

SOUTH COAST AQMD
CLERK OF THE BOARD

2024 SEP 26 AM 9:49

PETITION FOR MODIFICATION OF AN EXISTING VARIANCE
BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

MFCO/EXT
11/7/24

PETITIONER: BETA OFFSHORE OPERATING, LLC (BETA) _____ CASE NO: 5855-7 _____

111 W. Ocean Blvd., Suite 1240, Long Beach, CA 90802 _____ FACILITY ID: 166073

FACILITY ADDRESS : OCS Lease Parcels P300/P301, Federal Outer Continental Shelf
[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

CITY, STATE, ZIP: Huntington Beach, CA 92648

1. TYPE OF MODIFICATION REQUESTED

- (a) **MODIFICATION/EXTENSION OF A FINAL COMPLIANCE DATE:** If you are operating under a variance and will not be in full compliance by the final compliance date, you may request an extension of the variance and a modification of the final compliance date. **A petition requesting such an extension must be filed at least 45 days prior to the existing final compliance date in order to meet the legal notice requirement.** *(Hearing will be held approximately 45 days from date of filing—30-day published notice required.)*
- (b) **MODIFICATION OF VARIANCE CONDITIONS:** If you are unable to comply with one or more conditions of an existing variance, you may request a modification of variance conditions. *(Hearing will be held approximately 21 days from date of filing—10-day published notice required)*
- (c) **MODIFICATION OF INCREMENTS OF PROGRESS:** If you are unable to comply with one or more increments of progress of an existing variance and additional time is required, you may request a modification of those increments of progress. *(Hearing will be held approximately 21 days from date of filing—10-day published notice required.)*
- (1) **INTERIM AUTHORIZATION:** If compliance with an increment of progress cannot be achieved and you are unable to notify the Hearing Board at least 21 days in advance in order to schedule a noticed hearing, the Board can consider granting **one** extension of the increments of progress (interim authorization). **However**, an interim authorization cannot be granted: (1) for more than 30 days; or (2) to extend a final compliance date of an existing variance. *(Hearing will be held approximately 2 working days from date of filing or the next available hearing date thereafter.)*

Persons with disabilities may request this document in an alternative format by contacting the Clerk of the Board at 909-396-2500 or by e-mail at clerkofboard@aqmd.gov.

If you require disability-related accommodations to facilitate participating in the hearing, contact the Clerk of the Board at least five (5) calendar days prior to the hearing.

[ALL DOCUMENTS FILED WITH CLERK'S OFFICE BECOME PUBLIC RECORD]

(d) OTHER: Specify:

2. **CONTACT:** Name, title, company (if different than Petitioner), address, and phone number of persons authorized to receive notices regarding this Petition (no more than two authorized persons).

Jeff Ortloff, Director, Facilities Engineering Ivan Tether
Amplify Energy Corp., Beta Offshore's Parent Tether Law
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3. List the equipment and/or activity that are the subject of this petition, if different from the existing variance. **(Attach copy of last minute order regarding this variance)**

Equipment/Activity	Application/ Permit No.	RECLAIM Permit/Devi ce No.	Date Application/Plan Denied (if relevant, attach copy of denial letter)
Three Centaur Turbines and Associated SCRs			
Gas Turbine, NJ-01-A, Diesel Fuel, Process Gas, Solar Model Centaur GCI-CB-ID, 42 MMBTU/HR with Generator, 2.5 MW	63805	D98	Application approved on 12/28/22
Selective Catalytic Reduction (SCR), Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU. FT. with Urea Injection System	638609	C203	Application approved on 12/28/22
Gas Turbine, NJ-01-B, Diesel Fuel, Process Gas, Solar Model Centaur GCI-CB-ID, 42 MMBTU/HR with Generator, 2.5 MW	638607	D99	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU. FT. with Urea Injection System	638610	C204	Application approved on 12/28/22

Gas Turbine, NJ-01-C, Diesel Fuel, Process Gas, Solar Model Centaur GCI-CB-ID, 42 MMBTU/HR with Generator, 2.5 MW	638608	D100	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU. FT. with Urea Injection System	638611	C205	Application approved on 12/28/22
Six Rig Engines and Associated SCRs			
Internal Combustion Engine, Non-Emergency, EJ- 01A, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630158	D81	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630226	C197	Application approved on 12/28/22
Internal Combustion Engine, Non-Emergency, EJ- 01B, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630160	D82	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630230	C918	Application approved on 12/28/22
Internal Combustion Engine, Non-Emergency, EJ-01C, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630161	D83	Application approved on 12/28/22 <i>Beta respectfully requests that this Engine be removed from the Variance. Please see discussion in Variance Items 5 and 7, below.</i>
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630231	C199	Application approved on 12/28/22

Internal Combustion Engine, Non-Emergency, EN-010-E2, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630221	D84	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630266	C200	Application approved on 12/28/22
Internal Combustion Engine, Non-Emergency, EN-020-E2, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630022	D85	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630267	C201	Application approved on 12/28/22
Internal Combustion Engine, Non-Emergency, EN-030-E2, Diesel Fuel, Caterpillar, Model, D398PCTA, with aftercooler, Turbocharger, 853 BHP with generator, Rig, 600 KW	630224	D86	Application approved on 12/28/22
Selective Catalytic Reduction, Umicore DNX-929 or Cormetech CMHCDST, with Oxidation Catalyst, Johnson Matthey, Model BX-70-D-8, 76 CU.FT. with Urea Injection System	630268	C202	Application approved on 12/28/22

4. List all District rules, and/or permit conditions from which you are requesting variance relief, if different from the existing variance. *Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate the subject equipment only if you are adding a request for relief from permit conditions. If RECLAIM or Title V facility, attach only the relevant sections of the Facility Permit (for example, showing the equipment or process and conditions that are the subject of this petition).*

Rules	Explanation
Rules and Permit Conditions the same as for the existing Variance	

5. Explain the steps taken since the last hearing to achieve compliance, including how you have met each of your existing variance conditions and/or increments of progress.

Summary - Progress: Beta Offshore has made considerable progress toward compliance under the variance:

1. The Saturn Turbines have all been removed from service.
2. The first three Rig Engines (on Platform Eureka) have been retrofitted with SCR and final source test results have been provided to the District. (One Engine failed its source test by a narrow margin. Beta quickly determined the origin of the failure, installed a new fuel metering system to the engine, and will have the engine re-tested as soon as scheduling is possible.)
3. The first Centaur Turbine completed retrofit on August 27, 2024 and was source tested on September 10, 2024. Preliminary indications from the manufacturer and Alliance, the source testing contractor, are that the turbine passed the source test.
4. The next three Rig Engines (on Platform Ellen) were retrofitted by September 9, and are in the commissioning stage, to be followed by source testing on or about September 24, 2024.
5. Beta is reasonably confident that the second Centaur will be retrofitted and commissioned within the 60 days from the retrofit and commissioning of the first Centaur.
6. All retrofitting has been and is expected to be within the time limit duration ranges specified in Variance Conditions 5 (Centaur Turbines) and 12 (Rig Engines).

