



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
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NOV 07 2019

Mr. Thomas John  
Section Chief, Division of Air Resources  
New York State Department of Environmental Conservation, Region 2  
47-40 21<sup>st</sup> Street  
Long Island City, NY 11101  
[thomas.john@dec.ny.gov](mailto:thomas.john@dec.ny.gov)

Re: Draft title V Operating Permit Significant Modification Starrett City Power Plant,  
Permit ID # 2-6105-00263/00008, Brooklyn, Kings County, NY

Dear Mr. John:

Thank you for the opportunity to comment on the draft title V operating permit for a significant modification (draft permit) at the Starrett City Power Plant (Starrett or facility) that the New York State Department of Environmental Conservation Region 2 office (NYSDEC) issued for a 30-day public review on October 9, 2019.

Starrett is a Housing Development in Brooklyn, NY that produces all of its own electricity and meets heating and cooling needs through its power plant. Starrett has a total electrical generating capacity of 18 MW. This draft permit would authorize Starrett the installation and operation of 2 new identical CAT 175-20 diesel engines, each rated at 5,647 HP and 4 MW to be used for non-emergency purposes. The new engines will be equipped with selective catalytic reduction (for NO<sub>x</sub> control), oxidation catalysts (for CO and VOC control), and diesel particulate filter. Also, the draft permit would authorize the reclassification of the 3 existing identical Nordberg diesel engines each rated at 2,824 BHP and 2 MW from non-emergency to emergency operation only.

Starrett is an existing major source under the Prevention of Significant Deterioration (PSD) of Air Quality and Nonattainment New Source Review (NNSR) programs<sup>1</sup>, so the proposed modification or project constitutes a modification to an existing major source. NYSDEC determined that the proposed project would not be subject to PSD or NNSR requirements. The proposed project would not change the facility's current major source status.

We reviewed the permit application, permit review report (PRR)<sup>2</sup> and draft permit, and have identified several issues regarding the draft permit and PRR. To ensure that the draft permit complies with New York's approved title V Operating Permit Program, NYSDEC's air regulations, and applicable Clean Air Act (CAA) requirements, and that the permit record adequately supports NYSDEC's permitting decision, EPA recommends that DEC address the comments included in Attachment A of this letter.

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<sup>1</sup> The EPA has approved New York's Nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD) regulations contained in 6 NYCRR Part 231 as consistent with the requirements of 40 CFR § 51.165 and 40 CFR § 51.166, respectively.

<sup>2</sup> Part 70 requires permitting authorities to prepare a "statement of basis" for each Title V permit. 40 C.F.R. § 70.7(a)(5). The document that NYSDEC prepared and issued entitled "permit review report" is the functional equivalent of a statement of basis.

We look forward to working with you to address these comments. If you have any further questions or wish to discuss any of these issues, please feel free to contact me at 212-637-4019 or [chan.suilin@epa.gov](mailto:chan.suilin@epa.gov), or Viorica Petriman at 212-637-4021 or [petriman.viorica@epa.gov](mailto:petriman.viorica@epa.gov).

Sincerely,



Suilin W. Chan, Chief  
Permitting Section  
Air and Radiation Division

Attachment A

cc: Michael Cronin ([michael.cronin@dec.ny.gov](mailto:michael.cronin@dec.ny.gov))  
Director, Bureau of Stationary Source  
Division of Air Resources, NYSDEC  
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Albany, NY 12233-3258

Denise Prunier ([denise.prunier@dec.ny.gov](mailto:denise.prunier@dec.ny.gov))  
Chief, Permitting and Compliance Section  
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625 Broadway  
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Cicily Nirappel ([Cicily.nirappel@dec.ny.gov](mailto:Cicily.nirappel@dec.ny.gov))  
Professional Engineer I,  
Division of Air Resources  
New York State Department of Environmental Conservation  
47-40 21<sup>st</sup> Street, Long Island City, NY 11101

## ATTACHMENT A

### I. Comments on the Draft Permit

#### A. Permit Content – Applicable Requirements

As specified at CAA §§ 504(a) and (c), 40 CFR § 70.6 and 6 NYCRR 201-6.4 each title V permit must include all federal emission limitations and standards, as well as operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance, and also, all necessary testing, monitoring, recordkeeping, and reporting requirements to ensure compliance with the permit terms and conditions.

