



## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW

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October 17, 2018

Captain William Sheehan  
Hackensack Riverkeeper  
231 Main Street  
Hackensack, New Jersey 07601

Re: North Bergen Liberty Generating Station

Dear Messrs. Sheehan, Smith and Dolsky and Mses. Langa and Rogovin,

The Department of Environmental Protection (NJDEP) is writing in response to your August 24, 2018 email to Ruth Foster. Thank you for sharing your additional concerns regarding the North Bergen Liberty Generating Station. As discussed at the meeting held on August 17, 2018, the NJDEP's authority is limited to existing statutes and regulations. NJDEP understands that additional applications related to this project are forthcoming, thus, responses provided herein are based on preliminary information provided by the applicant and therefore may change as more information is provided. In addition, NJDEP is preparing to facilitate a public information session that will provide an opportunity for open discussion before the formal comment process and prior to any public hearings regarding permit applications. Nevertheless, please be assured that Commissioner McCabe and the NJDEP's priorities with all projects within its authority have been, and will remain, to protect the environment, follow the law and sound science, and be transparent with the public.

NJDEP understands your concerns regarding ozone, please know that all air permits must comply with all applicable State and Federal requirements. In this case, the permit in question will have to include short-term and long-term emission limits for all applicable pollutants. Depending on the pollutant, compliance with emission limits will be monitored through continuous emissions monitoring systems, stack testing, or direct measurements of operating parameters. The permit application is reviewed for applicability of and compliance with lowest achievable emission rate (LAER), best available control technology (BACT), and New Jersey's State of the Art (SOTA) requirements.

- LAER is applicable for pollutants when the ambient air quality standard has not yet been met (ozone precursors - VOC and NOx) and the source exceeds major source thresholds. LAER is the lowest emission rate achievable without any cost limitations.

- BACT applies to pollutants when the ambient air quality standard has been met and source exceeds major source thresholds. BACT emission rate is emission rate that has been achieved in practice for a similar source and cost may be considered.
- SOTA is applicable for sources that will not exceed any major source thresholds. Similar to BACT, the source is required to implement technology and emission rates that have been achieved in practice for a similar source and cost may be considered.

The applicant is also required to submit air quality modeling to show that the proposed sources comply with all applicable State and Federal air quality standards, including but not limited to VOC and NOx as ozone precursors. In addition to LAER, BACT, SOTA, and air quality modeling, the permit application also will require emissions offset requirements pursuant N.J.A.C. 7:27-18 for a new facility in an ozone nonattainment area. The emissions offsets are either from facilities that have been shut down (discounted) or have installed control equipment not required by rule or enforcement action.

Moreover, although, NJDEP cannot guarantee that a new facility will lead to the shutdown of old dirty units as such matter is driven by the market, based on economics, the assertion that the new facility will lead to the shutdown of existing, dirtier facilities in NYC that impact air quality in NJ is supported by data from the U.S. Energy Information Administration (EIA). EIA data demonstrates that electricity generation in NJ from fossil fuel units has increased 40% (calculated from "Net generation" at <https://www.eia.gov/electricity/data/browser/>) since 2001, while NOx emissions have decreased by 70% (calculated from "1.3 Net generation by state by sector" for fossil fuel only at <https://www.eia.gov/electricity/data/browser/>). This reduction in emissions has occurred because new, cleaner generation has replaced older, dirtier units.

Your email(s) posed several questions regarding NJDEP's regulatory authority. NJDEP's associated responses are provided below:

Question #1:

We all agreed it was important to obtain public input prior to the final decision on the air quality permit. We asked for at least two sessions in the Hudson/Bergen area at times convenient for working people. We also mentioned that some sections of the North Bergen and nearby communities are heavily Hispanic and we need to accommodate Spanish-speaking people at these hearings. We also discussed the need to ensure input from Environmental Justice communities, which may require additional sessions. Please let us know if this is the NJDEP's plan and how much advance notice we will receive on the logistics for these sessions.