Summary – Requests to Modify and to Extend Final Compliance Date:

- Condition 5: Remove date specific deadlines for retrofitting the second and third Centaur Turbines and relying on the existing requirements that each be retrofitted within 60 days of the prior commissioning.
- Condition 7: Extend the time period for source testing after all three Centaur Turbines are retrofitted from 30 to 45 days and start that time clock after not only the retrofit but also the commissioning of the three Centaur Turbines.
- Condition 15: Extend the time period for source testing after all six Rig Engines are retrofitted from 30 to 45 days and start that time clock after not only the retrofit but also the commissioning of the six Rig Engines.
- Remove Rig Engine D83 from the Variance. (Significant mechanical issues require diagnosis and repair prior to commissioning and source testing, and timing is currently uncertain. D83 will only be run for testing until final passing source test results are sent to the District.)
- Extend the Final Compliance Date to March 24, 2025. (Beta will remain bound at every step by the number of days allowed to complete the next step toward compliance after completion of the prior step.)
- Please see Petition Item 7, below, for discussion of these requests.

By Variance Condition:

Conditions 1 through 3 for the Saturn Turbines: The three Saturn Turbines, subject to Rule 1134, have been permanently removed from the Facility and their function has been replaced by electric power. And petitioner has submitted the Form 200-C within the thirty (30) days of removing all Saturn Turbines. This achieves compliance with Variance Conditions 1 through 3.

Conditions 4-11 for the three Centaur Turbines (Centaur):

Condition 4: Compliance achieved: Beta timely submitted the source test protocol to the District to determine Rule 1134 compliance on February 5, 2024.

Condition 5: Modification requested:

The Board granted extensions to the date specific deadlines for retrofitting the three Centaurs with SCR on April 23, 2024 and July 18, 2024. The condition's requirement that retrofit be accomplished within a certain number of days of a prior event remains unchanged and Petitioner does not request a change to those requirements, which will continue to govern Petitioner's progress. Petitioner requests that the current date-specific deadlines for retrofit of the remaining second and third Centaurs be deleted in favor of reliance on the requirement that the Centaur Turbine be retrofitted "within sixty days of completing the commissioning of the first Centaur and that the third Centaur be retrofitted "within sixty days of completing the commissioning of the prior two Centaur Turbines. . . ." Further information is provided below in Petition Item 7.

Condition 6: Grants Beta the discretion to select the sequence of Centaur Turbine retrofit:

Condition 7: Modification requested:

Because of the increased time, up to six weeks, required to schedule the only currently available source testing firm that works offshore, Beta requests that the time allowed to source test be extended from 30 days to 45 days. In addition, because accomplishing commissioning of a Turbine after its retrofit is can also be time-demanding, Beta requests that the trigger for the 45-day source test requirement be the completing the commissioning as well as the retrofit. With these modifications, Condition 7 would be: "At any time after the retrofit of a Centaur Turbine is completed, but no later than ~~thirty (30)~~ forty-five (45) days after completing the retrofit and commissioning for all three Centaur Turbines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1134 compliance." Further information is provided below in Petition Item 7.

Condition 8: Compliance achieved so far and anticipated to continue: Sixty-day deadline for submittal of source test results, source tests.

Condition 9: Compliance achieved and continuing: Requires Beta to operate no more than two of the three Centaurs Turbines at any one time, except in certain situations. At the April 23, 2024 hearing, the Board clarified that maintenance, source testing and commissioning of new or retrofitted Centaur Turbines, which all require various periods of running three turbines simultaneously, are necessary to protect safety of personnel and the environment. Accordingly, these activities were clarified to fit within the existing emergency exception to the limit on running more than two turbines at a time.

Condition 10: Compliance achieved and continuing. Beta maintains a monthly usage log for the Centaur Turbines according to the criteria enumerated in this condition, including any emergency usage under Condition 9 and timely submits the log for the prior month to District personnel.

Conditions 11 through 18 for the Three (of six) Rig Engines remaining to be retrofitted and for source testing of the first three Rig Engines already three retrofitted with SCR Systems:

Condition 11: Compliance achieved: Beta timely submitted the source test protocol to the District to determine Rule 1110.2 compliance on February 5, 2024.

Condition 12: Compliance achieved and continuing: Petitioner shall retrofit the six Internal Combustion Rig Engines to demonstrate compliance with Rule 1110.2(d)(1) according to [the stated schedule]. At

the April 23, 2024 hearing, the Board extended the deadline for retrofit of the Rig Engine under Condition 12.6 from fourteen (14) days to thirty (30) days from completion of structural modification and deck extension on Platform Ellen. Beta has now retrofitted and provided source test results to the District for the first three Rig Engines (on Platform Eureka) and continues to anticipate timely retrofit of the remaining three Rig Engines (on Platform Ellen). Rig Engine D86 on Platform Eureka was source tested on July 11, 2024. Final source test results submitted to the District indicate that D86 failed its source test under the new Rule 1110.2 emission limit, despite a substantial emission reduction from the pre-SCR level. By quickly diagnosing the problem and replacing D86's fuel meter, Beta has taken steps to reduce D86's emissions, and a source re-test is currently scheduled in November 2024. Beta anticipates retrofit of two of the three remaining Rig Engines on or about September 24 and anticipates source testing on or about September 27, 2024.

Because Rig Engine D83, for which SCR retrofit is nearly completed, is experiencing mechanical problems that prevents commissioning and source testing for a significant period, Beta respectfully requests that Engine D83 be removed from the variance. Removal will avoid disruption of the steady move toward final compliance. As soon Beta completes diagnostics for D83, and all parts and materials that are needed for the repairs can be obtained, the repair will be completed and D83 will be source tested. Engine D83 is not operable at present, and Beta will not operate Engine D83 other than for mechanical testing and source testing until final passing source test results are provided to the District.

Condition 13: NUMBER OMITTED.

Condition 14: Grants Beta the discretion to select the sequence of Rig Engine retrofit.

Condition 15: Modification requested: As under Condition 7 for the Centaurs, the increased time, up to six weeks, required to schedule the only currently available source testing firm that works offshore, Beta requests that the time allowed to source test be extended from 30 days to 45 days. In addition, because accomplishing commissioning of an Engine after its retrofit is can also be time-demanding, Beta requests that the trigger for the 45-day source test requirement be the completing the commissioning as well as the retrofit. With these modifications, Condition 15 would be: "At any time after the retrofit of an Internal Combustion Rig Engine is completed, but no later than ~~thirty (30)~~ forty-five (45) days after completing the retrofit and commissioning for all six Internal Combustion Rig Engines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1110.2 compliance." Further information is provided below in Petition Item 7.

Condition 16: Compliance achieved so far and anticipated to continue: Sixty-day deadline for submittal of source test results, source tests.

Condition 17: Compliance achieved so far and anticipated to continue: Beta will not operate more than three of the Rig Engines at one time, except in the event of emergency.

Condition 18: Compliance achieved so far and anticipated to continue: Beta maintains a monthly usage log for the Rig Engines according to the criteria enumerated in this condition, including any emergency usage under modified Condition 17 and timely submits the log for the prior month to District personnel.

Generally applicable Conditions 19 through 23:

Condition 19: Compliance achieved: Beta requested expedited review when submitting the Source Test Protocols and will comply when submitting the Source Test Reports.

