

From: glen@miller-engineer.com
To: [Senn, Nate](#)
Cc: [SCO; "Matthew J Capone"; Dave.Buff@WSP.com](#)
Subject: NHPC Okeelanta Cogen Facility - Amendment request AM23-286 - Response to RAI letter dated August 18 2023
Date: Thursday, September 28, 2023 10:39:26 AM
Attachments: [PA04-46 Boiler D Amendment RAI response-092823-final-ss.pdf](#)

EXTERNAL MESSAGE

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Mr. Senn – Please find attached the response to your RAI letter dated 8/18/23. All of the RAI comments pertained to my area so I prepared the RAI response. The self-certification (item 1) has been submitted via the DEP business portal. Feel free to email or call me directly if you have any questions.

Glen A Miller, PE
Miller Engineering
(561) 389-7037

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MILLER ENGINEERING
ENGINEERING & CONSTRUCTION SERVICES

September 28, 2023

Mr. Nate Senn
Program Administrator
Siting Coordination Office
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Licensee: New Hope Power Company
Power Plant: Okeelanta Cogeneration Facility

Siting Certification: PA 04-46

RE: NHPC Okeelanta Cogeneration Facility (PA04-46) Amendment Request (AM23-286)
Package Boiler
Subject: Response to Request for Additional Information letter dated August 18, 2023 (RAI)

Dear Mr. Senn:

This letter and attachments are submitted on behalf of the Licensee New Hope Power Company (NHPC) to respond to the above referenced RAI. What follows are the requests from the RAI letter, followed by our response.

- (1) *Please submit the stormwater management information listed in Section E of Form 62-330.060(1), F.A.C. [Conditions of Certification Section A. XXX.1.]*

Response:

Condition XXX.A.1. in Section A of the Conditions of Certification provides that for submittals for construction activities, the Licensee shall provide "DEP Form 62-330.060(1) or other applicable ERP authorization form (e.g., exemption forms)." Please find attached a Florida DEP general permit for upland stormwater systems authorized in section 403.814(12), Florida Statutes, for the NHPC package boiler project. As indicated in 62-330.020 F.A.C., an Environmental Resource Permit is not required for activities that qualify for the general permit authorized in section 403.814(12), F.S. (also referred to as a "10/2 General Permit"). In addition to the proposed project being in accordance with applicable rules pursuant to part IV of chapter 373, F.S., this general permit Self-Certification certifies that the proposed package boiler project does not:

- (a) Cause adverse water quantity or flooding impacts to receiving water and adjacent lands;
 - (b) Cause adverse impacts to existing surface water storage and conveyance capabilities;
 - (c) Cause a violation of state water quality standards; or;
 - (d) Cause an adverse impact to the maintenance of surface or ground water levels, or surface water flows, or a work of the district.
- (2) *Please provide a model or other demonstration that the treated runoff with the new 6,361 sf impervious area will meet water quality standards for nutrients. If the new treated runoff will not meet water quality*

standards for nutrients, please provide the existing and post-modification nutrient loads of the discharge from the surface water management system. [Conditions of Certification Section A XXVI and XXX.]

Response:

The boiler construction is not expected to generate measurable additional runoff due to development. Currently this area (pre-dev) is comprised of concrete foundations and hard-pack shellrock pavement which results in a high average runoff coeff. The Post-dev condition is similar. The calculated average runoff coeff. for the project site area Pre-development and Post-development is 0.958 and 0.966, respectively. Therefore, post-development runoff will be similar to pre-development and will receive similar treatment.

The NHPC facility does not, and will not generate any stormwater runoff that is discharged, except to groundwater when pumped with the onsite industrial wastewater to the permitted land application percolation pond system (Section B.I.A. of the Conditions of Certification and detailed in Site Certification Application documents). The proposed package boiler project will not change the existing conditions of no wastewater and no stormwater runoff discharges to surface water from the facility. As indicated in the response to item (1) above, certification has been provided that the package boiler project will not cause a violation of state water quality standards.