#### 1. Inclusion of Applicable Requirements of Federal Standards

- a. 40 CFR 60 Subpart IIII-Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) (NSPS 4I) – As stated in the PRR, NSPS 4I applies to the 2 new CAT 175-20 non-emergency diesel engines. While Condition 2-2 of the draft permit states, “[f]acilities that have stationary compression ignition internal combustion engines must comply with applicable portions of 40 CFR 60 Subpart IIII,” this condition doesn’t identify the engines at the facility to which NSPS 4I applies, and, no NSPS 4I requirements were included in the draft permit. Thus, the draft permit should be revised to include all requirements of NSPS 4I that apply to the new engines.

- i. NSPS 4I emission standards that apply to the 2 new CAT 175-20 non-emergency engines

Based on the application, the 2 new identical CAT 175-20 diesel non-emergency engines are model year 2018 and have a displacement of less than 10 liters/cylinder (l/c), and a maximum engine power of 4 MW (5,647 HP).

§60.4204(b) states that 2007 model year or later non-emergency stationary CI ICE with a displacement of less than 10 l/c, such as the 2 new CAT 175-20 engines, must comply with the emission standards for new engines in § 60.4201(c). Therefore, the 2 new CAT 175-20 engines must meet the Tier 4 emission standards (PM, NO<sub>x</sub>, NMHC and CO) in Table 1 of 40 CFR 1039.101 for generator sets greater than 560 kW<sup>1</sup>.

- ii. Requirement to purchase engines certified to the applicable emission standards

§60.4211(c) states that owners or operators of 2007 model year and later stationary non-emergency CI engines subject to the emission standards in § 60.4204(b), such as the 2 new CAT 175-20 engines, must comply (with the emission standards) by purchasing an engine certified to the applicable emission standards in §60.4204(b).

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<sup>1</sup> The Tier 4 standards applicable to the 2 new CAT 175-20 engines are: NO<sub>x</sub>: 0.67 g/kW-hr, CO: 3.5 g/kW-hr; NMHC: 0.19 g/kW-hr, and PM: 0.03 g/kW-hr.

iii. EPA certification for the 2 new CAT 175-20 non-emergency engines

As indicated by the “EPA’s Annual Certification Data for Vehicles, Engines, and Equipment/Non-Road Compression Ignition (NRCI) Engines”(available online at <https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment>) and confirmed by the EPA HQ, CAT 175-20 compression ignition engines, Model Year 2018, Engine Family: JCPXL106.NZS<sup>2</sup>, Certificate Number: JCPXL106.NZS-003<sup>3</sup>, 5,647 BHP and 4 MW with displacement less than 10 l/c<sup>4</sup> such as the subject engines have been certified by the EPA to the Tier 2 in 40 CFR Part 89 for emergency purposes only. Further, page 4 of 6 Exhibit 3-1 “Caterpillar CAT 175-20” of Exhibit 3 of the application, under the heading “Regulatory Information”, also indicates the engines to be emergency engines. However, as presented in the draft permit and application, the 2 new CAT 175-20 are intended for use for non-emergency purposes.

iv. Issues Related to the 2 new CAT 175-20 Certification

As discussed above, according to §60.4211(c) the only mechanism for showing compliance with the emission standards for owners or operators of model 2007 or later non-emergency engines subject to §60.420(4) (b), such as the 2 new CAT 175-20 engines. is to purchase an engine certified to the applicable emission standards. For the 2 new CAT 175-20 non-emergency engines, the applicable emission standards are the Tier 4 emission standards in Table 1 of 40 CFR 1039.101 for generator sets greater than 560 kW, and not the Tier 2 emission standards in 40 CFR Part 89 as the CAT 175-20 engines were certified by EPA. Engines model year 2018 that are certified to the Tier 2 emission standards in 40 CFR Part 89, which corresponds to emergency generators, cannot be used for non-emergency purposes even if they are equipped with air pollution controls to reduce emissions to levels equivalent to the Tier 4 emissions standards in 40 CFR 1039.101. Therefore the 2 new CAT 175-20, since they are certified to the Tier 2 standards, as emergency generators, may only be used for emergency purposes. This issue should be addressed by the facility. We recommend that Starrett may either purchase engines certified for non-emergency purposes or request that the 2 new CAT 175-20 diesel engines be permitted as emergency generators.

b. 40 CFR 63 Subpart ZZZZ-National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (NESHAP 4Z) – As stated in the PRR, NESHAP 4Z applies to the 3 existing Nordberg engines and to 2 new CAT 175-20 engines.

