

**New York State Department of Environmental Conservation
Notice of Incomplete Application - This is NOT a Permit**



Application ID: 2-6007-00259/00033

Batch Number: 829383

Facility: NYC-DOC - RIKERS ISLAND
17-25 HAZEN ST
EAST ELMHURST, NY 11370

Applicant: NYC DEPT OF CORRECTION
75-20 ASTORIA BLVD
EAST ELMHURST, NY 11370-3001

Owner ID: 19241

Permit(s) Applied for: 1 - Article 19 Air Title V Facility

Project Location: in BRONX in BRONX COUNTY

Your application for Permit is incomplete. The following items are required:

1. **NO_x RACT analysis:** After reviewing the NO_x RACT analysis, submitted on March 23, 2021, requesting alternate NO_x RACT limit 0.12lb/mmbtu for eight boilers and the most recent stack test conducted on September 2018, it appears that fuel switching is a possible option for the boilers as per the provisions of NYCRR Part 227-2.5(a)¹. These boilers with capability of burning distillate oil or gas have to comply with 0.08 lb/mmbtu limit, not 0.05lb/mmbtu as the facility states in the Section 3.2 of the NO_x RACT analysis. Therefore, the facility should further evaluate Fuel Switching compliance option.

¹ 227-2.5(a) *Fuel switching option. The owner or operator of an emission source subject to this Subpart may commit to burning a cleaner fuel between May 1st and September 30th of each year. Fuel switching must result in quantifiable annual NO_x emissions equal to or less than the NO_x emissions expected if the emission source complied with the applicable presumptive RACT emission limits set forth in section 227-2.4 of this Subpart.*

2. **SEQR/CEQR:** Based on the documentation provided, it is not clear if the proposed action/project requires any discretionary approvals that are subject to environmental review under City Environmental Quality Review (CEQR).

Has NYC Department of Corrections already completed an Environmental Assessment for the proposed project? If environmental review by the City of New York is required (or has been completed) in order to receive any City of New York discretionary approvals, please provide a copy of the CEQR documentation, reference number and Determination. Otherwise, in addition to the FEAF Part 1 submitted for this project, the Lead Agency must complete Part 2 and the Determination of Significance (Part 3).

Additionally, please address the following regarding **FEAF, Part 1 (Section B. Government Approvals, Funding, or Sponsorship):**

- a. Are any additional government approvals required by any federal, state or local agencies? For example, are any NYC Department of Buildings permits or approvals, and/or NYCDEP work permit(s), registration(s), and/or certificate(s) to operate required? Is any government funding, including grants, loans, tax relief,

and/or any other forms of financial assistance associated with the proposed project?

- i. If so, identify any such approval(s), funding and/or sponsorship required. Also, enter the date by which the application for any such approval, funding, or sponsorship will occur (actual or projected).
- ii. If not, please confirm that no additional funding or approvals are required.

3. **Draft Public Participation Plan (PPP):** Initial comments on the draft PPP are attached for your reference. The stakeholder list is under review. Accordingly, the Department will follow-up separately regarding additional comments on the stakeholder list and the draft PPP.

Pursuant to 6 NYCRR Part 621.6(e), applications will remain incomplete until all requested items are received by the Department. A partial submission of requested material does not change the incomplete status.

Please note that you may receive additional comments once the technical review of your application is complete. However, your Air Title V permit application (2-6007-00259/00033) will remain incomplete until the above-requested information is received by the Department.

cc: DAR: C. Nirappel, T. John, R. Bolt, S. Lieblich
DEP: S. Watts
AKRF: S. Sharma

***Please submit requested information by _____
No further action can be taken until all of these materials are received.***

Contact Person:

Caitlyn P Nichols
NYSDEC
47-40 21st St
Long Island City, NY 11101

Signature: Caitlyn Nichols

Date: May 24, 2021 (revised June

03, 2021)

Caitlyn P. Nichols Digitally signed by Caitlyn P. Nichols
Date: 2021.06.03 11:48:41 -0400

Telephone Number: (718) 482-4997

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDEC Region 2 Headquarters
47-40 21st St
Long Island City NY 11101
(718) 482-4997



SAVE THE TOP HALF OF THIS FORM FOR YOUR RECORDS AND RETURN THE BOTTOM
HALF WHEN PROVIDING THE INFORMATION REQUESTED ON THE ACCOMPANYING
NOTICE OF INCOMPLETE APPLICATION.

YOUR DOING SO WILL HELP US EXPEDITE YOUR PERMIT PROCESSING. THANK YOU.

DEC Contact: Caitlyn P Nichols
Batch ID: 829383
Application ID: 2-6007-00259/00033
Owner ID: 19241
Date Received: 05/22/2018
Date Incomplete: 05/24/2021
Application Type: RTN
Applicant Name: NYC DEPT OF CORRECTION
Facility Name: NYC-DOC - RIKERS ISLAND
Project Desc: ATV REN 3-remove/change in caps & use of ERCs

PLEASE PROVIDE REQUESTED INFORMATION ON OR BEFORE:

SAVE THIS PART !

DETACH

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDEC Region 2 Headquarters

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Environmental, Planning, and Engineering Consultants

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7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To: Caitlyn P. Nichols/New York State Department of Environmental Conservation
From: Henry Kearney
Date: September 22, 2021
Re: Rikers Island Notice of Incomplete Application
cc: Cicily Nirappel, Thomas John, Sam Lieblich, Steve Watts/NYSDEC; Alex Mahoney, Susan Yang, Blake Boyer, Hardee Saini, Keith MacCormack, Christopher Clarke, Avninder Aujla/DOC; William Dickerson, Ke He/NYPA; James Buchok, Aneesh Karlekar/AECOM; Steve Holley, Kevin Edwards, Sheveta Sharma/AKRF

AKRF has reviewed the Notice of Incomplete Application (NOIA) sent by the New York State Department of Environmental Conservation in a letter dated June 3, 2021, and additional comments sent via emails dated June 7, 2021, and September 20, 2021. Presented below are responses to the comments.

COMMENTS IN THE JUNE 3, 2021, NOIA

Comment 1: NO_x RACT analysis: After reviewing the NO_x RACT analysis, submitted on March 23, 2021, requesting alternate NO_x RACT limit 0.12 lb/mmbtu for eight boilers and the most recent stack test conducted on September 2018, it appears that fuel switching is a possible option for the boilers as per the provisions of NYCRR Part 227-2.5(a)¹. These boilers with capability of burning distillate oil or gas have to comply with 0.08 lb/mmbtu limit, not 0.05 lb/mmbtu as the facility states in the Section 3.2 of the NO_x RACT analysis. Therefore, the facility should further evaluate Fuel Switching compliance option.

¹227-2.5(a) *Fuel switching option. The owner or operator of an emission source subject to this Subpart may commit to burning a cleaner fuel between May 1st and September 30th of each year. Fuel switching must result in quantifiable annual NO_x emissions equal to or less than the NO_x emissions expected if the emission source complied with the applicable presumptive RACT emission limits set forth in section 227-2.4 of this Subpart.*

Response: The proposed fuel switching option to comply with the NO_x RACT requirements of 6 NYCRR Part 227 for the eight boilers is acceptable to the Department of Corrections (DOC).

Comment 2: SEQR/CEQR: Based on the documentation provided, it is not clear if the proposed action/project requires any discretionary approvals that are subject to environmental review under City Environmental Quality Review (CEQR).

Has NYC Department of Corrections already completed an Environmental Assessment for the proposed project? If environmental review by the City of New York is required (or has been completed) in order to receive any City of New York discretionary approvals, please provide a copy of the CEQR documentation, reference number and Determination. Otherwise, in addition to the FEAF Part 1 submitted for this project, the Lead Agency must complete Part 2 and the Determination of Significance (Part 3).

Additionally, please address the following regarding **FEAF, Part 1 (Section B. Government Approvals, Funding, or Sponsorship)**:

- a. Are any additional government approvals required by any federal, state, or local agencies? For example, are any NYC Department of Buildings permits or approvals, and/or NYCDEP work permit(s), registration(s), and/or certificate(s) to operate required? Is any government funding, including grants, loans, tax relief, and/or any other forms of financial assistance associated with the proposed project?
 - i. If so, identify any such approval(s), funding and/or sponsorship required. Also, enter the date by which the application for any such approval, funding, or sponsorship will occur (actual or projected).
 - ii. If not, please confirm that no additional funding or approvals are required.