Condition 20: Compliance achieved: Status/modification hearing in April 2024, that was scheduled for April 23, 2024. The Hearing Board granted Beta's request that this hearing be held on the Hearing Board's Consent Calendar, and the Board did not request that Beta appear at the hearing.

Condition 21: Compliance achieved so far and anticipated to continue: Excess emission fees. Beta has complied and will continue to comply with calculation and payment of excess emission fees according to the stated schedule.

Condition 22: Petitioner shall notify the Clerk of the Board in writing at clerkofboard@aqmd.gov when final compliance has been achieved. Beta will comply as directed.

Condition 23: Compliance achieved: As a Title V facility, Petitioner shall notify US EPA after the issuance of the order. Beta provided this notification to US EPA on or about February 28, 2024.

6. When did you first become aware that you would not be able to comply with the existing variance?

Date: On about September 3, 2024

7. What part(s) of the existing variance are you unable to comply with (final compliance date, specific increments of progress, and/or conditions)? For each part with which you cannot comply, provide an explanation.

Condition 5.b and 5.c: Beta respectfully requests modification to Condition 5.b and 5.c to remove the date deadline for completing the retrofit of the remaining second and third Centaur Turbines. Beta will comply with the Condition's requirement to complete retrofit of those Turbines "within sixty (60) days of completing the commissioning of the [first Centaur Turbine or the prior two Centaur Turbines, respectively]"

Beta is not certain of meeting the September 29, 2024 date deadline for retrofitting the second Centaur and is not currently on track to meet the October 15, 2024 date deadline to retrofit the third Centaur. Delays, earlier due to conditions and events onshore, are now primarily due to the difficulty of working offshore, particularly the acute spatial limitation placed on staffing and equipment assembly. There are only so many living quarters offshore, and there is only so much deck space. Beta is working toward compliance at maximum expedition. Because the personnel teams cycle on and off weekly, their workdays when on the platforms are permissibly long – 15 to 17 hours per day. It is not possible to provide more personnel or increase hours. Additional delay has arisen as the cumulative impacts of earlier delays come to roost, an evolving circumstance not fully realized at the time of petitioning for the July 18, 2024 modifications. Beta can admit to being overly optimistic or even aggressive in its efforts to achieve compliance as quickly as possible. Incidentally, Beta cannot commission the SCR System until Beta receives approval from the federal Bureau of Safety and Environmental Enforcement (BSEE) for the new equipment installed on the offshore platforms.

Beta respectfully requests the following specific modifications to Variance Condition 5:

5. Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:

a. Within seventy-five (75) days of receipt of the selective catalytic reduction ("SCR") system for at least one of the three Centaur Turbines and no later than August 29, 2024. [No modification requested.]

b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine ~~and no later than September 29, 2024.~~ (Commissioning is required to ensure the safety and reliability of each device and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) signoffs by the company.)

c. For the third of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the prior two Centaur Turbines ~~and no later than October 15, 2024.~~

Condition 7: Because of the increased time, up to six weeks, required to schedule the only currently available source testing firm that works offshore, Beta requests that the time allowed to source test Centaur Turbines be extended from 30 days to 45 days. In addition, because accomplishing commissioning of a Turbine after its retrofit is can also be time-demanding, Beta requests that the starter for the 45-day source test requirement be the completing the commissioning as well as the retrofit. This starter would then mirror the starter in Condition 5 as established at the first variance hearing.

Beta respectfully requests the following specific modifications to Variance Condition 7:

7. At any time after the retrofit of a Centaur Turbine is completed, but no later than ~~thirty (30)~~ forty-five (45) days after completing the retrofit and commissioning for all three Centaur Turbines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1134 compliance."

Condition 15: Beta requests the same modification to Condition 15, for the Rig Engines, as requested for Condition 7 for the Centaur Turbines, and on the same basis.

Beta respectfully requests the following specific modifications to Variance Condition 15:

7. At any time after the retrofit of a Internal Combustion Rig Engine is completed, but no later than ~~thirty (30)~~ forty-five (45) days after completing the retrofit and commissioning for all six Internal Combustion Rig Engines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1110.2 compliance."

Rig Engine D83: Beta respectfully requests that the Hearing Board remove Rig Engine D83 from the Variance. (Significant mechanical issues require diagnosis and repair prior to commissioning and source testing, and time is currently uncertain. D83 will only be run for testing until final passing source test results are sent to the District.)

Final Compliance Date:

Beta has been able to maintain compliance with the within the number of days after a prior step, as specified in Variance Conditions 5 and 12 for retrofit of the Centaur Turbines and the Internal Combustion Rig Engines. It has been more difficult to meet the specific date deadlines, however, and the Hearing Board has seen requests for extensions of those specific dates and now a request to eliminate the remaining date deadlines for retrofit of the second and third Centaur Turbines. The delays giving rise to Beta's need for extensions had been caused primarily by extreme weather (in one case, flooding of a factory and destruction of a key SCR component) and mismatched parts acquired from different manufacturers. Delays, earlier due to conditions and events onshore, are now primarily due to the difficulty of working offshore, particularly the acute spatial limitation placed on staffing and equipment assembly. There are only so many beds on the offshore platforms for the construction crews, and there is only so much deck space. Beta is working toward compliance at maximum expedition. Because the personnel teams cycle on and off weekly, their workdays when on the platforms are permissibly long – 15 to 17 hours per day. It is not possible to provide more personnel or increase hours. Additional delay has arisen as the cumulative impacts of earlier delays began to cascade introduce delay to subsequent steps in the compliance chain, an evolving circumstance not fully realized at the time of petitioning for the July 18, 2024 modifications. Beta can admit to being overly optimistic or even aggressive in its efforts to achieve compliance as quickly as possible. Incidentally, Beta cannot commission the SCR System until Beta receives approval from the federal Bureau of Safety and Environmental Enforcement (BSEE) for the new equipment installed on the offshore platforms.

In addition, Beta agrees with District Counsel that while no specific date deadlines were set under the Variance for source testing and provision of final source test results to the District, those steps need to be completed under variance coverage. Given the delays, that fact alone calls for an extension of the final compliance date.

Beta also has a growing concern arising from the considerable difficulty in scheduling source tests, requiring up to six weeks in advance to set a date. To respond to this difficulty, Beta has already scheduled all the remaining source tests required before final compliance. As set out above regarding Variance Conditions 7 and 15, Beta is requesting that the within a certain number of days deadlines for performing source tests be extended from 30 to 45 days, and that this period not begin until the equipment to be tested has been not only retrofitted but also commissioned. Commissioning time can vary, and it can also be difficult to schedule outside the outside commissioning tech contractors required for this step.

These and other extensions and uncertainties have pushed the feasible final compliance date into 2025. In order to avoid the need for further modifications and extensions, and to preserve Hearing Board resources, Beta respectfully requests that the Board extend the final compliance date to March 24, 2025. Beta will remain bound at every step by the number of days allowed to complete the next step toward compliance after completion of the prior step.

8. How do you intend to achieve compliance with the rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed and/or modifications or process changes to be made, a list of the dates by which the actions will be completed, and an estimate of total costs.