NJDEP Response:

A final decision has not been made regarding the air permit application. As of October 17, 2018, the application is still under technical review. NJDEP will provide a public comment period as required by State and Federal rules and regulations. The draft permit with all appropriate State and Federal requirements will be shared in advance of any public hearing. Because of the significant interest for this permit application, NJDEP will schedule a public hearing, which will

be held in or near North Bergen, depending on the availability of a suitable venue. Public hearings for air permits are usually scheduled during the evening, which is more convenient for most people. In past public meetings, NJDEP has made efforts to have Spanish speaking personnel at public meetings to translate. In addition, testimony can be accepted in multiple languages for public hearings based on our new stenographer contract.

The Office of Environmental Justice will be consulted during the planning and scheduling of any public hearings for this project.

In addition to the regulatory requirement to hold a public hearing, the NJDEP is committed to schedule an informal public information session that will provide an opportunity for open discussion before the formal comment process and prior to any public hearings regarding permit applications.

Question #2:

We were told that there are six air pollutants that cannot be exceeded. Please tell us, which these are, and the current level of each in the area relevant to this proposed power plant and the limit that cannot be exceeded.

NJDEP Response:

The Federal Clean Air Act requires the USEPA to set National Ambient Air Quality Standards (NAAQS) for six common air pollutants (also known as "criteria air pollutants"). For more information on criteria pollutants, please go to <https://www.epa.gov/criteria-air-pollutants>. The criteria air pollutants are: ground-level ozone (O<sub>3</sub>), particulate matter (PM<sub>2.5</sub>), carbon monoxide (CO), lead (Pb), sulfur dioxide (SO<sub>2</sub>), and nitrogen dioxide (NO<sub>2</sub>). NJ is attaining all of them except O<sub>3</sub>. The Table below lists all of the criteria pollutants, the primary level of the standards, the averaging time, the 2017 monitored levels, and the monitor location.

Pollutant	Level	Averaging Time	2017 Level	Monitor Location
O <sub>3</sub>	70 ppb	8-hour	0.07 ppb	Bayonne
PM <sub>2.5</sub>	35 µg/m <sup>3</sup>	24-hour	21 µg/m <sup>3</sup>	Jersey City (FH)
	12 µg/m <sup>3</sup>	Annual	8.4 µg/m <sup>3</sup>	Jersey City (FH)
CO	9 ppm	8-hour	1.1 ppm	Jersey City
	35 ppm	1-hour	1.7 ppm	Jersey City
Pb	0.15 µg/m <sup>3</sup>	3-month	0 µg/m <sup>3</sup>	Newark
SO <sub>2</sub>	75 ppb	1-hour	4 ppb	Jersey City
NO <sub>2</sub>	53 ppb	Annual	20 ppb	Jersey City
	100 ppb	1-hour	52 ppb	Jersey City

Question #3:

Please tell us the expected volume of each pollutant from this plant including the precursors to ozone and the expected increase in the volume of ozone.

NJDEP Response:

The permit application lists the potential-to-emit (PTE) for the following pollutants:

<b>Pollutant</b>	<b>Total Emissions (tons/yr)</b>
CO	423.3
NOx (Total)	305.3
Pb	0.038
PM10 (Total)	190.8
PM2.5 (Total)	185.6
SO2	52.4
TSP	99.7
VOC (Total)	79.6
Ammonia	262.7
Butadiene (1,3-)	0.056
Acrolein	0.186
Arsenic	0.03
Benzene	0.499
Cadmium	0.014
Formaldehyde	8.971
Manganese	2.128
Mercury	0.003
Polycyclic organic matter	0.172
Selenium	0.067
Toluene	3.786

Ozone is not a pollutant that is emitted directly from the source. Instead, it is formed downwind of the source from the complex chemical reaction of VOC and NOx in the presence of sunlight. For more information about ground-level ozone, please go to <https://www.epa.gov/ozone-pollution>.

While the permit application does not specify a limit on Greenhouse Gases (GHGs), the GHGs emissions information is in technical supporting documents (TSDs) that were submitted with the permit application. Please see response to #10 below for more information about GHGs.

Question #4:

We understood that if there was a feasibility study showing that renewable energy sources could be used to produce an equivalent amount of energy using the same site (plus others in

the same region) this would impact the decision to provide further permits. Is there a DEP guide to provide further details on how this would work? Would information on future energy demands and expected increased efficiency be taken into account by the DEP in any of its decisions?