Response: An Environmental Assessment (EAF) was previously prepared for the construction and operation of the cogeneration plant to provide a comprehensive description of the proposed project and to present an analysis of the project's potential environmental impacts. A copy of this EAF was previously provided to NYSDEC, and the New York Power Authority (NYPA) issued a Negative Declaration for the EAF in 2011. The proposed modifications to the Title V Air Permit do not involve any physical modifications to the facility. The project is not subject to any discretionary actions pursuant to CEQR, and no other new or additional approvals such as NYC DOB permits are required due to the proposed permit modifications. The project also does not require any funding that would require discretionary approval. Therefore, no environmental assessment has been prepared for the project aside from the SEQRA Part 1 EAF that was requested by and previously submitted to NYSDEC.

Comment 3: Draft Public Participation Plan (PPP): Initial comments on the draft PPP are attached for your reference. The stakeholder list is under review. Accordingly, the Department will follow-up separately regarding additional comments on the stakeholder list and the draft PPP.

Response: The draft PPP has been revised to address the comments. A copy of the revised documents, including marked and clean Word files of the PPP, contact list and fact sheet outline, are attached (see Attachment 1). Responses to NYSDEC's "bubble comments" included in the consolidated PPP and other CP-29 outreach materials (complete bi-lingual Fact Sheet and Virtual Public Information Notice/Invitation, which are not part of the PPP document) are answered in a separate Word file with AKRF Responses. While NYSDEC did not provide any comments directly on the Fact Sheet or Roll Call memo, they are being re-sent for

completeness. If NYSDEC has new comments or changes, please make them in the Clean Word files.

COMMENT RECEIVED VIA EMAIL DATED JUNE 7, 2021

Comment 4: CLCPA Analysis: As you may know, the Governor signed the Climate Leadership and Community Protection Act (CLCPA) into law in July 2019, which became effective January 1, 2020 (Chapter 106 of the Laws of 2019). Among other requirements, the CLCPA directs state agencies to determine if the decisions they make are consistent with the Statewide greenhouse gas (GHG) emission limits established by the CLCPA in Environmental Conservation Law (ECL) Article 75. In the case of the DEC, this includes determining if the permits issued are consistent with or would interfere with the attainment of the Statewide GHG emission limits in ECL Article 75.

To address Section 7(2) of CLCPA, please identify each GHG and calculate the project's potential to emit GHG in units of tons per year and carbon dioxide equivalents using the 20-year global warming potentials found in 6 NYCRR Section 496.5. The CLCPA analysis should also include calculations showing the project's projected GHG and CO_{2e} emissions in the years 2030 and 2050 if possible. For purposes of the CLCPA, Statewide GHG emissions include "upstream" out-of-state GHG emissions associated with the generation of electricity imported into the State, or the extraction, transmission, and use of fossil fuels imported into the State. Accordingly, please include any upstream emissions in the calculations. The Department has developed the attached draft document titled, "Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents," which includes preliminary emission for facilities to use as they prepare analyses. As explained in the attached document, the values are intended to be presumptive, meaning a facility may use a different value in a given context, provided that a different value is supported by appropriate justification and analysis.

Pursuant to ECL Article 75, the CLCPA's Statewide GHG emission limits require a Statewide reduction in GHG emissions from 1990 levels of 40% by 2030 and 85% by 2050. Further, CLCPA requires that the energy generation sector be zero-emissions by 2040. Please discuss how the emissions from this facility will be mitigated or reduced consistent with these requirements. If there are no feasible ways to reduce GHGs, please explain that too. If GHG emissions will not be consistent with the Statewide GHG emission limits of the CLCPA, then we may need to discuss this further.

In addition to the GHG requirements outlined above, calculations and discussions of mitigation measures for any co-pollutants should also be provided. To address Section 7(3) of CLCPA, the DEC is required to prioritize the reduction of GHG emissions and co-pollutants in disadvantaged communities. Co-pollutants are defined as hazardous air pollutants (HAPs) that are emitted by GHG sources, per CLCPA. Please calculate the co-pollutants and discuss any control or mitigation strategies that will be used to reduce the impacts on the facility's neighbors. This could include measures such as emission controls, raising stack heights, cleaner fuels, and periodic tune-ups, as appropriate. If you conclude that existing measures are enough to mitigate these impacts, that should be discussed as well.

Response: The proposed modifications to the Title V Air Permit do not involve any physical modifications to the facility. The proposed permit conditions for the cogeneration plant and boilers would ensure that the facility can provide the necessary heating and hot water

services to Rikers Island while meeting applicable federal and state New Source Review and other air regulations. Therefore, compared to existing conditions, GHG and co-pollutant emissions from these emission units would not change. However, the attached technical memorandum (Attachment 2) presents a summary of estimated GHG emissions associated with the facility's current operations, and compares these emissions with a 1990 baseline condition, before the cogeneration plant was constructed. For the diesel engines, the proposed modifications to the Title V Air Permit would reduce the number of engines that can be used for peak load management operation, as well as establishing the maximum load and number of operating hours. Overall, compared to the existing permit, the total capacity of diesel engines that can participate in a peak load management program will be reduced by more than 60 percent. This is projected to result in a reduction of GHG and HAP emissions on a short-term (hourly) basis (see the technical memorandum). On an annual basis, the current Title V permit application would still provide the same annual NO_x emission cap of 22.5 tons per year for operation of diesel engines at Rikers Island. Therefore, on a potential-to-emit basis, pollutant emissions from the PLM engines do not change. However, actual pollutant emissions would be expected to be reduced as a result of the reduced engine capacity enrollment in peak load management programs.

COMMENTS RECEIVED VIA EMAIL DATED SEPTEMBER 20, 2021

Comment 5: Certificates of conformity for all the PLM engines subject to 40 CFR Part 60 Subpart IIII.

Response: 40 CFR Part 60 Subpart IIII is applicable to new engines manufactured after April 1, 2006. The PLM engines are all existing engines, manufactured between 1985-1988, that are regulated under the previous Title V air permit. Therefore, these units are not subject to 40 CFR Part 60 Subpart IIII.

Comment 6: Comments on the stakeholder list.

Response: The stakeholder list for the PPP has been updated as appropriate.

ATTACHMENT 1



**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan**

September 2021

**Bill de Blasio
Mayor**

**Vincent Schiraldi
Commissioner**



Printed on paper containing 30% post-consumer material

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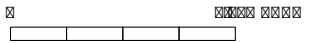
Introduction

The New York City Department of Correction (NYCDOC) is proposing to modify and renew the New York State Title V Air Facility permit for the operation of electrical and steam generation equipment (including a cogeneration plant, boilers, and emergency engines) at Rikers Island (the facilities), as shown on **Figure 1**. In accordance with *Commissioner Policy-29 Environmental Justice and Permitting* (CP-29), the New York State Department of Environmental Conservation (DEC) requires the permit applicant (in this case NYCDOC) to develop and execute a public participation plan targeting the local community, and conduct outreach as part of the environmental permit review process.

Background

NYCDOC installed and began operating a new cogeneration plant consisting of two 7.5 megawatt natural gas-fired combustion turbines on Rikers Island in 2014. The cogeneration plant on Rikers Island generates electricity for various uses on the island, and generates steam for heating, hot water, and other process uses (e.g., laundry). The cogeneration plant generates most of the electricity and steam needed to serve Rikers Island, reducing the amount of electricity needed from the Astoria power grid. NYCDOC also operates eight dual-fired (gas and fuel oil) boilers to supply steam during periods of peak demand on Rikers Island, or when the cogeneration plant is undergoing maintenance. Under the existing Title V permit, the boilers cannot operate as needed under the current annual emission limits during these periods. In addition, NYCDOC operates diesel engines to provide emergency power to buildings and facilities on Rikers Island in the event of a power outage. Under the current Title V permit, these engines are allowed to operate during limited periods to provide power to buildings and facilities during periods of peak utility demand (known as peak load management, or PLM). This collection of electrical and steam generation equipment operates under a New York State Title V Air Facility permit.