Beta Offshore has made considerable progress toward compliance under the variance:

- The Saturn Turbines have all been removed from service.
- The first three Rig Engines (on Platform Eureka) have been retrofitted with SCR and final source test results have been provide to the District. (One Engine failed its source test by a narrow margin. Beta quickly determined the origin of the failure, installed a new fuel metering system to the engine, and will have the engine re-tested as soon as scheduling is possible.)
- The first Centaur Turbine completed retrofit on August 27, 2024 and was source tested on September 10, 2024. Preliminary indications from the manufacturer and Alliance, the source testing contractor, are that the turbine passed the source test.
- The next three Rig Engines (on Platform Ellen) were retrofitted by September 9, and are in the commissioning stage, to be followed by source testing on or about September 27, 2024.
- Beta is reasonably confident that the second Centaur will be retrofitted and commissioned within sixty days of the commissioning of the first Centaur Turbine.
- All retrofiting has been and is expected to be within the time limit duration ranges specified in Variance Conditions 5 (Centaur Turbines) and 12 (Rig Engines).

To achieve final compliance, Beta will perform the following steps:

1. Retrofit and commission the remaining two of the three remaining Rig Engines with SCR Systems on or about September 27, 2024. (As referenced under Item 7, above, Beta respectfully requests that Internal Combustion Rig Engine D83 be removed from the Variance.)
2. Retrofit, commission, source test, and provide source test results to the District for the second and third Centaur Turbines.
3. Repair (already done) and re-test Internal Combustion Rig Engine D86.
4. Pay expediting fees to each involved contractor when available.

9. State the date by which you expect to achieve final compliance: March 24, 2025

If the regular variance is to extend beyond one year, you **must** include a **Schedule of Increments of Progress**, specifying dates or time increments for steps needed to achieve compliance. See District Rule 102 for definition of Increments of Progress.

Example:

- Permit application(s) will be submitted to the District by June 1, 2001.
- Contracts for the purchase of emission control systems will be awarded by August 1, 2001.
- On-site construction will be completed by September 8, 2001.

List Increments of Progress here: *Spell out additional steps required for final compliance.*

10. Estimate excess emissions, if any, on a daily basis, including, if applicable, excess opacity (the percentage of total opacity above 20%) during the variance period. If the variance will result in no excess emissions, go to No. 11. **Based on actual NOx emissions from Beta's most recent emissions and fees report, as required by Variance Condition 21, for the Month of August 2024.**

Pollutant	(A)	(B)	(C)*
	Total Estimated Excess Emissions (lbs/day)	Reduction Due to Mitigation (lbs/day)	Net Emissions After Mitigation (lbs/day)
NOx	3,495		596.29

*Column A minus Column B = Column C

Excess Opacity: 0 %

11. Show calculations used to estimate quantities in No. 10, or explain why there will be no excess emissions.

Please see Beta's Report of Excess Emissions and Fees for the Month of August 2024, attached to this Petition as **Attachment A**.

12. Explain how you plan to reduce (mitigate) excess emissions to the maximum extent feasible. If no excess emissions, skip to No. 13.

Beta will only operate 2 of 3 Centaur electricity-generating turbines during the period of non-compliance, except when maintenance or source testing of these Turbines requires operation of three Turbines, during commissioning of a new Centaur Turbine, during commissioning after retrofit of a Centaur Turbine, or in the event of another emergency that creates a risk to the health or safety of personnel and/or environment, thus mitigating emissions from these turbines.

In August 2023, Beta began shifting substantial electrical load from the Centaurs to the municipal power grid, reducing natural gas and diesel usage and emissions. This created a 50 to 80 percent reduction in fuel consumed and substantially reduced emissions. This has been sufficient to allow complete removal of the Saturn Turbines from the Facility. Further shift to shore power is ongoing.

Beta will only operate three of the six Rig Engines at any one time unless an emergency situation arises and creates a risk to personnel and/or environment that cannot be avoided without operating the additional rig engine. In addition, now that three of the six rig engines have been retrofitted with SCR Systems, Beta will only operate the three Rig Engines that have already been retrofitted, unless an emergency situation arises.

Beta retrofitted and source tested the first Centaur Turbine. Both the manufacturer and the source testing firm indicate that the Turbine most likely passed the new tighter emission limit of revised Rule 1134. Beta has retrofitted and source tested 3 of the Rig Engines. Two have met the tighter emission limits of Rule 1110.2. While the third failed the source tests, its emissions are still much lower than the pre-revision limit.

In addition, Beta has been able to shift most of the fueling for the Centaur Turbines from diesel to cleaner-burning produced gas, accomplishing an additional reduction in emissions.

13. Explain how you will monitor or quantify emission levels from the subject equipment or activity during the variance period and make such records available to the District. **Any proposed monitoring does not relieve RECLAIM facilities from missing data requirements.**

Beta will continue to utilize existing CEMS/ CPMS. The relief requested will not interrupt ongoing monitoring.

Beta will continue to comply with the monitoring and other requirements of RECLAIM, which is expected to remain in effect during the period of requested relief.

Fuel flow and engine operating hours are available, and reported to District Staff, and can be relied on for monitoring.

14. What would be the harm to your business if the variance were not modified/extended as requested?

Economic losses: \$ Substantial, but unable to be determined by reasonable precision. Please see detail provided below.

Number of employees laid off (if any): Approximately eighty-five (85) Beta Offshore employees would be in jeopardy of lay-offs, and a significant number of local contractors and consultants would face substantial negative impacts.

Provide detailed information regarding economic losses, if any (anticipated business closure, breach of contracts, hardship on customers, layoffs and/or similar impacts).

If the requested modifications to the existing variance were not granted, Beta would no longer be able to operate the Centaur Turbines, which are relied on to power Platform operations. (The first Centaur Turbine, while retrofitted, does not yet have final source test results.) This would result in a complete shutdown of production and termination of production revenues. The expected economic losses for Beta are extremely variable and dependent on multiple factors, including but not limited to commodity prices, operating expenses, and required capital investments. The revenues currently generated from Beta production continue to be critical to funding the large investment required to achieve the compliance discussed in this petition. If the requested modifications are not granted and this results in noncompliance and variance revocation, multiple employees would be laid off, and many supply chains would be negatively impacted or closed. These services directly impact the local community and taxable state revenue. In the community, the following would be among those negatively affected: marine / dock services, local transportation, skilled laborers and professionals, such as engineers and consultants, as well as local manufacturing and material suppliers. Additionally, the royalties paid by Beta to the Federal government help fund local offices and personnel at the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM). Beta also works closely with the University of Southern California, NASA and NOAA by supporting their oceanic and atmospheric research as they utilize Beta offshore equipment when that equipment is operating.

15. List the names of any District personnel with whom facility representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply.

Josephine Lee, Senior Deputy District Counsel Ext. 2913

Ext. _____

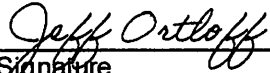
Ext. _____

16. Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six (6) months? No Yes

Date of Complaint	Number of Complainant(s)	Nature of Complaint

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on 9/24/2024 at Houston, Texas



 Signature

Jeff Ortloff

 Print Name

Title: Director, Facilities Engineering, Amplify Energy Corp.