While, Condition 35 of the draft permit states, “[f]acilities that have reciprocating internal combustion engines must comply with applicable portions of 40 CFR 63

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<sup>2</sup> The “Engine Family” is provided in the “Certification of Conformity” included in application documents.

<sup>3</sup> The “Certificate Number” is provided in the “Certification of Conformity” included in application documents.

<sup>4</sup> Information on displacement in l/cylinder are from the EPA’s Annual Certification Data, which can be found at <https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment>

subpart ZZZZ,” this condition doesn’t identify the engines at the facility to which NESHAP 4Z applies, and, no NESHAP 4Z requirement were included in the draft permit. Thus, the draft permit should be revised to include all requirements of NESHAP 4Z that apply to existing and new engines.

## 2. Capping Limits

The NYSDEC’s DAR-17/Federal Enforceability of Air Pollution Control Permits (DAR-17) provides the procedures and requirements for developing federally enforceable permit conditions that must be used by permit writers when implementing NYSDEC’s operating permit program and requires emission caps to be enforceable as a practical matter and limits on the PTE to be clearly defined and accompanied by a clear compliance demonstration method (i.e., monitoring, periodic testing, recordkeeping and reporting requirements). Further, according to the DAR-17 Guidance as well as EPA guidance, a clear methodology for verifying compliance with the emission caps is specifying the emission factors (e.g., lb/MMBTU, lb/kW-hr, g/BHP-hr, g/kW-hr, ppm) or emission rates (e.g., lb/hr) that the facility should use in combination with the actual production or operation parameters to determine the actual monthly or annual emissions. The calculation method to be used for calculating the actual emissions to verify compliance with the capping limits should also be specified.

The draft permit contains two emissions caps (or limits on the potential to emit (PTE)) on the VOC (Condition 2-4) and NO<sub>x</sub> (Conditions 2-5 and 2-6) emissions that would result from the 3 existing Nordberg engines after their reclassification to emergency engines. These 2 emission limits were established pursuant to 6 NYCRR Part 231-10.5, for the purposes of avoiding the applicability of PSD/NNSR to the proposed modification. Also, the draft permit contains two emission limits on the PTE of VOC (Condition 2-7) and NO<sub>x</sub> (Conditions 2-9) emissions that would result from the 2 new proposed CAT 175-20 diesel engines. These 2 limits were established for the purposes of avoiding the applicability of 6 NYCRR Part 231-6 to the proposed modification.

To be consistent with the DAR-17 Guidance and EPA guidance, and to ensure that the limits on the PTE limits are federally and practically enforceable, please address the following regarding the 4 emission caps included in the draft permit:

a. Conditions 2-4, 2-5, 2-6 and 2-7

- i. A calculation formula, similar to the one included in Condition 2-9 of the draft permit, which the facility should use for calculating the actual VOC or NO<sub>x</sub> emissions of the engines is missing from these conditions.
- ii. Specify the VOC and NO<sub>x</sub> emission factors (or emission rates) that the facility should use for determining the monthly and 12-month rolling actual emissions. These emission factors/rates should be verified via performance testing conducted once per permit term

- iii. The requirement to conduct one performance test per permit term in order to verify compliance with the VOC and NO<sub>x</sub> emission factors (or emission rates) must be included as a permit condition.
- b. Conditions 2-4, 2-5, 2-6, 2-7, and 2-9
- i. Condition 2-9 establishes a limit on the NO<sub>x</sub> PTE for the 2 new CAT 175-20 and directs the facility to determine the actual NO<sub>x</sub> emissions by multiplying the total output in BHP and the NO<sub>x</sub> emission factor in g/BHP. However, the draft permit does not require the facility to continuously monitor the BHP, a parameter that does not stay constant.
  - ii. Permit conditions should be added to the draft permit to require the facility to continuously monitor the production parameters (e.g., in BHP, kW) or operation (e.g., in hours of operation, fuel usage) so that the actual VOC or NO<sub>x</sub> emissions are properly calculated to determine compliance with the VOC and NO<sub>x</sub> emission limits in the above-mentioned conditions.
- c. Three Existing Engines - Monitoring and Recordkeeping Requirements for Hours of Operation.