NYCDOC is proposing modification of the limits for nitrogen oxides (NO_x) and particulate matter less than 10 microns in diameter (PM₁₀) that can be emitted by the Rikers Island facility equipment under the current Title V permit. The proposed permit modifications would allow the facility to operate the eight existing boilers on an as-needed basis to meet Rikers Island's steam demand during periods of peak steam usage or when the cogeneration plant is undergoing maintenance. Currently, the Title V permit has annual emission caps NO_x and PM₁₀ that limit the boiler operations. Permit modifications will involve setting new NO_x emission limits for the cogeneration plant and eliminating the current emission limits on the boilers. NYCDOC is also proposing permit modifications related to the emergency engines. These permit modifications would reduce the number of engines that could participate in PLM operations as well as their maximum operating load for certain engines to ensure compliance with air quality standards. No new equipment or physical modifications to the Rikers Island cogeneration plant, boilers, or emergency power engines are proposed.



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Public Participation Plan

The draft PPP for this permit application includes a number of activities and tasks that will be undertaken to inform stakeholders about the permit modifications being sought from DEC. This PPP focuses on the community potentially affected by the proposed project and aims to inform interested stakeholders about the proposed action and provide additional opportunities for public participation in the NYSDEC environmental permit review process. The outreach process outlined in this PPP will provide stakeholders access to information about the project site and permit application, and to encourage stakeholder dialogue.

Task # 1 -- Identify Outreach Area

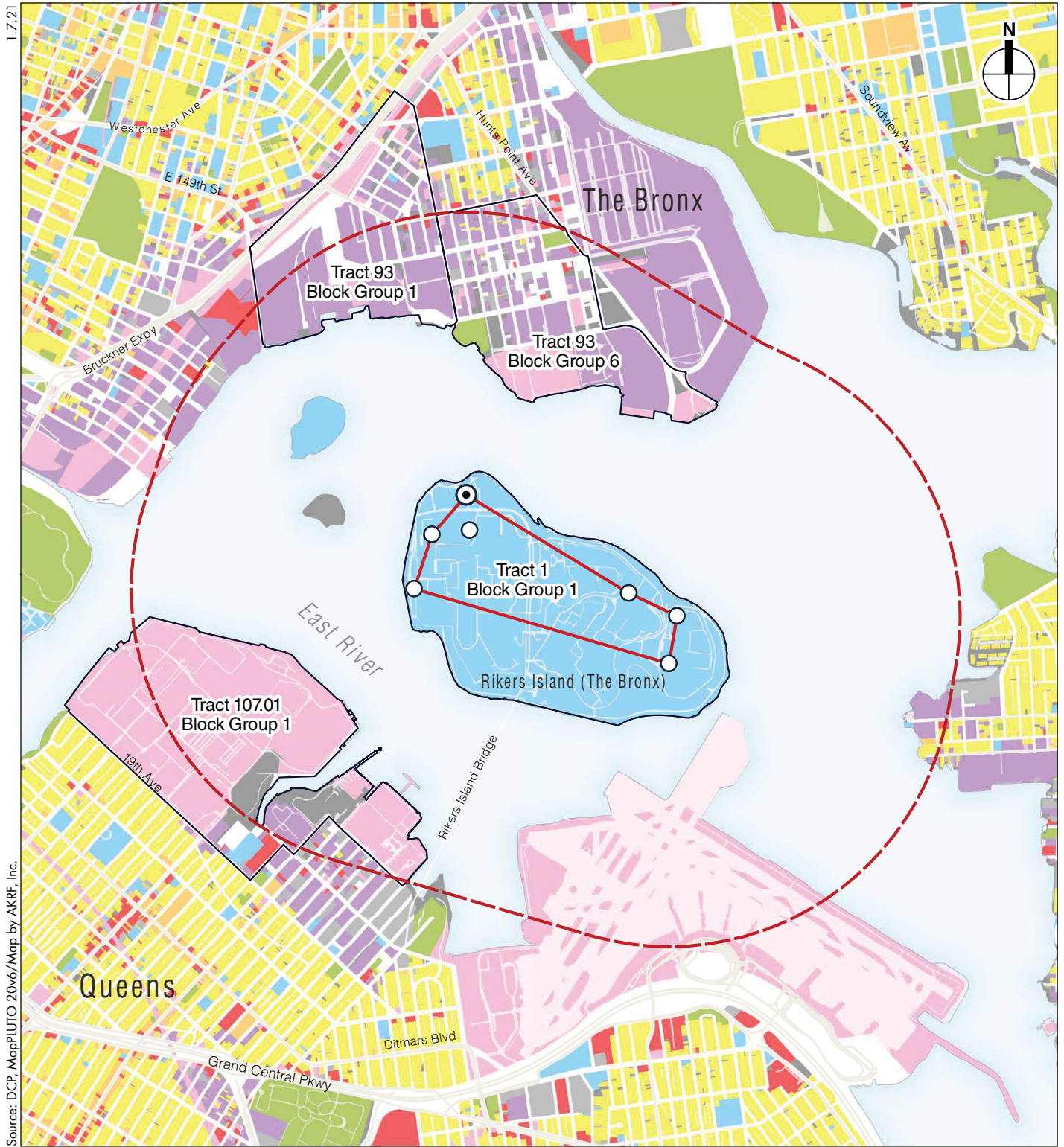
Because of the project's location (within the NYCDOC property on Rikers Island—with its unique population, as well as being just across the East River from the Hunts Point peninsula), a 1-mile radius from the NYCDOC electrical facilities has been selected in consultation with DEC staff, to ensure that outreach to an appropriate area and interested entities (stakeholders) is undertaken. This is shown in **Figure 2**. This PPP will serve to inform, encourage dialogue, and solicit input from stakeholders interested in this permit application, including residents near and adjacent to the project site, local elected officials, community-based organizations and civic organizations, environmental groups, and neighborhood religious establishments, as described in more detail in Task 2, below. In addition, particular emphasis will be placed on identifying stakeholders within potential environmental justice areas and community members and residents that represent the area's minority and low-income populations for outreach during the public participation process.















Within this 1-mile radius of the Rikers Island emission sources included in the permit modification lies a small portion of the South Bronx (specifically, the southwestern portion of the Hunts Point Peninsula and Oak Point) as well as a very small portion of northern Astoria in Queens, and a very small portion of the College Point neighborhood. The area of the Bronx that lies within this 1-mile radius is mostly industrial, but also includes some limited scattered residential uses. The areas in Queens are predominantly occupied by the existing Con Edison power plant property, other industrial uses, and include some limited scattered commercial and residential uses.

Task #2 -- Identify Stakeholders and Create an Outreach Contact List

Stakeholders who may be affected by NYCDOC's ongoing operation of the electrical and steam generation equipment on Rikers Island will be identified. This will be done in coordination with Community Board representatives and with input from NYCDOC. It is expected that the stakeholders for this plan will include, but may not be limited to:

- NYCDOC employees and contractors who work or visit portions of the island
- Inmate visitors (family, friends, lawyers, support services, etc.)



- | | | |
|--|---|---|
|  Project Site | Land Use |  Transportation/Utility |
|  1-Mile Study Area |  Residential |  Public Services |
|  Cogeneration Facility and Boiler House |  Mixed Use |  Open Space |
|  Locations of PLM Engines |  Commercial |  Parking |
|  Environmental Justice Study Area Block Group |  Industrial |  Vacant |

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- Inmates incarcerated on Rikers Island
- Residents/neighborhood groups who reside or are active in the vicinity of the proposed project
- Community boards, local community and civic organizations, environmental and business groups, and any entities recommended by these groups
- Neighborhood religious establishments
- Elected officials
- Other appropriate state and local government officials.

A preliminary outreach contact list of stakeholders has been assembled, including names, addresses, telephone numbers and e-mail addresses (if available) of individuals and organizations (as described above) with a possible interest in the proposed action. This list will be updated regularly to include new stakeholders identified as the public participation process continues. The preliminary outreach contact list developed to date for this plan, is included in **Attachment A**.

Task #3 -- Prepare Written Information

Written information on the operation of the electrical and steam generation equipment on Rikers Island and the environmental permit review process will be prepared for posting and distribution (see subtask 4B below, which describes how written information will be distributed). The following written materials will be prepared and made available to the public as part of this outreach effort:

- Project Fact Sheet (bi-lingual English-Spanish) (An outline of the contents of the Fact Sheet has been developed, and is included in the draft PPP as **Attachment B**.)
- Virtual Information Session Notice/Invitations (bi-lingual English-Spanish)
- Draft Public Participation Plan

Prepared materials will be written in clear, concise language, avoiding legal or overly technical terminology. Materials will be prepared in English; the Project Fact Sheet and Virtual Information Session Meeting Notice/Invitation will be translated into Spanish. This is because the outreach area identified in Task #1 includes a notable population with limited English proficiency; Spanish is the most prevalent foreign language spoken in the area.