17. **SMALL BUSINESS and TABLE III SCHEDULE A FEES:** To be eligible for reduced fees for small businesses, individuals, or entities meeting small business gross receipts criterion [see District Rule 303(h)], you must complete the following:

Declaration Regarding Reduced Fee Eligibility

1. The petitioner is
 - a) an individual, or
 - b) an officer, partner or owner of the petitioner herein, or a duly authorized agent of the petitioner authorized to make the representations set forth herein.

If you selected 1a, above, skip item 2.

2. The petitioner is
 - a) a business that meets the following definition of Small Business as set forth in District Rule 102: **SMALL BUSINESS** means a business which is independently owned and operated and meets the following criteria, or if affiliated with another concern, the combined activities of both concerns shall meet these criteria:
 - (a) the number of employees is 10 or less; **AND**
 - (b) the total gross annual receipts are \$500,000 or less or
 - (iii) the facility is a not-for-profit training center.

-OR-

b) an entity with total gross annual receipts of \$500,000 or less.

3. Therefore, I believe the petitioner qualifies for reduced fees for purpose of filing fees and excess emission fee calculations, in accordance with Rule 303(h).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, at _____.

Signature

Print Name

Position with Company

(Petition for Modification: Revised December 10, 2008)

Beta Offshore, Case No. 5855-7
Petition to Modify Conditions and Extend Final Compliance Date
September 24, 2024

Prior Hearing Board Orders

December 7, 2023 Regular Variance Hearing
Minute Order and Findings and Decision

Orders – December 7, 2023 Hearing

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MINUTE ORDER**

BETA OFFSHORE OPERATING, LLC
111 W. Ocean Boulevard
Long Beach, CA 90802

Case No: 5855-7
Facility ID: 166073

Hearing Date: 12/07/2023

Hearing Type: Regular

Consent Calendar:

HEARING BOARD ACTION

Action: Granted

Starting Date: 12/31/2023

Ending Date: 11/16/2024

RULES

203(b) {from Permit Condition Nos. A63.15, A63.16, D12.8, D12.9, D12.10, D12.11, D12.12, D12.13, D12.14, D29.5, D29.6, E193.2, E448.4, E448.9, H23.19, and H23.10 of Facility Permit No. 166073}

1100(d)(1)(B)

1110.2(d), (e)(2), (e)(4), (e)(10), (f)(1)(C), and (F)(1)(D)

1134(d)(3), (e)(2), and (e)(3)

2004(f)(1) {from Permit Condition Nos. A63.15, A63.16, D12.8, D12.9, D12.10, D12.11, D12.12, D12.13, D12.14, D29.5, D29.6, E193.2, E448.4, E448.9, H23.19, and H23.10 of Facility Permit No. 166073}

2012

3002(c)(1) {from Permit Condition Nos. A63.15, A63.16, D12.8, D12.9, D12.10, D12.11, D12.12, D12.13, D12.14, D29.5, D29.6, E193.2, E448.4, E448.9, H23.19, and H23.10 of Facility Permit No. 166073}

EQUIPMENT DESCRIPTION

DEVICE/APPLICATION/PERMIT

Internal Combustion Engines (ICE)
Selective Catalytic Reduction (SCR) Unit

D81, D82, D83, D84, D85, and D86
C197, C198, C199, C200, C201, C202, C203,
C204, and C205

Gas Turbines
Urea Injection System

D95, D96, D97, D98, D99, and D100

CONDITIONS

"Saturn Turbines" – Device id Nos. D95, D96 and D97

1. Petitioner shall cease operation of the three Saturn Turbines according to the following schedule:

- a. For at least one of the three Saturn Turbines, within thirty (30) days of receipt of the electrical and control system for the replacement electric motor and no later than February 15, 2024.
 - b. For the second of the three Saturn Turbines, within thirty (30) days of completing the commissioning of the replacement electric motor for the second Saturn Turbine and no later than March 1, 2024.
 - c. For the third of the Saturn Turbines, within thirty (30) days of completing the commissioning of the replacement electric motor for the second Saturn Turbine and no later than April 1, 2024.
2. Selection of the sequence of ceasing operation of each Saturn Turbine shall be at the discretion of Petitioner subject to the timeline set forth in Condition 1.
 3. Within thirty (30) days of removing all Saturn Turbines, Petitioner shall submit a Form 200-C Request to Inactivate a Permit to Operate for Devices D95, D96 and D97.

“Centaur Turbine” – Device ID Nos. D98, D99, and D100

4. Petitioner shall, within sixty (60) days of issuance of this Order, submit a source test protocol to the District to determine Rule 1134 compliance for the Centaur Turbines.
5. Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:
 - a. Within seventy-five (75) days of receipt of the selective catalytic reduction (“SCR”) system for at least one of the Centaur Turbines and no later than May 30, 2024.
 - b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than July 31, 2024. (Commissioning is required to ensure the safety and reliability of each device and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) signoffs by the company.)
 - c. For the third of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the prior two Centaur Turbines and no later than September 30, 2024.
6. Selection of the sequence of retrofitting each Centaur turbine shall be at the discretion of Petitioner subject to the timeline set forth in Condition 5.
7. At any time after the retrofit of a Centaur Turbine is completed, but no later than thirty (30) days after completing the retrofit for all three Centaur Turbines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1134 compliance.
8. Within sixty (60) days of completing the source test, Petitioner shall submit a copy of the source test results for each Centaur Turbine to South Coast AQMD by email to AQ Engineer 1 Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov).
9. During the term of this variance, Petitioner shall operate no more than any two of the three Centaur Turbines at a given time, except in the event of an emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating an additional Centaur Turbine.
10. Petitioner shall maintain a monthly usage log for the Centaur Turbine and send log records to South Coast AQMD by email to AQ Engineer 1 Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov) by the first Tuesday of each month starting January 2024. The log shall contain at minimum:
 - a. Date and total hours of operation, including start and end time, for each turbine identified by Device ID No.;
 - b. Date and total quantity of fuel usage for each turbine identified by Device ID No.;

- c. If a turbine was operated in the case of an emergency as identified in Condition 9, then:
 - i. Basis for the emergency;
 - ii. Date and total hours of operation, including start and end time, under emergency for each turbine identified by Device ID No.; and
 - iii. Date and total quantity of fuel usage under emergency for each turbine identified by Device ID No.