NJDEP Response:

For this project, the facility is required to submit an alternatives analysis pursuant to N.J.A.C. 7:27-18.3(c)2, which includes consideration of "alternative sites within New Jersey, and of alternative sizes, production processes, including pollution prevention measures, and environmental control techniques, demonstrating that the benefits of the newly constructed, reconstructed, or modified equipment significantly outweigh the environmental and social costs imposed as a result of the location, construction, reconstruction or modification and operation of such equipment." The facility submitted this analysis with the permit application along with a supplement to address battery storage. NJDEP will evaluate the alternatives analysis as part of permit application review. It is important to note that the Federal Prevention of Significant Deterioration (PSD) review requires the alternative site analysis, but it does not give authority to require a different method of generation.

Question #5:

We are very concerned about the accuracy of the web site showing the air quality permit had been withdrawn given the fact that it is active. Would it be possible to have another avenue of communication on these items to ensure timely information?

NJDEP Response:

On the NJDEP website (<https://nj.gov/dep/>), there is a link to Data Miner on the left-hand side ribbon (<https://www13.state.nj.us/DataMiner>). The air permit information is available by clicking on "Search By Category" and selecting "Air Quality Permitting and Reporting." There are two options to find the air permitting information for North Bergen Liberty Generating Station:

- Click on "Air Permit Actions by Facility Name." Enter "North Bergen Liberty" and the information on the pending permit application appears; or
- Click on "Title V Permit Report." Enter "13558" as the Program Interest (PI) and the information on the pending permit application appears.

Contact information for NJDEP is available on the web at <https://www.nj.gov/cgi-bin/dep/contactdep.pl>. Air permitting contact information is available at <https://www.state.nj.us/dep/aqpp/contact.html>. All public notices for air permitting are posted at <https://www.state.nj.us/dep/aqpp/publicnotices.htm>.

In addition, please feel free to contact David Pepe, of Permit Coordination with any questions regarding this project

Question # 6:

We asked if Diamond Generating has ownership of the property. Can you please provide documentation on this information?

NJDEP Response:

Neither Diamond Generating, or the applicant, North Bergen, LLC, have ownership of any parcels that would comprise the proposed station. However, pursuant to N.J.A.C. 7:13-18.2, by signing the "Property owner's certification" section in the application form, the property owners "grants permission for the conduct of the proposed activity." According to the application form submitted to the Division of Land Use Regulation, Millennium Resource Recovery, Ltd., Incorporated Society of Saint Maria Del Buoncammino, U.S.A, and the Township of North Bergen own the parcels that comprise the "site."

Question #7:

We asked about opportunities for public input on permits (in addition to those we discussed for the air quality permit). Please provide a list of these additional permits and objectives for obtaining public input on them.

NJDEP Response:

The project as proposed will require additional permits for construction dewatering and industrial stormwater discharges. NJDEP has not yet received these applications, and therefore cannot confirm which specific permits North Bergen LLC will require. However, one or more of these permits will likely have an associated opportunity for public comment. Further, if temporary dewatering will occur that exceeds a certain withdrawal threshold, then a public hearing will likely occur.

While a NJPDES application has not been submitted, is it NJDEP's understanding that the facility intends to utilize treated effluent from a nearby publicly-owned treatment works (POTW) and will return that water after use in its processes to that same POTW. This would not require a NJPDES permit. If this is not the case, and an intake and/or a discharge to surface water will occur, then a NJPDES permit will be issued, which requires a public comment process. A public hearing process may be triggered if there is sufficient public interest.

Please note that NJDEP is researching methods to keep the public informed beyond those that are already in place. Specifically, we are exploring email notification for interested parties at certain milestones (e.g., application receipt, setting of a hearing date and location) recorded in our internal tracking database. In the meantime, please continue to consult the NJDEP Bulletin (<https://www.nj.gov/dep/bulletin/index.html>) for more information)

and Dataminer (<https://www13.state.nj.us/DataMiner>) to check the status of permit applications.