Task #4 -- Establish Document Repositories/Distribute Project Information

Subtask 4A: Establish Document Repositories

NYCDOC will publish permit-related documents on the publicly accessible website created for this Project, which will be available to all stakeholders. The URL address of the web-based document repository (<http://www.RikersIslandTitleVPermit.com>) [BEING CONFIRMED] will be included in the Project Fact Sheet and in any Virtual Information Session

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Notice/Invitations distributed publicly. The project website (<http://www.RikersIslandTitleVPermit.com>) [BEING CONFIRMED] is currently the only public document repository proposed for this permitting process because of the ongoing Coronavirus (COVID-19) public health situation, and consistent with current NYSDEC public outreach guidance for permitting actions (*Guidance on Commissioner's Policy 29 During the COVID-19 Public Health Crisis*, dated April 24, 2020) (see **Attachment C**). The availability of any additional repositories (if any are established) will be noted on the website established for this permit's outreach activities (<http://www.RikersIslandTitleVPermit.com>). [BEING CONFIRMED]

The repository will contain electronic copies of the written information prepared for the PPP for this permitting process, as well as copies of the permit application, Environmental Justice Analysis, and the State Environmental Quality Review Act (SEQRA) Environmental Assessment Form (EAF) documents. The contents of the online repository (the Project website) will be updated regularly (if any physical repositories are eventually established, they will also be updated and checked regularly to ensure that no documents are missing). A list of document contents will be prepared and updated, to help stakeholders accessing the website find materials of interest (and to keep any physical document repositories that may be established organized).

The web address (<http://www.RikersIslandTitleVPermit.com>). [BEING CONFIRMED] of the web-based document repository will be included in the Project Fact Sheet, the Virtual Public Information Session Notice/Invitations, and newspaper ads.

Subtask 4B: Distribute Project Information

The Project Fact Sheet (bi-lingual English/Spanish) and Virtual Public Information Session Notice/Invitations (in English and Spanish) will be distributed not less than 15 days in advance of the Virtual Public Information Session by US Mail and/or email to the stakeholders, local organizations, Community Boards, elected officials, etc. identified and listed in the preliminary outreach contact list (see Attachment A). Virtual Public Information Session Notices, indicating where to find project information and when a virtual public information session will be held, will also be published in newspapers of local circulation serving the outreach area described above in Task 1 not less than 15 days in advance of the Virtual Public Information Session (see more detailed description in Task 5, below).

The written information (Project Fact Sheet, the Virtual Public Information Session Notice/Invitations) will be distributed or made available to staff, visitors, and inmates (not less than 15 days in advance of the Virtual Public Information Session) by the following means: i) an official memorandum would be circulated on Rikers Island containing a brief explanation to be read at Roll Calls to provide information to uniformed staff; ii) the inmates would be notified about the project during their regular weekly Inmate Council Meetings, and flyers could also be posted in housing areas for a brief, finite period of time; and iii) flyers would be posted at each facility's

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visit house and the Central Visit Building. With the implementation of these measures, adequate notification would be provided to Rikers Island staff, visitors, and inmates to learn about the proposed project, and thus afford them the opportunity to participate in the permit's PPP process and provide comments.

Task #5 -- Conduct Public Information Session

A Virtual Public Information Session will be held using a video- or teleconference call with interested stakeholders (including members of the public, and possibly elected officials and Community Board representatives of the Bronx and Queens), to provide information about the Rikers Island Electrical Facilities, the permit modifications being sought, and the DEC Title V permitting process. A presentation for the virtual public information session will be provided on the project website, which will be presented live during the public information session. A version of the virtual public information session presentation translated into Spanish will also be available on the project website. Stakeholders will be invited to provide comments on project materials and the draft PPP, via the Project website, or via email or US mail, to a specified NYCDOC representative (Mr. Alex Mahoney, Executive Director Facilities, NYCDOC – Alex.Mahoney@doc.nyc.gov), which will be announced during the information session and identified on the Project website.

Virtual Public Information Session Notice/Invitations will be published in English and Spanish in local newspapers, web-based media, and sent to all interested parties on the Contact List (in English and Spanish, along with a bi-lingual (English/Spanish) Project Fact Sheet. These bi-lingual Virtual Public Information Session Notice/Invitations will include:

- the name of the project sponsor;
- the name and address of the permit subject;
- a brief description about the project's permitting information available for review;
- the description of why the information is being sent;
- directions on how to obtain the permit application materials on the publicly available website;
- the time and date of the virtual public information session; and instructions detailing how to sign onto the video- or teleconference public information session;
- a contact list of email or physical addresses for submitting comments; and
- instructions for how to submit questions and comments via email or in writing, and the deadline for submitting questions and comments.

Stakeholders will be encouraged to submit comments or questions for a period of not less than 15 days from the date of the informational briefing, with a minimum public comment period of 35 days from the postmark date of the Virtual Public Information Session Notice/Invitation. NYCDOC and consultant team staff members will be available to receive and answer questions about the project during the virtual public information session.

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The Virtual Public Information Session will be scheduled after consulting Community Board (CB) calendars and municipal and agency officials. This will help to avoid conflicts with important meetings or events that are regularly held or already scheduled within the community. The Virtual Public Information Session will occur not less than fifteen (15) days from the postmark date of the Virtual Public Information Session Notice/Invitations or the appearance of newspaper advertisements/virtual meeting notices, whichever is later. It is anticipated that the Virtual Public Information Session would be held after the initial draft permit application has been submitted to DEC for review, but several weeks prior to DEC making its decision on the permit application. The date for the Virtual Public Information Session will be established after the initial draft permit application has been submitted to DEC for review.

Project information, and the method for providing comments, will be disseminated to the Rikers Island populations as described in Task #4, above.

Because the primary impact of the project would be to Rikers Island workers, visitors, and inmates, NYCDOC only intends to provide information and materials to the staff of Bronx Community Board 2 (CB2) and Queens Community Board 1 (CB1), and provide briefings as requested. While it is not anticipated that they will be necessary, the need for other public information sessions can be evaluated in consultation with DEC staff after the Virtual Public Information Session has taken place.

Task #6 - Prepare Participation Plan Outreach Summary/Certification Document

A written summary of the outreach conducted under the PPP will be prepared and submitted to the DEC. This report will serve as the public participation plan's Certification Document, and will include:

- A summary of PPP milestones, outlining plan implementation;
- Methods used to engage the public and solicit outreach;
- Time and date of the virtual public information session and other project informational briefings conducted by NYCDOC (if any);
- Any substantive concerns/issues raised during outreach activities or received during the virtual public information session or associated public comment period from stakeholders or the public at large;
- Descriptions of how the issues raised were addressed; and
- A description of any unresolved or outstanding issues.

The written Certification Document will confirm that the applicant has complied with the PPP, and will include a summary detailing the activities that occurred pursuant to the plan. The Certification Document will become part of the permit application and will be made available to the public on the Project website (and at any physical document repositories established, if any). The Certification Document will also include several appendices as follows:

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan**

- Copies of written information such as Fact Sheets, virtual public information session notices, and invitations; Meeting minutes of any informal outreach meetings/activities;
- Copies of the presentation made during the virtual public information session; and
- Names of attendees at the virtual public information session (as available).

*

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan
Attachment A – Preliminary Contact List**

COMMUNITY BOARD OFFICES

Bronx Community Board 2

1029 East 163rd Street, Suite 202
Bronx, NY 10459
Phone: 718.328.9125
Fax: 718.991.4974
Email: brxcb2@optonline.net
Chair: Roberto Crespo
District Manager: Ralph Acevedo

Queens Community Board 1

45-02 Ditmars Boulevard
Astoria, NY 11105
Phone: 718.626.1021
Fax: 718.626.1072
Email: qn01@cb.nyc.gov
Chair: Marie Torniali
District Manager: Florence Koulouris

Queens Community Board 7

133-32 41st Road, Suite 3B
Flushing, NY 11355
Phone: 718-359-2800
Email: qn07@cb.nyc.gov
Chair: Mr. Eugene T. Kelty, Jr.
District Manager: Ms. Marilyn McAndrews

UNIFORMED OFFICERS' ORGANIZATIONS

Correction Officers' Benevolent Association, Inc. (COBA)

77-10 21st Avenue
East Elmhurst, NY 11370
Phone: 718.545.2622
Email: cobanyc@aol.com
Union President: Benny Boscio Jr.