Internal Combustion Rig Engines – Device ID Nos. D81, D82, D83, D84, D85, and D86

11. Petitioner shall, within sixty (60) days of issuance of this Order, submit a source test protocol to the District for approval to determine Rule 1110.2 compliance for the Internal Combustion Rig Engines.
12. Petitioner shall retrofit the six Internal Combustion Rig Engines to demonstrate compliance with Rule 1110.2(d)(1) according to the following schedule:
 - a. For at least one of the six Rig Engines, within fourteen (14) days of completion of structural modification and deck extension on Platform Eureka;
 - b. For the second of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12a.;
 - c. For the third of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12b;
 - d. For the fourth of the six Rig Engines, within fourteen (14) days of completion of structural modification and deck extension on Platform Ellen;
 - e. For the fifth of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12d;
 - f. For the sixth of the six Rig Engines, within fourteen (14) days of completing the commissioning of the previously selected Rig Engine pursuant to Condition 12e.
13. NUMBER OMITTED
14. Selection of the sequence of retrofitting each Rig Engine shall be at the discretion of Petitioner subject to the schedule set forth in Condition 12.
15. At any time after the retrofit of an Internal Combustion Rig Engine is completed, but not later than thirty (30) days after completing the retrofit for all six Internal Combustion Rig Engines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1110.2 compliance.
16. Within sixty (60) days of completing the source test, Petitioner shall submit a copy of the source test results for each Centaur Turbine to South Coast AQMD by email to AQ Engineer I Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov).
17. During the term of this variance, Petitioner shall operate no more than three of the six Internal Combustion Rig Engines at a given time, except in the event of an emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating one or more additional rig engine(s).
18. Petitioner shall maintain a monthly usage log for the Internal Combustion Rig Engines and send log records to South Coast AQMD by email to AQ Engineer I Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov) by the first Tuesday of each month, starting January 2024. The log shall contain at minimum:
 - a. Date and total hours of operation, including start and end time, for each engine identified by Device ID No.;

- b. Date and total quantity of fuel usage each engine identified by Device ID No.; and
- c. If an Internal Combustion Rig Engine was operated in the case of an emergency as identified in Condition 17, then:
 - i. Basis for the emergency;
 - ii. Date and total hours of operation, including start and end time, under emergency for each Internal Combustion Rig Engine identified by Device ID No. ; and
 - iii. Date and total quantity of fuel usage under emergency for each Internal Combustion Rig Engine identified by Device ID Nos.

Generally Applicable Conditions

- 19. Petitioner shall request expedited review and processing of both the Source Test Protocol and the Source Test report by submitting the Expedited Evaluation request Form 222-XST.
- 20. The Parties shall appear before the Hearing Board for a status/modification hearing in April 2024.
- 21. Petitioner shall calculate and pay excess emission fees to the Clerk of the Board no later than February 29, 2024, for January excess emissions, and subsequently no later than the 30th of each month for the previous month, or the variance will be invalidated pursuant to Rule 303(k).
- 22. Petitioner shall notify the Clerk of the Board in writing at clerkofboard@aqmd.gov when final compliance has been achieved.
- 23. As this is a Title V facility, Petitioner shall notify US EPA of this Order promptly after its issuance in accordance with its Title V obligations.

EXCESS EMISSIONS

NOx: 1964 lbs/day

Failure to comply in full with any and all conditions and increments of progress may result in modification or revocation of this order by the Hearing Board, and/or enforcement actions by the South Coast AQMD.

REMINDER

The Parties shall appear before the Hearing Board for a status/modification hearing in April 2024.

Present:

Cynthia Verdugo-Peralta, Chair
Robert Pearman, Esq., Vice Chair
Jerry P. Abraham, M.D., MPH, CMQ
Micah Ali
Mohan Balagopalan

Representing the Petitioner: Ivan Tether, Attorney at Law

Representing the Respondent: Josephine Lee, Senior Deputy District Counsel

Witness for the Petitioner: Jeff Ortloff, Director of Facilities Engineering, Amplified Energy Corp.
Don Barkley, Senior Engineer, Yorke Engineering
Cory Whidden, Manager Director of Compliance Project

Petitioner's Exhibits:

- *#1 - Notice of Violation No. P79006
- *#2 - Compliance Timeline
- *#3 - Facility Permit to Operate No. 166073
- *#4 - PowerPoint, Beta Field Federal OCS-P0300, 0301, 0306
- *#5 - Cover letter and Updated Compliance Timeline
- *#6 - Declaration of Jeff Ortloff
- *#7 - Revised Excess Emissions Calculations

Respondent's Exhibits: A - Proposed Variance Conditions

*Entered into Evidence

Motion: Fearman/All 4-1, Balagopalan votes No.

Board

Review/Approval



Robert Pearman, Vice Chair

Dated 12/15/23

Prepared by Altheresa Rothschild

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

In the Matter of)	Case No. 5855-7
)	
BETA OFFSHORE OPERATING, LLC)	
)	
Order Granting a Regular Variance)	
)	
)	
Section 42350 of the California)	
Health and Safety Code)	
_____)	

FINDINGS AND DECISION OF THE HEARING BOARD

This petition for a regular variance was heard on **December 7, 2023**, pursuant to notice in accordance with the provisions of California Health and Safety Code Section 40826. Five members of the Hearing Board were present: Cynthia Verdugo-Peralta, Chair; Robert Pearman, Esq., Vice Chair; Jerry P. Abraham, M.D., MPH, CMQ; Micah Ali and Mohan Balagopalan. Petitioner was represented by Ivan Tether, Attorney at Law. Respondent, Executive Officer, was represented by Josephine Lee, Senior Deputy District Counsel. The public was given the opportunity to testify. Evidence was received, and the case submitted. The Hearing Board finds and decides as follows:

Nature of Business and Location of Facility

Petitioner produces oil and gas from three platforms: Ellen, Elly and Eureka located about nine (9) miles offshore from Huntington Beach, within the San Pedro Bay shelf on the Federal Outer Continental Shelf of California, and transports oil by pipeline from the Beta oil field to its onshore facilities in the port of Long Beach.

Equipment and Permit to Construct/Operate

The equipment that is the subject of this petition is Six Internal Combustion Rig Engines,(Device ID Nos. D81, D82, D83, D84, D85, and D86) and associated Selective Catalytic Reduction (SCR) Units (Device ID Nos. C197, C198, C199, C200, C201 and C202); and three Centaur Turbines (Device ID Nos. D98, D99, and D100) and associated SCRs (Device ID Nos. C203, C204, and C205); and three Saturn Turbine (Device ID Nos. D95, D96 and D97, due to be phased out during this variance period). The equipment is operated pursuant to Facility P/O No. 166073.

SUMMARY

Petitioner will be violation of District Rules 203, 1100, 1110.2, 1134, 2004, 2012, and 3002 and intends to achieve compliance by expeditiously retrofitting it equipment to comply with the ongoing Air Quality Compliance Project.

FINDINGS OF FACT AND CONCLUSIONS

Following are the facts and conclusions supporting the findings set forth in Health and Safety Code Section 42352 necessary to grant the variance. The Executive Officer did not oppose the granting of the variance.

a. The petitioner for a variance is, or will be, in violation of Section 41701 or of any rule, regulation, or order of the District.

1. Petitioner will be in violation of South Coast AQMD Rule 203, 1100, 1110.2, 1134, 2004, 2012, and 3002, which requires compliance with permit conditions

because petitioner may exceed the new reduced Oxides of Nitrogen (NOx) limit, various equipment gauges cannot be monitored until the SCRs can be installed, and source testing compliance with various South Coast AQMD Rules by the January 1, 2024, deadline.

b(1). Non-compliance with District Rule(s) is due to conditions beyond the reasonable control of the petitioner.

1. Petitioner began its Air Quality (AQ) Compliance Project in August 2018, in anticipation of rule amendments, requiring substantial Oxides of Nitrogen (NOx) reduction for its engines and turbines by December 31, 2023, and January 1, 2024, respectively.

2. Petitioner testified that in January 2021, two large container ships, prohibited from dragging anchor in the region of petitioner's pipeline, violated that prohibition and snared the pipeline, petitioner shut down all transportation of oil from the platforms and all production for a period of 18 months (from October 2021 until April 2023).