- (3) *Please provide calculations that estimate the industrial wastewater annual average daily flow with the proposed boiler blowdown included. [Conditions of Certification Section B.I.A.2.b.]*

Response:

The boiler blowdown is the only industrial wastewater (IWW) flow generated by the gas package boiler process. All IWW flows are disposed of via the active IWW percolation cell. The attached process flow diagram and water balance shows the IWW flows. The estimated AADF to the IWW percolation cell (using the current 3 boilers) is 0.57 mgd and 0.84 mgd during the grinding and non-grinding season, respectively.

The following Table A summarizes the last 12 months of monthly measured industrial wastewater TDS and flows:

TABLE A - Industrial WW		
Monthly TDS and Flow		
12 month aug2022-jul 2023		
Month	Industrial Wastewater	
Date	TDS mg/L	ADF, mgd
Aug-22	5880	1.10
Sep-22	3620	0.77
Oct-22	4490	0.67
Nov-22	5720	0.40
Dec-22	4160	0.55
Jan-23	3760	0.32
Feb-23	2610	0.31
Mar-23	4400	0.37
Apr-23	3510	0.38
May-23	2740	0.34
Jun-23	3470	0.22
Jul-23	4200	0.34
Ann Ave	4047	0.48
Limit	6000	1.10

The following Tables B and C present the estimated boiler blowdown under two scenarios: Table B presents blowdown with existing Boilers A, B and C in service. Table C presents blowdown flows with one of the primary boilers offline and Proposed Boiler D online. As shown, the blowdown flow totals with the 3 primary boilers (table B) vs Boiler D in place of one of the primary boilers (table C) is 28.5 kgpd for both scenarios because the package boiler manufacturer estimate of the blowdown rate (1%) is equivalent to the blowdown rate of existing boilers. The operational steam demand by the sugar mill and refinery is unchanging and the proposed package Boiler will only be operated to make up for steam not produced by one of the primary bagasse boilers as described in the amendment request by WSP USA Inc.

Table B - Boiler Blowdown - max Boilers A, B, and C on line							
Boiler	Status	Use	boiler load, %	steam production, lb/hr	Blowdown, %	Blowdown, lb/hr	Blowdown, gpd
Boiler A	E	Primary	100%	330,000	1.0%	3,300	9,500
Boiler B	E	Primary	100%	330,000	1.0%	3,300	9,500
Boiler C	E	Primary	100%	330,000	1.0%	3,300	9,500
Max blowdown boilers A,B and C (currently)							28,500

Table C - Boiler Blowdown - max proposed using Boiler D							
Boiler	Status	Use	boiler load, %	steam production, lb/hr	Blowdown, %	Blowdown, lb/hr	Blowdown, gpd
Boiler A	Exst	Primary	100%	370,000	1.0%	3,700	10,650
Boiler B	Exst	Primary	100%	370,000	1.0%	3,700	10,650
Boiler C (OL)	Exst	Primary	0%	-	0.0%		
Boiler D	Prop	Backup	100%	250,000	1.0%	2,500	7,200
Max blowdown with boiler D in service (proposed)							28,500

- (4) Please provide calculations that estimate total dissolved solids concentration of the industrial wastewater. [Conditions of Certification Section B.1.A.2.c.]

Response:

Table A (see response to Q3) presents 12 months of TDS in the industrial wastewater by monthly grab samples. The annual average TDS for the period presented is 4047 mg/l which is well below the limit of 6,000 mg/l (Condition of Certification Section B.1.A.2.c).

The TDS of the boiler blowdown varies from 2,000 to 3,500 mg/l. The proposed Boiler D blowdown TDS is estimated to be similar. Boiler D blowdown TDS will not affect the overall TDS of the industrial wastewater going to the IWW disposal perc ponds.

- (5) This site is located within Flood Zone AE with a Base Flood Elevation of 12 ft. NAVD. The existing site is below that elevation. Any fill placed on the site will need to have lost site storage compensated for. Please provide an analysis to demonstrate how compensating storage will be provided with existing and proposed elevations for the site and any necessary calculations.