Based on the application, the VOC and NO<sub>x</sub> limits on the PTE for the 3 existing Nordberg engines included in Conditions 2-4, 2-5, and 2-6 were established based on 500 hours of operation per year (hr/yr) for each engine. Although Condition 2-1 of the draft permit establishes a limit of 500 hr/yr for each engine, the draft permit does not require the facility to monitor the hours of operation. As discussed elsewhere, the 3 existing Nordberg engines are subject to NESHAP 4Z requirements, which among other things, requires the installation and use of a non-resettable hour meter and recordkeeping of the hours of operation. Thus, the following NESHAP 4Z requirement must be included in the draft permit:

“40 CFR 63.6625(f) - The owner or operator of the 3 existing Nordberg emergency stationary RICE engines, which are located at an area source of HAP emissions, must install a non-resettable hour meter if one is not already installed.”

“40 CFR 63.6655(f) – The owner or operator of the 3 existing Nordberg emergency stationary RICE engines must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640 (f)(2)(ii) or (iii) or §63.6640 (f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.”

d. Existing Engines - Reclassification to Emergency Engines

Condition 38.1, 38.2 and 38.3 of the draft permit which read in part: “Nordberg generator...used to generate electricity for the apartment buildings...” should be revised to state that the 3 existing Nordberg engines shall only be used as emergency generators, consistent with Conditions 2-1.2 and 21.1 of the draft permit.

**3. 6 NYCRR Part 231-11.2 “Reasonable possibility requirements for insignificant modifications”**

Please address the following regarding Part 231-11.2 “Reasonable possibility requirements for insignificant modifications”:

- a. Revise the draft permit by adding conditions assuring compliance with the requirements of Part 231-11.2, as necessary; and
- b. Clarify in the PRR the applicability of Part 231-11.2 “Reasonable possibility requirements for insignificant modifications” to the proposed modification at Starrett.

**4. Emission Reduction Credits (ERCs) – Contemporaneous period**

In order to avoid NNSR review for the addition of the 2 new diesel engines at the facility, the facility proposes to use emission reduction credits resulting from reclassifying the 3 existing Nordberg diesel engines from non-emergency use to emergency use only. Based on 6 NYCRR 231-4.1(b)(30)(iii), the ERCs used in determining the net emissions increase must be contemporaneous<sup>5</sup> with the particular project or modification. In order to ensure that the actual emissions reductions to be used by Starrett as ERCs will occur within the contemporaneous period, we recommend that the following or similar language be added to the permit:

“The use of the 3 existing Nordberg diesel engines for emergency purposes only must occur prior to the “commencement of operation date” (as the term is defined in 6 NYCRR 231-4.1(b)(12)), of the 3 new identical diesel engines. The facility must maintain and submit appropriate records to the NYSDEC for demonstrating compliance with this applicable requirement.”

“The facility is allowed a shakedown period that meets all applicable provisions of 6 NYCRR 231-3.8. The facility must maintain and submit appropriate records to the NYSDEC for demonstrating compliance with this applicable requirement.”

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<sup>5</sup> Under 6 NYCRR 231-4.1(b)(13), “contemporaneous” is defined as “the period beginning five years prior to the proposed commence construction date of the new or modified emission source and ending with the proposed commence operation date.” “Commence(s) operation or commencement of operation” is defined in 6 NYCRR 231-4.1(b)(12) as “(i) the date that a proposed new or modified facility first emits or increases emissions of any regulated NSR contaminant to which this Part applies; or (ii) the date on which the facility shakedown period ends for a proposed modified facility which utilizes future ERCs for netting.”