3. During this 18-month period, petitioner did not know if it would be allowed to resume pipeline operations and produce the oil that depend on the pipeline. Petitioner is required by federal law to maintain personnel on the platforms at all times, however, petitioner's revenue from the platforms was fully interrupted for that 18-month period. With the future unclear petitioner's AQ Compliance Project was limited to timely application for South Coast AQMD permits for its engines and turbines to comply with the new NOx limits. The estimated cost for the AQ Compliance Project is over \$20 million.

4. On or about April 7, 2023, three federal agencies, the US Army Corps of Engineers, the Pipeline Hazardous Material Safety Administration, and the Bureau of Safety and Environmental Enforcement, with input from California State Lands Commission, authorized petitioner to resume use of the pipeline which allowed petitioner

to return to production. Immediately upon receipt of pipeline authorization, petitioner reinstated and expedited the AQ Compliance Project.

5. Petitioner reasonably expects that it can achieve compliance by October 30, 2024.

b(2). Requiring compliance would result in either (1) an arbitrary or unreasonable taking of property, or (2) the practical closing and elimination of a lawful business.

1. If the variance were not granted, petitioner would suffer significant economic harm as petitioner's operations were completely shut down for 18 months after damage to the pipeline, in which petitioner had no revenue from that period, and petitioner's AQ Compliance Project is estimated to be over \$20 million.

c. The closing or taking would be without a corresponding benefit in reducing air contaminants.

1. The excess NOx emissions are expected to be approximately 1964 pounds per day.

2. The Board determined that the significant harm to petitioner would outweigh the benefit to air quality if the amount of emissions associated with this variance were eliminated as a result of denying the variance.

d. The petitioner for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.

1. Petitioner has considered shutting down and curtailing operations, petitioner has been shut down for 18 months with a complete revenue loss. Any further shut down would jeopardize petitioner's ability to complete the AQ Compliance Project.

e. During the period the variance is in effect, the petitioner will reduce excess emissions to the maximum extent feasible.

1. During the variance period, petitioner will reduce excess emissions to the maximum extent feasible by operating only 2 of the 3 Centaur turbines. By end of March 2024, all 3 Saturn turbines will have been replaced and be fully electrified. As of August 2023, substantial electrical load from the Centaurs had been shifted to the municipal power grid, reducing natural gas and diesel usage, and petitioner will only use 3 of the 6 rig engines at any one time unless an emergency situation arises and creates a risk to personnel or the environment.

f. During the period the variance is in effect, the petitioner will monitor or otherwise quantify emission levels from the source, if requested to do so by the District, and report these emission levels to the District pursuant to a schedule established by the District.

1. Petitioner will monitor or otherwise quantify emission by adhering to the conditions of this Order and providing a monthly log to South Coast AQMD staff.

ORDER

THEREFORE, good cause appearing, the Hearing Board orders as follows:

A. Petitioner is granted a regular variance from District Rules 203(b), 2004(f)(1), 3002(c)1) {from Permit Condition Nos. A63.15, A63.16, D12.8, D12.9, D12.10, D12.11, D12.12, D12.13, D12.14, D29.5, D29.6, E193.2, E448.9, H23.9 and H23.10 of Facility Permit No. 166073} and from Rules 1100(d)(1)(B), 1110.2(e)(2), (e)(4), (e)(10), (f)(1)(C), 1134(d)(3), (e)(2), (e)(3), and 2012 for Six Internal Combustion Engines, Nine Selective Catalytic Reduction (SCR) Units, Six Gas Turbines, and Urea Injection System for the period commencing December 31, 2023, and continuing through October 30, 2024, the final compliance date.

B. The variance granted herein is subject to the following conditions:

"Saturn Turbines" – Device id Nos. D95, D96 and D97

1. Petitioner shall cease operation of the three Saturn Turbines according to the following schedule:
 - a. For at least one of the three Saturn Turbines, within thirty (30) days of receipt of the electrical and control system for the replacement electric motor and no later than February 15, 2024.
 - b. For the second of the three Saturn Turbines, within thirty (30) days of completing the commissioning of the replacement electric motor for the second Saturn Turbine and no later than March 1, 2024.
 - c. For the third of the Saturn Turbines, within thirty (30) days of completing the commissioning of the replacement electric motor for the second Saturn Turbine and no later than April 1, 2024.
2. Selection of the sequence of ceasing operation of each Saturn Turbine shall be at the discretion of Petitioner subject to the timeline set forth in Condition 1.
3. Within thirty (30) days of removing all Saturn Turbines, Petitioner shall submit a Form 200-C Request to Inactivate a Permit to Operate for Devices D95, D96 and D97.

"Centaur Turbine" – Device ID Nos. D98, D99, and D100

4. Petitioner shall, within sixty (60) days of issuance of this Order, submit a source test protocol to the District to determine Rule 1134 compliance for the Centaur Turbines.
5. Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:
 - a. Within seventy-five (75) days of receipt of the selective catalytic reduction ("SCR") system for at least one of the Centaur Turbines and no later than May 30, 2024.
 - b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than July 31, 2024. (Commissioning is required to ensure the safety and reliability of each device and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) signoffs by the company.)
 - c. For the third of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the prior two Centaur Turbines and no later than September 30, 2024.
6. Selection of the sequence of retrofitting each Centaur turbine shall be at the discretion of Petitioner subject to the timeline set forth in Condition 5.
7. At any time after the retrofit of a Centaur Turbine is completed, but no later than thirty (30) days after completing the retrofit for all three Centaur Turbines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1134 compliance.
8. Within sixty (60) days of completing the source test, Petitioner shall submit a copy of the source test results for each Centaur Turbine to South Coast AQMD by email to AQ Engineer 1 Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov).
9. During the term of this variance, Petitioner shall operate no more than any two of the three Centaur Turbines at a given time, except in the event of an emergency that creates

a risk to the health and safety of personnel and/or environment that cannot be avoided without operating an additional Centaur Turbine.

10. Petitioner shall maintain a monthly usage log for the Centaur Turbine and send log records to South Coast AQMD by email to AQ Engineer 1 Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov) by the first Tuesday of each month starting January 2024. The log shall contain at minimum:
 - a. Date and total hours of operation, including start and end time, for each turbine identified by Device ID No.;
 - b. Date and total quantity of fuel usage for each turbine identified by Device ID No.;
 - c. If a turbine was operated in the case of an emergency as identified in Condition 9, then:
 - i. Basis for the emergency;
 - ii. Date and total hours of operation, including start and end time, under emergency for each turbine identified by Device ID No.; and
 - iii. Date and total quantity of fuel usage under emergency for each turbine identified by Device ID No.