Response:

For your reference, I have attached a copy of the original Bechtel grading plan drawing COL-0101 with the proposed Boiler D development shown. Elevations on this plan use the NGVD vertical datum. The conversion from NGVD to NAVD at this location is -1.24 ft. The site where the Boiler D development is shown is at or above elevation 16.0 NGVD (14.8 NAVD). This is above the Base Flood Elevation of 12ft NAVD. Therefore, no compensating storage is required.

That concludes our response to your request for information.

Respectfully submitted,

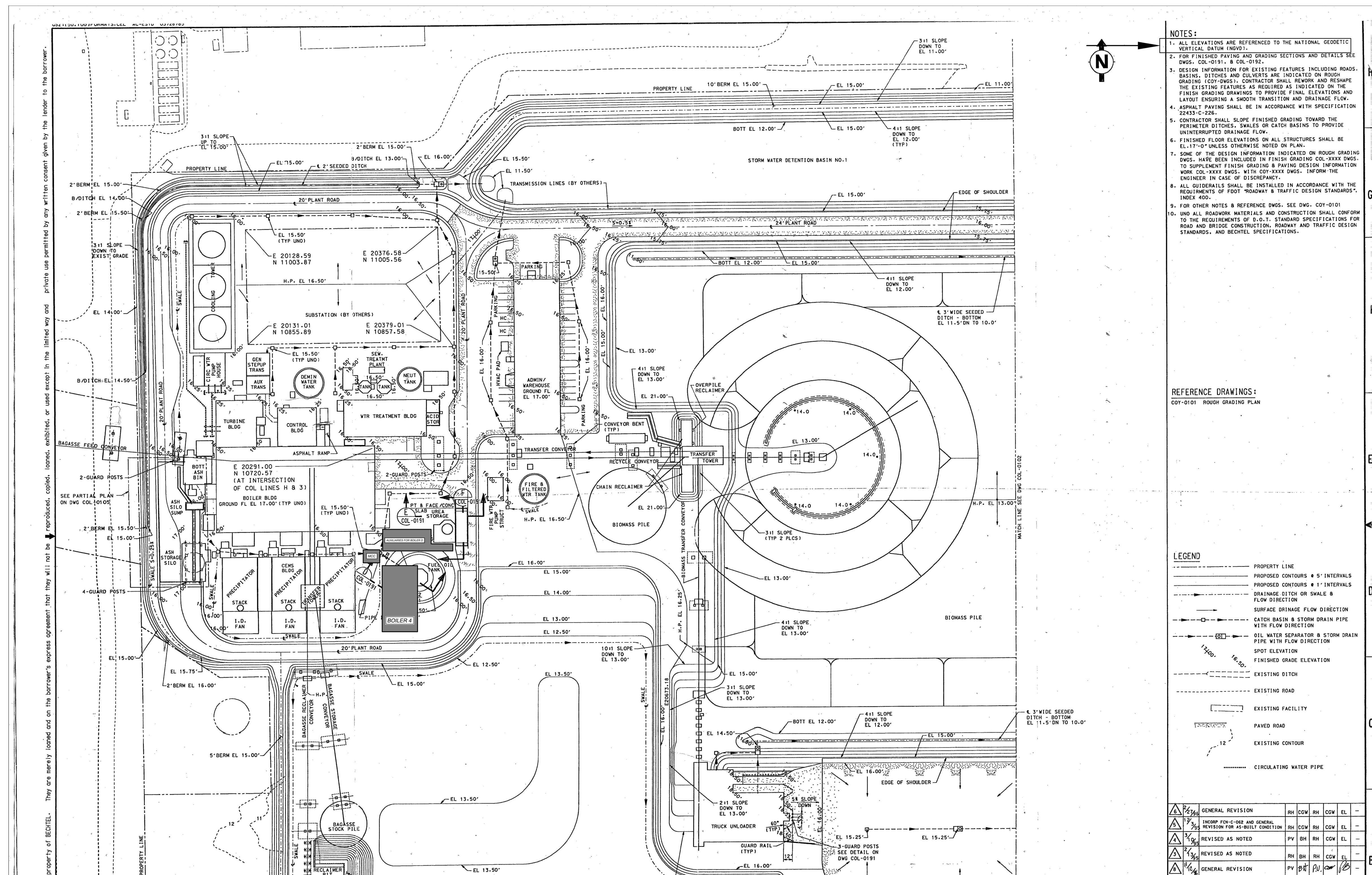
Glen A. Miller, P.E.
Engineer of Record

Encl:
cc: M.Capone, M. Coglianese - NHPC

[illegible]