## **5. PSD and NNSR Applicability Determination**

Please provide the information related to the calculation of the potential to emit for the 2 new engines and the baseline actual emissions and projected actual emissions for the 3 existing engines that EPA requested via email on October 28, 2019. *See Attachment B*

## **II. Comments on the Permit Review Report**

### **1. 40 CFR Part 64 - Compliance Assurance Monitoring (CAM Rule)**

The applicability of the CAM Rule must be considered at this facility because the facility uses emission control devices for some of its emission units to comply with federally enforceable emission limits. Please clarify, in the PRR, whether or not CAM applies to this facility. Please follow 40 CFR § 64.2 while conducting the CAM applicability and exemption analysis.

### **2. NYSDEC Permit Review Report (PRR) Guidance - Capping Limits**

As discussed in this letter, there are 4 capping limits established in the draft permit. However, the PRR omitted to discuss or documents the capping limits. The PRR should be revised to discuss the capping limits established in the draft permit, consistent with the NYSDEC PRR Guidance.

### **3. Facility Emission Summary**

Please ensure that the PTE for CO listed under the “Emission Summary” section on page 9 of the PRR matches the latest revisions to the facility’s PTE of CO provided by Starrett.



# ATTACHMENT B

**Petriman, Viorica**

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**From:** Petriman, Viorica  
**Sent:** Monday, October 28, 2019 9:12 AM  
**To:** 'John, Thomas (DEC)'  
**Cc:** Chan, Suilin; Nirappel, Cicily (DEC); Lieblich, Sam (DEC)  
**Subject:** Starrett City - Clarifications Emission Calculations  
**Attachments:** Terranext\_Starrett TV Ren 3 Mod 2 Revised Pages CO Emission Rates Letter\_10\_23\_19.pdf; Starret City-Tables.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Thomas,

Thank you for providing the additional information regarding the CO emissions for the 2 new proposed diesel engines.

On the page that contains “Equipment Specification” of the attachment you provided with your email (attached here), under the heading “Engine Information”, it says “Hours of Operation: 500 hours per year”. Since, based on the draft permit, the 2 new diesel engines would be permitted for **non-emergency use**, could you please clarify what is the **purpose/meaning** of “**Hours of Operation: 500 hours per year**”?

After I reviewed the application documents and the latest information you provided, it’s still not entirely clear to me how were the baseline actual emissions and projected actual emissions for the 3 existing identical Nordberg engines, and the potential to emit for the 2 new identical CAT 175-20 engines determined/calculated. I am not suggesting that there is something incorrect regarding the calculations employed. However, there are so many sets of the same type information included in the documents (e.g., tables, narrative) transmitted to me, sometimes without a clear explanation of what they represent or what was ultimately used in the calculations. I just need to feel comfortable that I understand how the calculations/determinations were performed.

The information related to the emission factors, BHP, hours of operation, control device efficiency, tpy could be entered in the tables I prepared (for your convenience), and which are attached here. *See* word document titled “Starrett City-Tables” attached.

I need this information by **no later than Wednesday, October 30**.

I know Cicily is out until November 1. Maybe Mr. Richard Rao, who provided the information related to the CO emissions could help entering the data in the tables.

If, you think it would be more convenient for you, we could have a call and provide the information that way.

Thank you, Viorica

Viorica Petriman  
Environmental Engineer  
US EPA–Region 2  
Air & Radiation Division

Permitting Section  
212-637-4021

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**From:** John, Thomas (DEC) <thomas.john@dec.ny.gov>  
**Sent:** Thursday, October 24, 2019 11:43 AM  
**To:** Petriman, Viorica <Petriman.Viorica@epa.gov>  
**Cc:** Chan, Suilin <Chan.Suilin@epa.gov>; Nirappel, Cicily (DEC) <cicily.nirappel@dec.ny.gov>; Lieblich, Sam (DEC) <sam.lieblich@dec.ny.gov>  
**Subject:** RE: Clarifications - Starrett City

Hi Viorica,

This is in follow up to your question about PSD applicability to Starrett City's modification. The attached letter and manufacture's specification verify that the CO emissions from the new engines will not trigger PSD. Hope this clarify your concern.