Corrections Captains' Association, Inc. (CCA)

241 37th Street, Suite 303
Brooklyn, NY 11232
Phone: 718.243.0222
Email: president@nyccca.org
President: Patrick Ferraiuolo

Assistant Deputy Wardens/Deputy Wardens Association (ADW/DW Association)

364 Decker Avenue
Staten Island, NY 10302
Phone: 718.273.8687
Email: adwdwa@nycwarden.com
President: Joseph Russo
Vice President: Robert Mitil

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan
Attachment A – Preliminary Contact List**

ELECTED OFFICIALS

NEW YORK CITY OFFICIALS

Mr. Ruben Diaz, Jr.
Office of the Bronx Borough President
851 Grand Concourse, 3rd Floor
Bronx, NY 10451
Tel: 718.590.3557
Email: webmail@bronxbp.nyc.gov

Mr. Donovan Richards
Office of the Queens Borough President
120-55 Queens Boulevard
Kew Gardens, NY 11424
Tel: 718.286.3000
Email: info@queensbp.org

Mr. Rafael Salamanca Jr.
District 17 City Council Member
1070 Southern Boulevard
Bronx, NY 10459
Tel: 718.402.6130
Email: salamanca@council.nyc.gov

Mr. Paul Vallone
District 19 City Council Member
District Office
42-40 Bell Boulevard, Suite 507
Bayside, NY 11361
Tel: 718-619-8611
Fax: 718-631-4100

Legislative Office
250 Broadway, Suite 1792
New York, NY 10007
Tel: 212-788-7250
Fax: 212-788-1860
Email: district19@council.nyc.gov

Mr. Costa Constantinides
District 22 City Council Member
31-09 Newtown Ave, Suite 209
Astoria, NY 11102
Email: costa@council.nyc.gov

NEW YORK STATE OFFICIALS

New York State Assembly Members

Mr. Daniel Rosenthal
27th Assembly District
District Office
159-06 71st Avenue
Flushing, NY 11365
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Fax: 718-969-8326
Email: rosenthald@nyassembly.gov

Mr. Jeffrion L. Aubry
35th Assembly District
District Office
98-09 Northern Blvd.
Corona, NY 11368
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Mr. Zohran Mamdani
36th Assembly District
District Office
24-08 32nd Street
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Astoria, NY 11102
Tel: 718-545-3889
Email: mamdanz@nyassembly.gov

Ms. Amanda Septimo
84th Assembly District
District Office
384 E 149th St., Suite 202
Bronx, NY 10455
Tel: 718-292-2901
Email: septimoa@nyassembly.gov

Mr. Kenny Burgos, 85th Assembly District
District Office
1163 Manor Ave.
Store Front #3
Bronx, NY 10472
Tel: 718-893-0202
Email: burgosk@nyassembly.gov

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan
Attachment A – Preliminary Contact List**

New York State Senators

Mr. John C. Liu
NY State Senate District 11
District Office
38-50 Bell Boulevard, Suite C
Bayside, NY 11361
Tel: 718-765-6675
Email: liu@nysenate.gov

Ms. Jessica Ramos
NY State Senate District 13
District Office
32-37 Junction Blvd.,
East Elmhurst, NY 11369
Tel: 718-205-3881
Fax: 718-205-4145
Email: ramos@nysenate.gov

Ms. Allesandra Biaggi
NY State Senate District 34
District Office
3190 Riverdale Ave., Suite 2
Bronx, NY 10463
Tel: 718-822-2049
Email: biaggi@nysenate.gov

Mr. José M. Serrano
NY State Senate District 29
District Office
1916 Park Avenue, Suite 202
New York, NY 10037
Tel: 212-828-5829
Fax: 212-828-2420
Email: serrano@nysenate.gov

COMMUNITY ORGANIZATIONS

Assembly of Christian Churches—
Eastern District
840 Intervale Avenue
Bronx, NY 10459
Tel: 718.861.7826
Email: distrito_este@optimum.net
Contact: Reverend Abner Rivera

Bella Vista Health Center
890 Hunt's Point Avenue
Bronx, NY 10474
Tel: 718.589.4755
Fax: 718.589.3573
Email: info@urbanhealthplan.org
Contact: Paloma Izquierdo-Hernandez,
President

Bronx Parent Housing Network, Inc
488 East 164th Street
Bronx, NY 10457
Tel: 347-271-8257
Contact: Victor Rivera, President & CEO

Casita Maria Center for Arts & Education
928 Simpson Street
Bronx, NY 10459
Tel: 718.589.2230
E-mail: marketing@casitamaria.org
Website: <https://www.casitamaria.org/>
Contact: Jacqueline Weld Drake, Chairman

Damascus Christian Church of Hunts Point
833-837 Manida Street
Bronx, NY 10474
Tel: 718.542.5254
Website:
<http://damascushuntspoint.org/welcome/>
Contact: Jonathan Roque, Senior Pastor

Erma Cava II Housing for the Elderly
887 Southern Boulevard
Bronx, NY 10459
Tel: 718.893.2604
Contact: Connie Romani, Coordinator

**New York City Department of Correction
Rikers Island
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Attachment A – Preliminary Contact List**

Fire Department - Engine 94, Ladder 48,
Battalion 3
1226 Seneca Avenue
Bronx, NY 10474
Tel: 718.999.2000
Contact: Fire Chief

Food Bank for New York City
Hunts Point Co-op Market
355 Food Center Drive
Bronx, NY 10474
Tel: 718.991.4300
Fax: 718.893.3442
Email: prez@foodbanknyc.org
Website: <https://www.foodbanknyc.org/>
Contact: Leslie Gordon, President & CEO

The Greater Hunts Point Economic
Development Corporation & Greater Hunts
Point Chamber of Commerce
The Bank Note Building
1231 Lafayette Avenue, 4th Floor
Bronx, NY 10474
Website: <https://ghpedc.org/>
Contact: Donald Eversley, Executive
Director

Hunts Point Recreation Center (Department
of Parks & Recreation)
765 Manida Street
Bronx, NY 10474
Tel: 718.860.5544
Fax: 718.860.5885
Email: Ashanta.Smith@parks.nyc.gov
Contact: Ashanta Smith

Latin/African American Chaplains
Association (LACA), State of New York
1112 Garrison Avenue
Bronx, NY 10474
Tel: 718.842.8555
Fax: 718.842.4747
Website: <http://www.lacasny.com>
Contact: Bishop Dr. Fernando Rodriguez,
President/CEO

La Peninsula Community Organization
711 Manida Street
Bronx, NY 10474
Tel: 718.542.1161
Fax: 718.542.8230
Email: jdejesus@lapen.com
Contact: Johann DeJesus-Cortes, Executive
Director

New Season Christian Center
937 Teller Avenue
Bronx, NY 10451
Tel: 718.557.9937
Email: pastorphil@newseasonchurch.cc
Contact: Reverend Philip Bonano, Senior
Pastor

Nos Quedamos
754 Melrose Avenue
Bronx, NY 10451
Tel: 718.585.2323
Email: jclemente@nosquedamos.org
Contact: Jessica Clemente, Chief Executive
Officer

The New South Bronx Police Athletic
League Youth Center
991 Longwood Avenue
Bronx, NY 10459
Tel: 718.991.2447, Ext. 22
Fax: 718.991.2589
Email: crobledo@palnyc.org
Contact: Corrine Robledo, Center Director
SONYC
The Point CDC
940 Garrison Avenue
Bronx, NY 10474
Tel: 718.542.4139, Ext. 121
Fax: 718.542.4988
Email: mtorres@thepoint.org
Contact: Maria Torres, President & Chief
Operating Officer

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan
Attachment A – Preliminary Contact List**

Sustainable South Bronx, The Hope
Program
1360 Garrison Avenue
Bronx, NY 10474
Tel: 646.400.5292
Email: info@ssbx.org
Contact: Jennifer Mitchell, Executive
Director

GOVERNMENT AGENCY

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC)
Division of Environmental Permits
Contact: Caitlyn Nichols, Environmental Analyst II
1 Hunters Point Plaza
47-40 21st Street, 4th Floor
Long Island City, NY 11101-5407
Phone: (718) 482-4997

**New York City Department of Correction
Rikers Island
Title V Permit Modification and Renewal
Public Participation Plan
Attachment B – Fact Sheet Outline**

The following is an outline of the proposed contents of the Fact Sheet (bi-lingual English-Spanish) that NYCDOC is preparing for public distribution for the Title V Air Facility permit modification and renewal, as part of the outreach materials for the project's PPP.