Note:
Flows are expressed in thousand gallons per day
Flow number on top are non-grinding season flows.
Flow number on bottom are grinding season flows.

PA04-46C Specific Condition B.I.A.2 limits annual ave IWW flow to 1,100 thousand gal per day.





FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

**SELF-CERTIFICATION FOR
A STORMWATER MANAGEMENT SYSTEM IN UPLANDS SERVING
LESS THAN 10 ACRES OF TOTAL PROJECT AREA AND
LESS THAN 2 ACRES OF IMPERVIOUS SURFACES**

Owner(s)/Permittee(s):	NEW HOPE POWER COMPANY
File No:	TBD
File Name:	TBD
Site Address:	21250 U.S. Hwy 27 South South Bay FL - 33493
County:	Palm Beach
Latitude:	26° 34' 36.1359"
Longitude:	-80° 44' 47.4785"
Total Project Area:	.50
Total Impervious Surface Area:	.15
Approximate Date of Commencement of Construction:	10/20/2023
Registered Florida Professional:	GLEN MILLER
License No.:	39242
Company:	Miller Engineering

Date: TBD: DATE OF SUBMISSION

Glen Miller certified through the Department's Enterprise Self-Service Application portal that the project described above was designed by the above-named Florida registered professional to meet the following requirements:

- (a)The total project area involves less than 10 acres and less than 2 acres of impervious surface;
- (b)Activities will not impact wetlands or other surface waters;
- (c)Activities are not conducted in, on, or over wetlands or other surface waters;
- (d)Drainage facilities will not include pipes having diameters greater than 24 inches, or the hydraulic equivalent, and will not use pumps in any manner;
- (e)The project is not part of a larger common plan, development, or sale; and
- (f)The project does not:
 - 1.Cause adverse water quantity or flooding impacts to receiving water and adjacent lands;

- 2.Cause adverse impacts to existing surface water storage and conveyance capabilities;
- 3.Cause a violation of state water quality standards; or
- 4.Cause an adverse impact to the maintenance of surface or ground water levels or surface water flows established pursuant to s. 373.042 or a work of the district established pursuant to s. 373.086, F.S.

This certification was submitted before initiation of construction of the above project. The system is designed, and will be operated and maintained in accordance with applicable rules adopted pursuant to part IV of chapter 373, F.S. There is a rebuttable presumption that the discharge from such system will comply with state water quality standards. Therefore, construction, alteration, and maintenance of the stormwater management system serving this project is authorized in accordance with s.403.814(12), F.S.

In accordance with s. 373.416(2), F.S., if ownership of the property or the stormwater management system is sold or transferred to another party, continued operation of the system is authorized only if notice is provided to the Department within 30 days of the sale or transfer. This notice can be submitted to:

FDEP Southeast District
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406

This certification was submitted along with the following electronic documents:

If you have submitted this certification as a Florida Registered Professional, you may wish to sign and seal this certification, and return a copy to the Department, in accordance with your professional practice act requirements under Florida Statutes.

I, GLEN MILLER, License No. 39242, do hereby certify that the above information is true and accurate, based upon my knowledge, information and belief. In the space below, affix signature, date, seal, company name, address and certificate of authorization (if applicable).

This sealed certification may be submitted to the Department, either electronically (as an attachment in Adobe PDF or other secure, digital format) at SED_Permitting@dep.state.fl.us, or as a hardcopy, at the postal address below:

FDEP Southeast District
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406