Thanks

Thomas John P.E. | Chief, Air Permitting Section  
**New York State Department of Environmental Conservation**  
Region 2, 47-40 21<sup>st</sup> Street, Long Island City, NY 11101-5401  
P: 718-482-4993 | F: 718-482-4874 | [Thomas.John@dec.ny.gov](mailto:Thomas.John@dec.ny.gov)

[www.dec.ny.gov](http://www.dec.ny.gov) |  

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**From:** Nirappel, Cicily (DEC) <[cicily.nirappel@dec.ny.gov](mailto:cicily.nirappel@dec.ny.gov)>  
**Sent:** Friday, October 11, 2019 2:32 PM  
**To:** Petriman, Viorica <[Petriman.Viorica@epa.gov](mailto:Petriman.Viorica@epa.gov)>  
**Cc:** John, Thomas (DEC) <[thomas.john@dec.ny.gov](mailto:thomas.john@dec.ny.gov)>; Chan, Suilin <[Chan.Suilin@epa.gov](mailto:Chan.Suilin@epa.gov)>  
**Subject:** RE: Clarifications - Starrett City

Hi Viorica,

Below are the responses to your questions highlighted. If you have any more question, please let us know.

Thanks  
Cicily Nirappel  
Professional Engineer 1  
Division of Air Resources  
**New York State Department of Environmental Conservation**  
47-40 21<sup>ST</sup> Street, Long Island City, NY 11101  
P: 718-482-4876 | F: 718-482-4874 | [Cicily.nirappel@dec.ny.gov](mailto:Cicily.nirappel@dec.ny.gov)

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**From:** Petriman, Viorica <[Petriman.Viorica@epa.gov](mailto:Petriman.Viorica@epa.gov)>  
**Sent:** Thursday, October 10, 2019 3:47 PM  
**To:** Nirappel, Cicily (DEC) <[cicily.nirappel@dec.ny.gov](mailto:cicily.nirappel@dec.ny.gov)>

Cc: John, Thomas (DEC) <[thomas.john@dec.ny.gov](mailto:thomas.john@dec.ny.gov)>; Chan, Suilin <[Chan.Suilin@epa.gov](mailto:Chan.Suilin@epa.gov)>

Subject: Clarifications - Starrett City

**ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.**

Hi Nirappel,

I have the following questions/clarifications regarding Starrett's application and PSD/NNSR applicability determination. I would like to hear from you by no later than 10/18/2019. In case you cannot back to me by then, it's fine. But, please let me know so I will no longer wait for the information.

1. Is this draft permit for both, renewal and a modification, or only for modification?

Response: This draft permit is a permit modification, not a renewal.

2. On page 7 of Exhibit 1 of the Application (which contains the title V Application Forms) there is a "Process Emission Summary" table for NOx emissions, which includes the uncontrolled and controlled NOx emissions, and the capture and control % of the SCR for each of the 2 new engines. However, the application materials I received do not contain "Process Emission Summary" tables for CO, VOC, and PM, for which the facility will also use air pollution controls. In case you have those forms, please send them me. If, you don't have them, please indicate so in your reply to this request.

Response: Application did not have process emission summary for CO, VOC and PM.

3. On pg. 4 of the title V Application Forms, Exhibit 1 and, also, Table 2A of Exhibit 2 of the application shows that the CO emission increases from the 2 new CAT 175-20 diesel engines is 198 tpy, which is greater than the PSD significant emission increase of 100 tpy. Since, the facility is a major PSD facility, it seems that the PSD applicability determination for CO emissions was required for the installation of the 2 new engines. Has the facility conducted the PSD applicability determination CO? In case they have it, please send it to me. Otherwise, please indicate so in your reply to this request.

Response: Application did not include a PSD applicability determination for CO.

4. Is there any information in the application ( perhaps some portions that were not sent to us) relating to PM 2.5 emissions from the new engines and in general from the facility? If not, please indicate so in your reply to this request.

Response: Application did not have PM2.5 information other than what is included in Exhibit 2.

5. For the 3 Emergency diesel generators (EG) at the facility:

- If, the 3 diesel EG are new engines pursuant to NSPS 4I, meaning the engines commenced construction after July 11, 2005, and are manufactured after April 1, 2006, please provide the following information:
  - Size of each engine in BHP and kW
  - Displacement in l/cylinder for each engine
  - Model year (the calendar year in each the engine was manufactured)
- If, the 3 diesel EG are not new engines pursuant to NSPS 4I, please provide the size of each engine in BHP and kW;

Response: Our records show that the three 3 Nordberg engines started operation on 10/1/74, and have not modified or reconstructed since. Each engine is 2805 BHP/2000 KW.