Title of Fact Sheet

We proposed to use:

**Rikers Island
Title V Permit Modification and Renewal
Project Fact Sheet**

Project Issues/Goals

This section would provide a brief description of the need for the permit modification and renewal NYCDOC is seeking from DEC, and the project's issues and overall goals.

Proposed Project (Description of Permit and Modifications)

This section will include a brief description of the proposed New York State Title V Air Facility permit modifications NYCDOC is seeking from DEC for Rikers Island's existing power supply facilities. This will include a brief description of the emission limits that will be included in the permit modification, to ensure the operation of the equipment on Rikers Island results in emissions that remain below the relevant thresholds, including the National Ambient Air Quality Standards (NAAQS). These limits will ensure that there would be no adverse effects from operation of the equipment to any surrounding sensitive receptors (residences, open spaces, etc.) as a result of the permit being granted. A figure depicting the Project Location (the locations of all of the emission sources considered under the permit, including the cogeneration facility, PLM engine locations, and the boiler house, etc.) will be included. There will also be images of the Island from one or more perspectives off-island for providing context of the setting of Rikers Island in the larger community.

Public Outreach

This section will describe that the Fact Sheet is part of the permit review process, will refer to the Public Participation Plan, will indicate that a virtual public information session will be held (consistent with the NYSDEC's April 2020 COVID outreach guidelines), will explain how to join the virtual information session, and will indicate where project information is available to stakeholders and the public.

Document Repositories

There will be a special "Information Box" on the Fact Sheet that shows the URL address of the online virtual document repository (<http://www.RikersIslandTitleVPermit.com>) [BEING CONFIRMED] for the project (if any physical document repositories are established before the Fact Sheet is printed, they will be listed as well). There will also be a line indicating a NYCDOC contact and the project website address for stakeholders and members of the public to obtain more information.

*

**New York City Department of Correction
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Attachment C – Proposed Document Repository**

ON-LINE WEBSITE

<https://www.RikersIslandTitleVPermit.com> [BEING CONFIRMED]

The website listed above is currently the only public document repository proposed for this public outreach process because of the ongoing Coronavirus (COVID-19) public health situation, consistent with current DEC CP-29 guidance (*Guidance on Commissioner's Policy 29 During the COVID-19 Public Health Crisis*, dated April 24, 2020). The availability of any additional repositories (if any are established) will be noted on the Project website, listed above. *

ATTACHMENT 2



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To: Caitlyn Nichols, Division of Environmental Permits
New York State Department of Environmental Conservation

From: Henry Kearney, Kevin Edwards

Date: September 17, 2021

Re: Rikers Island Title V—Climate Leadership and Community Protection Act Greenhouse Gas Assessment

cc: Sheveta Sharma/AKRF

INTRODUCTION

In July of 2019, New York State enacted the Climate Leadership and Community Protection Act (CLCPA) establishing Statewide greenhouse gas (GHG) emission limits that represent a 40 percent reduction from 1990 levels by 2030, and a 85 percent reduction from 1990 level by 2050. Among other requirements to meet State's emission reduction goals, the CLCPA directs state agencies to determine if their decisions are consistent with the Statewide GHG emission limits established by the CLCPA in Environmental Conservation Law (ECL) Article 75. In the case of the NYSDEC, a CLCPA consistency determination is required for approval of new and significant modifications to state facility permits and Title V permits. Subsequently, a GHG assessment was requested by NYSDEC and performed for the Riker's Island Title V Renewal application, which is defined in more detail below.

METHODOLOGY

POLLUTANTS OF CONCERN

GHGs are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. The general warming of the Earth's atmosphere caused by this phenomenon is known as the "greenhouse effect." The United States Environmental Protection Agency (EPA) identifies seven types of GHGs that are relevant for GHG inventory purposes: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃), and sulfur hexafluoride (SF₆). There are no significant direct or indirect sources of HFCs, PFCs, NF₃, or SF₆ associated with the facility; therefore, the GHG assessment of the facility focuses on CO₂, N₂O, and methane.

To present a complete inventory of all GHGs, component emissions are added together and presented as CO₂e emissions—a unit representing the quantity of each GHG weighted by its effectiveness using CO₂ as

a reference. This is achieved by multiplying the quantity of each GHG emitted by a factor called global warming potential (GWP). GWPs account for the lifetime and the radiative forcing¹ of each chemical over a period of 20 years (e.g., CO₂ has a much shorter atmospheric lifetime than SF₆, and therefore has a much lower GWP). The GWPs for the main GHGs discussed here are presented in **Table 1**.

Table 1
Global Warming Potential (GWP) for Major GHGs

Greenhouse Gas	20-year Horizon GWP
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	84
Nitrous Oxide (N ₂ O)	264
Source: 6 NYCRR 496.5	

STATEWIDE GHG INVENTORY AND EMISSION LIMITS

As part of the adopted 6 NYCRR Part 496 in 2020, the New York State Energy Research and Development Authority (NYSERDA) developed the 1990 baseline GHG emissions for New York State consistent with the calculation requirements specified under the CLCPA. The statewide inventory was separated into four sectors across the statewide and included:

1. Energy Sector—This sector includes direct fuel combustion within the state (associated with building fuel usage, vehicle travel, and electricity generation), fugitive emissions within the state (associated with emission released during production and transportation of fuels), electricity transmission (associated with the leakage of GHGs during the manufacture, use, and disposal of equipment used in the transmission and distribution of electricity), fuels imported into the state (associated with emissions from out of state industrial production and transportation), and electricity imported into the state (associated with emissions from generation and transmission).
2. Industrial Processes and Product Use—This sector includes emissions from the manufacturing process or from a manufactured product and are separate from the combustion of fossil fuels by industries, which is accounted for in the Energy sector.
3. Agriculture Forestry and Other Land Use—This sector includes emission sources associated with land management relating to livestock, land use, and other aggregated sources.
4. Waste—This sector includes emissions associated with solid waste disposal, biological treatment of solid waste, waste combustion, and wastewater treatment.

The GHG inventory performed by NYSERDA determined a statewide 1990 annual baseline emission total of 409.78 million metric tons (MMT) of CO₂e. Subsequently, this established the statewide annual CO₂e emission limits for 2030 and 2050 as 245.87 MMT and 61.47 MMT, respectively.

FACILITY SOURCES

The proposed modifications to the Rikers Island Title V renewal would not involve any physical modifications to the existing installed equipment at the facility or the installation of additional equipment. Therefore, under the permit renewal the Rikers Island facility would continue to consist of:

- Eight (8) 96 MMBtu/hr boilers firing primarily natural gas or Number 2 Fuel Oil as backup fuel;

¹ *Radiative forcing* is a measure of the influence a gas has in altering the balance of incoming and outgoing energy in the Earth-atmosphere system and is an index of the importance of the gas as a GHG.

- Two (2) 7.5 megawatt (MW) natural gas-fired turbines;
- Nineteen (19) diesel-fired internal combustion engines which, under the previous Title V permit had the option to enroll in a peak load management (PLM); and
- One (1) spray booth.

Of the nineteen engines, five have not undergone stack testing to show compliance with the NO_x RACT requirements. Four of the fourteen engines would no longer be eligible to operate under the PLM program due to the potential for exceedances of the 1-hour average nitrogen dioxide (NO₂) National Ambient Air Quality Standards (NAAQS). Furthermore, to ensure compliance with the 1-hour NO₂ NAAQS, the remaining engines would be operated at lower peak capacities. While the Title V Permit does not revise the NO_x emission cap associated with the PLM engines, this would lower the peak generating capacity of the engines when used in a PLM program from 13,925 kilowatts (kW) to 5,223 (kW) under the proposed Title V Permit modifications—a reduction of approximately 62 percent.

Under the PLM Program, on-site electrical generation is performed to reduce the peak demand on the electric grid during periods where demand is expected to exceed generation capacity of the electrical grid. The frequency and duration of peak demand events is not dependent on the facility's generation capacity; therefore, the number of hours that the engines would be required to operate under the PLM Program is not anticipated to increase and GHG emissions would likely decrease by a similar amount as the facility's peak generation capacity. This reduction is also anticipated for co-pollutants and would have direct benefits associated with short-term air quality conditions within close proximity to the facility. However, estimates of the facility's GHG emissions assume that annual generation would remain unchanged, since the annual limit on NO_x emissions to 22.5 tons per year (tpy) would remain unchanged under the proposed Title V permit modifications.

