissions from each affected unit shall not exceed 5% opacity as determined by Reference Method 9. This condition applies at all times except during startup, shutdown, and malfunction.

9VAC5-530-270. Testing requirements.

A. Each affected unit shall be constructed and installed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.

B. No affected unit shall be used for the purposes of preventative maintenance purposes before 5 p.m. any day during the ozone season of May 1 through September 30.

C. Initial performance tests shall be conducted for NO_x, CO, PM₁₀, and PM_{2.5} from the electric generating unit using EPA approved reference methods to determine compliance with the emission limits contained in 9VAC5-530-260.

1. The tests shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the affected unit will be operated but in no event later than 180 days after start-up of the permitted affected unit.

2. Test shall be conducted in accordance with EPA methods or an alternative method approved by the department.

3. The details of the tests are to be arranged with the regional office and the owner shall submit a test protocol at least 30 days prior to testing.

4. One copy of the test results shall be submitted to the department regional office within 45 days after test completion and shall conform to the test report format in 9VAC5-530-210.

5. . Testing for multiple identical affected units located at the source shall be conducted as follows:

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

- a. 50% of CI affected units shall be tested.
- b. 100% of SI affected units over 500 bhp shall be tested.

6. The owner shall conduct additional performance testing every three years for NO_x, CO, PM₁₀, and PM_{2.5} to demonstrate compliance with the emission limits contained in 9VAC5-530-260. The details of the tests shall be arranged with the regional office. Additional performance testing for multiple identical affected units located at the source shall be conducted as follows:

- a. 20% percent of CI affected units shall be tested.
- b. 100% of SI affected units over 500 bhp shall be tested.

D. The test report format for non-visible emissions evaluations shall include the following:

1. A report cover containing:

- a. The plant name;
- b. The plant location;
- c. Units tested at the source identified by the agency that have been issued reference numbers (including unit reference # if assigned);
- d. Test dates;
- e. The name of the individual conducting the test;
- f. The address of the individual conducting the test; and
- g. The report date.

2. A certification, including the date certified, which has been signed by:

- a. A test team leader or a certified observer;
- b. The test reviewer; and
- c. A responsible company official.

3. A copy of approved test protocol.

4. A summary including:

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

- a. The reason for testing;
 - b. Test dates;
 - c. Identification of the unit tested including the maximum rated capacity for each unit.
 - d. For each emission unit, a table showing:
 - (1) The operating rate;
 - (2) Test methods;
 - (3) The pollutants tested; and
 - (4) Test results for each run, including the run average.
 - e. Process and control equipment data for each run and the average, as required by the test protocol;
 - f. A statement that the test was conducted in accordance with the test-protocol, or identification and discussion of deviations, including the likely impact on results; and
 - g. Any other important information as determined by the regional office.
5. A description of source operation including:
- a. A description of the process;
 - b. A description of control devices, if necessary;
 - c. A process and control equipment flow diagram; and
 - d. A description of sampling port location and a dimensioned cross section. A protocol shall be attached that includes a sketch of the stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions.
6. Test results, including:
- a. Detailed test results for each run;

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

- b. Sample calculations; and
- c. A description of collected samples, including audits, when applicable .

7. An appendix, including:

- a. Raw production data;
- b. Raw field data;
- c. Laboratory reports;
- d. Chain of custody records for laboratory samples;
- e. Calibration procedures and results;
- f. Project participants and contact information;
- g. Observers' names (including their industry and agency affiliation),
- h. Related correspondence; and
- i. Standard procedures.

E. Visible Emission Evaluations (VEE) in accordance with Reference Method 9 shall be conducted on each electric generating unit.

1. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the affected unit will be operated but in no event later than 180 days after start-up of the permitted affected unit.

2. Should conditions prevent concurrent opacity observations, the regional office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days.

3. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests.

4. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a 6-minute average.

5. The details of the tests are to be arranged with the regional office and the owner shall submit a test protocol at least 30 days prior to testing.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

6. One copy of the test results shall be submitted to the regional office within 45 days after test completion and shall conform to the test report format in 9VAC5-530-210.

7. Initial VEE testing for multiple identical electric generating units located at the source shall be conducted as follows:

- a. 50% of CI affected units shall be tested.
- b. 100% of SI affected units over 500 bhp shall be tested.

8. The owner shall conduct additional VEE testing every three years for NO_x , CO, PM_{10} , and $\text{PM}_{2.5}$ to demonstrate compliance with the opacity limit contained in 9VAC5-530-180 D. The details of the tests shall be arranged with the regional office. Additional VEE testing for multiple identical affected units located at the source shall be conducted as follows:

- a. 20% of CI affected units shall be tested.
- b. 100% of SI affected units over 500 bhp shall be tested.

9VAC5-530-280. Recordkeeping requirements.

A. The owner shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this general permit.

B. The owner shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the affected unit or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.

C. The content and format of such records shall be arranged with the regional office. These records shall include, but are not limited to:

1. Total combined annual hours of operation for the electric generating units, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

2. All fuel supplier certifications.

3. Engine information including make, model, serial number, model year,

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

maximum engine power, and engine displacement for each affected unit.

5. Written manufacturer specifications or written standard operating procedures prepared by the owner for each affected unit. The written standard operating procedures prepared by the owner cannot be less stringent than the written manufacturer specifications.

6. Results of all stack tests, VEE and performance evaluations.

7. Operation and control device monitoring records for the fuel flow meter.

8. Scheduled and unscheduled maintenance, testing and operator training.

D. These records shall be available for inspection by the department and shall be current for the most recent five years.

9VAC5-530-290. Reporting requirements.

A. The owner shall furnish written notification to the regional office of the following:

1. The actual date on which construction of each affected unit commenced within 30 days after such date.

2. The anticipated start-up date of each affected unit postmarked not more than 60 days nor less than 30 days prior to such date.

3. The actual start-up date of each affected unit within 15 days after such date.

4. The anticipated date of performance tests of each affected unit postmarked at least 30 days prior to such date.

B. The owner shall furnish notification to the regional office of malfunctions of the affected unit or related air pollution control equipment that may cause excess emissions for more than one hour.

1. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered.

2. The owner shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction.

NONEMERGENCY PEAK SHAVING GENERAL PERMIT (9VAC5- 530)

3. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the regional office.

Rev. 6