Thank you, Viorica

Viorica Petriman  
Environmental Engineer  
US EPA–Region 2  
Air & Radiation Division  
Permitting Section  
212-637-4021

## Starrett City – 2019 Permit Modification

EPA R2 10/28/2019

Information-Potential to Emit, Baseline Actual Emissions and Projected Actual Emissions

### 2 New Identical Non-Emergency CAT 175-20 Diesel Engines

5,646 BHP for each engine

6,6132 hr/yr for each engine

Air Pollution Controls: SCR, Oxidation Catalyst, Diesel Particulate Filter for each engine

Pollutant	Emission Factor g/BHP-hr	Comment	Source of Emission Factor	TPY
NOx		This is Controlled NOx g/bh-hr; SCR Control Efficiency is 75%	SCR Manufacturer Guarantees	
CO		This is Controlled CO g/bhp-hr  Oxidation Catalyst Design Control Efficiency is 75%	Oxidation Catalyst Manufacturer Guarantees	
VOC		This is Controlled VOC g/bhp-hr  Oxidation Catalyst Design Control Efficiency is 75%	Oxidation Catalyst Manufacturer Guarantees	
PM		This is Controlled PM g/BHP-hr  Diesel Particulate Filter Design Control Efficiency is 75%	Diesel Particulate Filter Manufacturer Guarantees	
PM10		This is Controlled PM10 g/BHP-hr Diesel Particulate Filter Design Control Efficiency is 75%		
PM2.5		This is Controlled PM2.5 g/BHP-hr Diesel Particulate Filter Design Control Efficiency is 75%		

#### Notes:

- Please enter the emission factor in g/BHP-hr and **not** in other units;
- Please feel free and correct the information I entered, in case they are not accurate;

### 3 Existing Identical Non-Emergency Nordberg Diesel Engines – Baseline Actual Emissions

[ **DEC To enter**] BHP for each engine (Actual or Maximum/Design BHP)

Actual Operating Hours for each engine

Air Pollution Control: Oxidation Catalyst for each engine

Pollutant	Emission Factor g/BHP-hr	Comment	Source of Emission Factor	TPY
NOx		Uncontrolled There is no NOx air pollution control equipment		
CO		This is Controlled CO g/bhp-hr (based on actual stack test) Oxidation Catalyst Design Control Efficiency is [ ]%		
VOC		This is Controlled VOC g/bhp-hr (based on actual stack test) Oxidation Catalyst Design Control Efficiency is s [ ]%		
PM		Uncontrolled There is no PM air pollution control equipment		
PM10		Uncontrolled There is no PM10 air pollution control equipment		
PM2.5		Uncontrolled There is no PM2.5 air pollution control equipment		

**Notes:**

- Please enter the emission factor in g/BHP-hr and **not** in other units;
- Please feel free and correct the information I entered, in case they are not accurate;

### 3 Existing Identical Emergency Nordberg Diesel Engines – Projected Actual Emissions

[ DEC **To enter** BHP for each engine (BHP must be the Maximum/Design BHP, in case no enforceable limitation on BHP is established in the permit)

500 hours for each engine

Air Pollution Control: Oxidation Catalyst for each engine (draft permit indicates that the oxidation catalyst will be used after the conversation of the engines to emergency use)

Pollutant	Emission Factor g/BHP-hr	Comment	Source of Emission Factor	TPY
NOx		Uncontrolled There is no NOx air pollution control equipment		
CO		This is Controlled CO g/bhp-hr Oxidation Catalyst Design Control Efficiency is 11%		
VOC		This is Controlled VOC g/bhp-hr Oxidation Catalyst Design Control Efficiency is 11%		
PM		Uncontrolled There is no PM air pollution control equipment		
PM10		Uncontrolled There is no PM10 air pollution control equipment		
PM2.5		Uncontrolled There is no PM2.5 air pollution control equipment		

**Notes:**

- Please enter the emission factor in g/BHP-hr and **not** in other units;
- Please feel free and correct the information I entered, in case they are not accurate;