Question #8:

We discussed the process and rules for the applicant to purchase credits to offset ozone that would be produced from its emissions. Can you please provide us with documentation on this process, rules and requirements as well as specific information on the source of the credits and the assurances it must provide as to the validity of these credits?

NJDEP Response:

The unofficial copies of all NJDEP Air Rules are available at <https://www.nj.gov/dep/agm/rules27.html>. Subchapter 18 is the Emissions Offset Rules.

In addition to the rules, NJDEP has developed guidance for offsets (<https://www.state.nj.us/dep/aqpp/permitguide.html>):

- Banking and Securing Air Emission Credits – NJDEP Guidance Document
- N.J.A.C. 7:27-18 Netting Analysis
- N.J.A.C. 7:27-18 Netting Analysis Form
- N.J.A.C. 7:27-18 Procedures for OP modifications

NJDEP also has a webpage for banked emission credits, <https://www.state.nj.us/dep/aqpp/bec.html>. Between these and the other guidance and forms, the emission credits used are well documented and verified.

Question # 9:

We would also like to raise two issues that were not discussed:

The first is the impact of the expected emissions on waterways and water quality. Air emissions eventually come down to earth in precipitation and this water eventually finds its way into sewers, streams and rivers and the ocean. We request that this impact on water be included in your model of the impact on air quality. This should take into account not only the impact on local rivers like the Hackensack and the Passaic but include the Hudson as well as the impact of tidal flows which can move pollution throughout the port of NY/NJ and down to the Raritan. We understand there is a federal rule that prohibits increased water pollution without offsets and these offsets should be included in the costs of building this plant. (Of course, we would be thrilled to hear you say that these impacts cannot be mitigated and will prevent issuance of the air quality permit). Please let us know if you are going to include this in your permitting and regulating process and, if not, why not.

NJDEP Response:

At this time, NJDEP does not model potential impact of air deposition to nearby waterbodies. There are existing water quality models in the NY/NJ harbor that take into account the air deposition contributions in kg/day, however, deposition rates are based on actual data, not air models. None of the water quality models include forecasted deposition.

These water quality models include the three-dimensional eutrophication model (System Wide Eutrophication Model commonly known as SWEM) for water circulation, phytoplankton dynamics, nutrient cycles and oxygen demand; pathogen model for bacteria (E.Coli, Enterococci, Fecal coliform) and toxics (Contaminant Assessment Reduction Program model commonly known as CARP). The reports related to these models can be found in the NY/NJ Harbor & Estuary Program (<http://www.harborestuary.org/reports.htm>, <http://www.hudsonriver.org/?x=carp> ). All of these models include the tidal portions of Hackensack River, Raritan River, Passaic River, Hudson River, Long Island Sound and the NJ/NY bight. Example air deposition rates for eutrophication model are reported in the following link:

[http://www.harborestuary.org/reports/nutrient/All Tables Eng%20Jan%202008.pdf](http://www.harborestuary.org/reports/nutrient/All%20Tables%20Eng%20Jan%202008.pdf) .

Furthermore, the Long-term control plan (LTCP) development process as part of NJ's Combined Sewer Outfall permit requirement includes the updating of the existing pathogen model by improving the model resolution, calibrating the hydrodynamics (water circulation) and water quality. The toxics model, CARP will also be validated as part of CARP II project ([https://www.state.nj.us/transportation/refdata/research/pdf/ResearchProcureRFPs/2016/RFP\\_2016-10.pdf](https://www.state.nj.us/transportation/refdata/research/pdf/ResearchProcureRFPs/2016/RFP_2016-10.pdf) ).

Currently sampling is underway for this project. Additionally, EPA Region II, NYCDEP and Long Island Sound estuary program are working on updating the eutrophication model to address low dissolved oxygen in Long Island Sound. The NY bight and NY/NJ shared waters and tidal portions of NJ's tributaries to the NJ/NY bight are also being considered for inclusion in the model domain.