The operation of the facility's dual-fuel boilers and natural gas turbines would be unchanged from current operations. In order to accurately reflect the operation of these pieces of equipment, the renewed Title V Permit would revise the annual limit on NO_x emissions for the natural gas turbines to 52 tpy (from the 42 tpy under the current Title V Permit) and would remove the limit on NO_x emissions for the dual-fuel boilers.

The facility's electricity consumption would not be affected by the renewed Title V Permit; therefore the facility emissions did not include estimates of emissions associated with in-state fossil-fuel fired electrical generation sources (including upstream emissions), in-state electricity transmission, and imported electricity.

FACILITY EMISSIONS

GHG emissions from the above combustion sources were calculated based on annual fuel consumption records from 2017 through 2019 by equipment and fuel type. The quantity of fuel was then multiplied by emission factors of 54.55 grams kilograms CO_{2e} per standard cubic feet of natural gas and 10.27 kilograms CO_{2e} per gallon of diesel fuel (Distillate Fuel Oil No. 2) taken from EPA Emission Factors for Greenhouse Gas Inventories for stationary combustion.² These emissions would correlate to direct fuel combustion under the Energy Sector of the 1990 baseline GHG Inventory.

Additionally, upstream emissions were projected for the annual fuel consumed on site. Upstream emission factors for natural gas and diesel fuel have been specified by NYSDEC for upstream and out-of-state emission.³ Fuel deliveries may originate from either in-state or out-of-state sources; therefore, portions of the facility's upstream emissions would correlate to the Industrial Processes and Product Use Sector as fuel production emissions. The remaining portion would correlate to the Energy Sector as either direct fuel

² EPA. *Emission Factors for Greenhouse Gas Inventories*. 26 March 2020.

³ NYSDEC. *Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents*. February, 2021

combustion associated with in-state vehicle travel, fugitive emissions occurring within the state, as well out-of-state emissions associated with the production and transport of imported fuel.

As discussed above, the statewide GHG emission limits are referenced to the 1990 baseline emissions. Consequently, the Rikers Island facility's emissions from 1990 were estimated to compare with the facility emissions with the proposed modifications to the Title V permit. In 1990, the boiler plant at the Rikers Island facility operated using Residual Fuel Oil No. 6 and Distillate Fuel Oil No. 2. The plant has since undergone improvements to eliminate the usage of Residual Fuel Oil No. 6 and to primarily use natural gas, a lower carbon fuel, for the operation of the boilers. Furthermore, the Rikers Island facility has undergone energy efficiency improvements through the installation of the cogeneration plant to provide most of the heating and power needs for Rikers Island, and has consolidated building space served by the boiler plant, resulting in significantly reduced boiler operations. In order to compare the facility's emissions to the 1990 baseline, historic fuel purchasing records for fiscal year 1991 were used to estimate 1990 emissions—approximately 12.8 million gallons of Residual Fuel Oil No. 6 and 1.7 million gallons of Distillate Fuel Oil No. 2.

Similar to the projected GHG emissions under the renewed Title V Permit, the quantity of fuel was then multiplied by emission factor of 11.33 kilograms CO₂e per gallon of Residual Fuel Oil No. 6 taken from EPA Emission Factors for Greenhouse Gas Inventories for stationary combustion.⁴

GREENHOUSE GAS EMISSIONS

The fuel consumption, usage, emission factors, and resulting GHG emissions for the combustion sources under the proposed modifications to the Title V Permit for the Rikers Island facility are presented in **Table 2**.

Table 2
Current Facility Annual GHG Emissions from Fuel Consumption

Type	Annual Usage	Category	Emission Factors			Emissions (metric tons CO ₂ e/year)
			CO ₂	CH ₄	N ₂ O	
Natural Gas	1,427,122,593 scf	Direct ⁽¹⁾	53,060 g/MMBtu	1.00 g/MMBtu	0.10 g/MMBtu	77.854
		Upstream ⁽²⁾	11,913 g/MMBtu	384 g/MMBtu	0.136 g/MMBtu	64,348
Natural Gas Total						142,201
Distillate Fuel Oil No. 2	337,302 gallons	Direct ⁽¹⁾	73,960 g/MMBtu	3.00 g/MMBtu	0.60 g/MMBtu	3,463
		Upstream ⁽²⁾	15,164 g/MMBtu	121 g/MMBtu	0.258 g/MMBtu	1,199
Distillate Fuel Total						4,662
Facility Total						146,863
Notes:						
scf—standard cubic feet						
g—grams						
kg—kilograms						
MWh—megawatt-hour						
MMBtu—million British thermal units						
(1) Direct emission factors for natural gas and diesel fuel (Distillate Fuel Oil No. 2) consumption taken from EPA Emission Factors for Greenhouse Gas Inventories for stationary combustion (https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf).						
(2) Upstream emission factors for natural gas and diesel fuel specified by NYSDEC, <i>Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents</i> , February, 2021.						

As discussed above, the facility would limit the total generation capacity from the diesel-fired internal combustion engines (including restricting four of the engines from operation) within the PLM Program

⁴ EPA. *Emission Factors for Greenhouse Gas Inventories*. 26 March 2020.

under the renewed Title V Permit. Therefore, emissions associated with operation of the PLM engines are anticipated to be reduced up to 62 percent. However, this would represent only a small portion of overall emissions at the facility.

The facility's electricity consumption would not be affected by the proposed modifications to the Title V Permit; therefore, the facility emissions did not include estimates of emissions the facility's electrical consumption. Electrical demand at the facility is offset by the operation of the cogeneration system as well as the PLM engines during peak load events. This would minimize demand on the region's electrical power grid and allow for increased reliability across the power grid.

Furthermore, both New York City and New York State have enacted policies to achieve an electric grid that is powered by 100 percent renewable sources. Therefore, emissions associated with the facility's electrical consumption would decrease over time as this goal is achieved.

Estimates of the facility's GHG emissions associated with fuel consumption in 1990 are presented in **Table 3**. When compared to the 1990 baseline, the energy efficiency measures that have already been implemented at the Rikers Island facility represent a 30 percent reduction in GHG emissions associated with the permitted combustion sources. Consistent with the GHG estimates of the current facility, the facility emissions did not include estimates of emissions associated the consumption of electricity. However, emissions would likely demonstrate similar or greater reductions in emissions due to reduced energy consumption associated with the previous consolidation of building space and the improvements to the New York City electrical generation mix.

Table 3
Estimated Facility 1990 Annual GHG Emissions from Fuel Consumption

Type	Annual Usage	Category	Emission Factors			Emissions (metric tons CO ₂ e/year)
			CO ₂	CH ₄	N ₂ O	
Residual Fuel Oil No. 6	12,828,939 gallons	Direct ⁽¹⁾	75,100 g/MMBtu	3.00 g/MMBtu	0.60 g/MMBtu	145,372
		Upstream ⁽²⁾	11,799 g/MMBtu	111 g/MMBtu	0.194 g/MMBtu	40,746
Residual Fuel Total						186,118
Distillate Fuel Oil No. 2	1,718,197 gallons	Direct ⁽¹⁾	73,960 g/MMBtu	3.00 g/MMBtu	0.60 g/MMBtu	17,639
		Upstream ⁽²⁾	15,164 g/MMBtu	121 g/MMBtu	0.258 g/MMBtu	6,109
Distillate Fuel Total						23,747
1990 Facility Total						209,866
Notes:						
scf—standard cubic feet						
g—grams						
kg—kilograms						
MWh—megawatt-hour						
MMBtu—million British thermal units						
(1) Direct emission factors for Residual Fuel Oil No. 6 and Distillate Fuel Oil No. 2 consumption taken from EPA Emission Factors for Greenhouse Gas Inventories for stationary combustion (https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf).						
(2) Upstream emission factors for residual fuel and diesel/distillate fuel specified by NYSDEC, <i>Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents</i> , February, 2021.						

CONCLUSIONS

As discussed above, the combustion sources at the Rikers Island facility included in the renewed Title V Permit are estimated to emit approximately 147 thousand metric tons of CO₂e per year. Compared to the 1990 baseline, the energy efficiency measures already implemented at the Rikers Island facility have resulted in a 30 percent reduction of GHG emissions. However, this estimate does not include emissions associated with electrical consumption across the Rikers Island facility and would likely demonstrate

similar reductions in emissions due to reduced energy consumption associated with consolidate of building space and the improvements to the New York City electrical generation mix. Furthermore, future emissions associate with the facility's electrical consumption would continue to be reduced as the percentage of renewable energy sources within the electrical grid are increased.

Therefore, the GHG emissions associated with the facility under the renewed Title V Permit are consistent with the emission reduction goals of the CLCPA and would not interfere with achieving the Statewide GHG emission limits of the CLCPA.

Facility Emissions

Equipment	Fuel Consumption		Direct Emissions			Total	
	Residual Fuel Oil (1000 gal)	Distillate Fuel Oil (1000 gal)	NG (MMBSCF)	Residual Fuel Oil (metric ton)	Distillate Fuel Oil (metric ton)		NG (metric ton)
Boilers	-	305.35	748.33	-	3,134.59	40,823.59	43,958.18
PLM Engines	-	31.95	-	-	328.01	-	328.01
Turbines	-	-	678.79	-	-	37,030.12	37,030.12
Total	-	337.30	1,427.12	-	3,462.59	77,853.70	81,316.30
1990 Boilers	12,828.94	1,718.20	-	145,371.89	17,638.25	-	163,010.15

Reduced PLM	
Total	43,958.18
	123.02
	37,030.12
	81,316.30

-50.1%

-73.0%

Upstream Emissions		
Residual Fuel Oil (metric ton)	Distillate Fuel Oil (metric ton)	NG (metric ton)
-	1,085.66	33,741.45
-	113.60	-
-	-	30,606.08
-	1,199.26	64,347.53
40,746.41	6,108.97	-
		46,855.38

39.9%

-25.7%

Total	
	34,827.11
	42.61
	30,606.08
	65,546.80

Total Emissions		
Residual Fuel Oil (metric ton)	Distillate Fuel Oil (metric ton)	NG (metric ton)
-	4,220.25	74,565.04
-	441.61	-
-	-	67,636.20
-	4,661.86	142,201.24
186,118.30	23,747.23	-
		209,865.53

-30.0%

-62.5%

Total	
	78,785.29
	165.63
	67,636.20
	146,587.12

0.0%

-62.5%

0.0%

-0.2%

**NYC-DOC-Rikers Island
Existing Emission Calculations**

Engines participating in PLM No Action Condition

Source	Capacity (kW)	Future Conditions Maximum Allowed under Permit Modification (kW)
00010	1,100	715
00011	1,100	638
00012	625	468.75
00013	900	540
00014	800	200
00015	800	200
00016	900	0
00017	900	0
00018	1,100	0
00019	1,100	0
00020	1,150	615.25
00021	-	-
00022	1,150	615.25
00023	-	-
00024	1,150	615.25
00025	1,150	615.25
00026	-	-
00027	-	-
00028	-	-
Total	13,925	5,223

NOx RACT not performed
NOx RACT not performed
NOx RACT not performed
NOx RACT not performed
NOx RACT not performed

-62%

Pollutant	Emission Factor	Units	No Action Emissions (lbs/hr)	With Modifications (lbs/hr)
CO2	73.96	kg/MMBtu	24,998	9,376
CH4	0.003000	kg/MMBtu	1.01	0.38
N2O	0.000600	kg/MMBtu	0.20	0.08
CO2e			25,137	9,428

-62%

GWPs:

CO2	1
CH4	84
N2O	264

NYC-DOC-Rikers Island

BOILERS

Year	Emission Unit U-00001		Emission Unit U-00002		Emission Unit U-00003		Boiler Total Fuel Consumption	
	Fuel Oil (1000 gal)	NG (MMSCF)	Fuel Oil (1000 gal)	NG (MMSCF)	Fuel Oil (1000 gal)	NG (MMSCF)	Fuel Oil (1000 gal)	NG (MMSCF)
2017	181.81	670.52	87.4	61.37	36.14	16.44	305.35	748.33
2018	98.17	224.51	110.44	164.29	64.73	137.64	273.34	526.45
2019	106.41	187.16	89.22	143.15	51.32	91.98	246.94	422.29
Max (2017-2019)	181.81	670.52	110.44	164.29	64.73	137.64	305.35	748.33

Combustion Turbines- Natural Gas

Year	Emission Unit U-00011	
	Turbine NG (MMSCF)	Ductburners NG (MMSCF)
2017	46.967	7.939
2018	571.37	37.06
2019	586.64	92.16
Max (2017-2019)	586.64	92.16

Turbine Fuel Consumption
NG (MMSCF)
54.906
608.44
678.79
678.79

PLM Engines

Year	Fuel Oil (1000 gal)
2017	8.232
2018	31.952
2019	9.521
Max (2017-2019)	31.95

PLM Total Fuel Consumption
Fuel Oil (1000 gal)
8.232
31.952
9.521
31.95

NYC-DOC-Rikers Island

BOILERS

		Boiler Total Fuel Consumption	
	Year	#6 Fuel Oil (1000 gal)	#2 Fuel Oil (1000 gal)
	1991	12,829	1,718

EPA Emission factors--(Federal Register EPA, March 26, 2020)

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

	Natural Gas
CH4	1.00 g/MMBtu
N2O	0.10 g/MMBtu
CO2	53,060 g/MMBtu
CH4	0.00103 g/scf
N2O	0.00010 g/scf
CO2	54.44 g/scf

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

Natural Gas Heating Value	1,020 btu/scf
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CO2e	5.317E-02 metric ton/MMBtu
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CO2e	5.455E-05 metric ton/scf
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54.55

NYSDEC Upstream Emission Factor

Table 1. Current Upstream and Out-of-State Emission Factors for Imported Fossil Fuels

	Natural Gas as Stationary Fuels
CH4	384.000 g/MMBtu
N2O	0.136 g/MMBtu
CO2	11,913 g/MMBtu

	Natural Gas as Stationary Fuels
CH4	0.0004 metric ton/MMBtu
N2O	0.0000 metric ton/MMBtu
CO2	0.0119 metric ton/MMBtu
CO2e	0.0442 metric ton/MMBtu
	45.0890 metric ton/MMscf

NYSDEC, Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents, February, 2021

EPA Emission factors--(Federal Register EPA, March 26, 2020)

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

Distillate Fuel Oil 2	
CH4	3.00 g/MMBtu
N2O	0.60 g/MMBtu
CO2	73,960 g/MMBtu
CH4	0.41000 g/gal
N2O	0.08000 g/gal
CO2	10,210.00 g/gal

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

No 2 Fuel Oil HHV
140,000 btu/gal

CO2e	7.437E-02	metric ton/MMBtu
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10.27

CO2e	1.027E-02	metric ton/gal
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NYSDEC Upstate Emission Factor

Table 1. Current Upstream and Out-of-State Emission Factors for Imported Fossil Fuels

Conv. Diesel	
CH4	0.0001 metric ton/MMBtu
N2O	0.0000 metric ton/MMBtu
CO2	0.0152 metric ton/MMBtu
CO2e	0.0254 metric ton/MMBtu
	3.5555 metric ton/1,000 gal

NYSDEC, Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents, February, 2021

EPA Emission factors--(Federal Register EPA, March 26, 2020)

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

Distillate Fuel Oil 2	
CH4	3.00 g/MMBtu
N2O	0.60 g/MMBtu
CO2	75,100 g/MMBtu
CH4	0.45000 g/gal
N2O	0.09000 g/gal
CO2	11,270.00 g/gal

<https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf>

No 6 Fuel Oil HHV
150,000 btu/gal

CO2e	7.551E-02	metric ton/MMBtu
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11.33

CO2e	1.133E-02	metric ton/gal
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NYSDEC Upstate Emission Factor

Table 1. Current Upstream and Out-of-State Emission Factors for Imported Fossil Fuels

Resid. Diesel	
CH4	0.0001 metric ton/MMBtu
N2O	0.0000 metric ton/MMBtu
CO2	0.0118 metric ton/MMBtu
CO2e	0.0212 metric ton/MMBtu
	3.1761 metric ton/1,000 gal

NYSDEC, Preliminary Interim Draft Emission Factors for Use by State Agencies and Project Proponents, February, 2021

CH4	GWP
N2O	84
CO2	264
	1

6 NYCRR 496.5