#### Question # 10:

The second is the fact that NJ has authority to regulate GHG's under Title 5. This power plant is expected to emit over two million metric tons of CO<sub>2</sub> and about 1,000 metric tons of methane annually. Both are significant greenhouse gases with methane being 86 times more potent than CO<sub>2</sub> over a twenty-year period. We understand that the DEP is not going to utilize its authority to regulate these emissions. Why is the DEP not going to use this authority and what would be required to change this policy?

#### NJDEP Response:

Facilities are required to obtain a Title V operating permit if the facility has the potential to emit any air contaminant in amounts that are equal to or greater than those listed in N.J.A.C. 7:27-22.2 (Operating Permits Rules). As part of the permit review, NJDEP will also be evaluating this Title V permit application pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD), for GHGs, including CO<sub>2</sub> and methane. Under PSD, the facility will be subject to Best Available Control Technology Requirements for GHG. Additionally, the facility will be subject to the New Source Performance Standards for GHGs at 40 CFR 60 Subpart TTTT. Although CO<sub>2</sub> and methane may not have been included in the PTE list of the permit application, the analysis for GHGs was submitted with the application as part of the TSDs, which estimated the annual PTE for CO<sub>2</sub> at 3.5 million metric tons and for methane at 73



metric tons. NJDEP will evaluate the application as submitted and approve or deny the application based on its compliance with all applicable State or Federal air pollution control rules and regulations.

Question #11 (additional question emailed by Ken Dolsky to Frank Steitz on August 28, 2018):

The third [additional issue] is the impact of this project on the NJ Global Warming Response Act, which requires establishment of a greenhouse gas emission reduction program to reduce GHG emissions by the year 2020 to the 1990 level (or below) and to 80% below the 2006 level by 2050. How do the expected emissions from the Liberty Generating Station in North Bergen impact this plan? In particular we would like to know:

- What is the most likely level of GHG expected in 2020 (or the year in which this plant is expected to become operational) without this plant?

NJDEP Response:

USEPA projected New Jersey's GHG emission to be 127 million short tons from all sources by 2020.

- What is the most likely level of GHG expected in 2020 (or the year in which this plant is expected to become operational) if this plant is in operation?

NJDEP Response:

Bergen Liberty's proposed emissions are dependent on how often it is dispatched. Dispatch is dependent on load demand and the electric generating unit's ability to compete for that demand in the wholesale electric market. Additionally, the net contribution of the emission from a specific electric generating unit is dependent on the generation it displaces. For example, assuming a constant load demand, if Bergen Liberty was to displace a higher emitting unit located in NJ, the net result would be a reduction in GHG emission.

That being said, if Bergen Liberty is dispatched by New York Independent System Operator (NYISO) as has been reported, its NJ based generation would be competing for demand in NY and its emission would be additional and counted in NJ's inventory. However, regionally a reduction could still be realized.

- How does this plant affect the specific recommendations for actions necessary to meet the 2020 and 2050 targets?

NJDEP Response:

As stated in the previous answer, the emissions of the proposed Bergen Liberty Plant and its impact on New Jersey's net GHG emissions is uncertain. If the proposed Bergen Liberty plant is dispatched to New York by NYISO, its emission would likely work against the GWRA

2020 and 2050 New Jersey GHG reduction goals. However, the impact on regional emissions could result in a net emission reduction dependent of what generating source(s) Bergen Liberty displaces.

- If this plant makes it more difficult for NJ to meet its objectives and/or causes more draconian impacts on other sources of emissions in order to meet these targets, is this sufficient ground for refusing permits for this station? If not, why not?

NJDEP Response:

All permit actions, approvals, and denials must be based on underlying regulatory authority. If North Bergen Liberty meets all the air regulatory requirements, the NJDEP does not have the authority to deny the air permit.

Please feel free to contact David Pepe of the NJDEP's Office of Permit Coordination and Environmental Review if you have additional questions regarding this project.

Sincerely,



Ruth W. Foster, Acting Director  
Office of Permit Coordination & Environmental Review

CC: Matthew Smith, Food and Water Watch  
Ken Dolsky, Coalition Against Pilgrim Pipeline  
Paula Rogovin, Coalition to Ban Unsafe Oil Trains  
Jan Barry, NJ Highway Coalition  
Michele Langa, Hackensack Riverkeeper