Internal Combustion Rig Engines – Device ID Nos. D81, D82, D83, D84, D85, and D86

11. Petitioner shall, within sixty (60) days of issuance of this Order, submit a source test protocol to the District for approval to determine Rule 1110.2 compliance for the Internal Combustion Rig Engines.
12. Petitioner shall retrofit the six Internal Combustion Rig Engines to demonstrate compliance with Rule 1110.2(d)(1) according to the following schedule:
 - a. For at least one of the six Rig Engines, within fourteen (14) days of completion of structural modification and deck extension on Platform Eureka;
 - b. For the second of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12a.;
 - c. For the third of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12b.;
 - d. For the fourth of the six Rig Engines, within fourteen (14) days of completion of structural modification and deck extension on Platform Ellen;
 - e. For the fifth of the six Rig Engines, within fourteen (14) days of completing the commissioning of the retrofit of the previously selected Rig Engine pursuant to Condition 12d.;
 - f. For the sixth of the six Rig Engines, within fourteen (14) days of completing the commissioning of the previously selected Rig Engine pursuant to Condition 12e.
13. NUMBER OMITTED
14. Selection of the sequence of retrofitting each Rig Engine shall be at the discretion of Petitioner subject to the schedule set forth in Condition 12.
15. At any time after the retrofit of an Internal Combustion Rig Engine is completed, but not later than thirty (30) days after completing the retrofit for all six Internal Combustion Rig Engines, Petitioner shall conduct a source test pursuant to the requirements of the approved source test protocol to demonstrate Rule 1110.2 compliance.

16. Within sixty (60) days of completing the source test, Petitioner shall submit a copy of the source test results for each Centaur Turbine to South Coast AQMD by email to AQ Engineer I Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov).
17. During the term of this variance, Petitioner shall operate no more than three of the six Internal Combustion Rig Engines at a given time, except in the event of an emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating one or more additional rig engine(s).
18. Petitioner shall maintain a monthly usage log for the Internal Combustion Rig Engines and send log records to South Coast AQMD by email to AQ Engineer I Kaesean Brown (kbrown1@aqmd.gov) and AQ Inspector II Adam Tavasolian (atavasolian@aqmd.gov) by the first Tuesday of each month starting January 2024. The log shall contain at minimum:
 - a. Date and total hours of operation, including start and end time, for each engine identified by Device ID No.;
 - b. Date and total quantity of fuel usage each engine identified by Device ID No.; and
 - c. If an Internal Combustion Rig Engine was operated in the case of an emergency as identified in Condition 17, then:
 - i. Basis for the emergency;
 - ii. Date and total hours of operation, including start and end time, under emergency for each Internal Combustion Rig Engine identified by Device ID No. ; and
 - iii. Date and total quantity of fuel usage under emergency for each Internal Combustion Rig Engine identified by Device ID Nos.

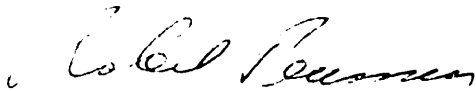
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Generally Applicable Conditions

19. Petitioner shall request expedited review and processing of both the Source Test Protocol and the Source Test report by submitting the Expedited Evaluation request Form 222-XST.
20. The Parties shall appear before the Hearing Board for a status/modification hearing in April 2024.
21. Petitioner shall calculate and pay excess emission fees to the Clerk of the Board no later than February 29, 2024, for January excess emissions, and subsequently no later than the 30th of each month for the previous month, or the variance will be invalidated pursuant to Rule 303(k).
22. Petitioner shall notify the Clerk of the Board in writing at clerkofboard@aqmd.gov when final compliance has been achieved.
23. As this is a Title V facility, Petitioner shall notify US EPA of this Order promptly after its issuance in accordance with its Title V obligations.

FOR THE BOARD:

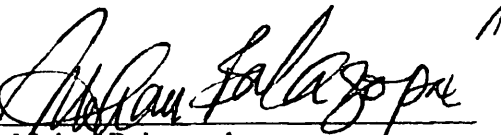


Robert Pearman, Esq., Vice Chair

DATE SIGNED:

March 21, 2024

I Vote No.



Mohan Balagopalan

ar

PROOF OF SERVICE BY E-MAIL

Case No. 5855-7

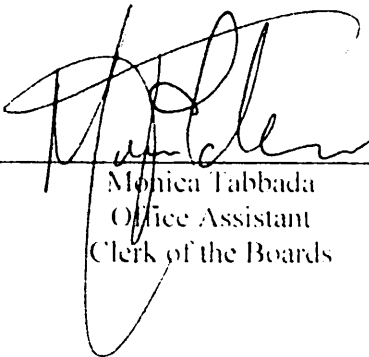
I, the undersigned, declare that I am employed in the **County of Los Angeles, State of California**. I am over the age of eighteen years and am not a party to the within action. My business address is **21865 Copley Drive, Diamond Bar, California 91765**.

CALIFORNIA AIR RESOURCES BOARD <u>variance@arb.ca.gov</u>	US EPA AIR ENFORCEMENT OFFICE <u>aeo_r9@epa.gov</u>
DAN STEWARD BETA OFFSHORE <u>dan.steward@amplifyenergy.com</u>	IVAN TETHER TETHER LAW <u>ivan@tetherlaw.com</u>

BY E-MAIL - By transmitting a true pdf copy of the **Findings and Decision** before the **Hearing Board** by e-mail transmission from mtabbada@aqmd.gov to each of the interested party at the e-mail addresses set forth above. Said transmission(s) were completed on the aforesaid date at the time stated on declarant's email transmission record.

I declare under penalty of perjury under the laws of the **State of California** that the foregoing is true and correct.

Executed on **March 29, 2024** at **Diamond Bar, California**.



Monica Tabbada
Office Assistant
Clerk of the Boards

Beta Offshore, Case No. 5855-7
Petition to Modify Conditions and Extend Final Compliance Date
September 24, 2024

Prior Hearing Board Orders

April 23, 2024 Hearing
Modification of Variance Conditions
Minute Order and Findings and Decision

Orders – April 23, 2024 Hearing

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

MINUTE ORDER

**BETA OFFSHORE OPERATING, LLC
OCS Lease Parcels P300/301
Huntington Beach, CA 92648**

**Case No: 5855-7
Facility ID: 166073**

Hearing Date: 4/23/24 Hearing Type: Modification Variance Conditions Consent Calendar:
Previous Hearing Date: 12/7/23

HEARING BOARD ACTION

Action: Modified

Starting Date: 4/23/24

Ending Date: 11/16/24

Present:

Cynthia Verdugo-Peralta, Chair
Robert Pearman, Esq., Vice Chair
Jerry P. Abraham, MD MPH CMQ
Mohan Balagopalan

Absent:

Micah Ali

Representing the Petitioner:

No Appearance

Representing the Respondent:

No Appearance

Petitioner's Exhibits:

*#8 – Stipulation to Place matter on Consent Calendar
*#9 – Declaration of Jeff Ortloff
*#10 – Proposed Findings and Decision

Hearing Board's Exhibit:

*HB-1 – Email Thread Re: Board Member Balagopalan's
Question and Parties' Response

***Entered into Evidence**

Comments:

The Board modified and/or clarified Conditions Nos. 5, 9 and 12.d of the regular variance granted to petitioner on December 7, 2023, as set forth on Pages 8 and 9 of the attached Findings and Decision of the Hearing Board.

Other than the modifications/clarifications specified above, petitioner is subject to the conditions imposed on the regular variance, to the extent that they remain applicable, including the final compliance date of November 16, 2024.

Motion: _____ Verdugo-Peralta/Pearman 3-1, Balagopalan votes no

**Board
Review/Approval**

Cynthia Verdugo-Peralta
Cynthia Verdugo-Peralta, Chair

Dated

05/21/24

Prepared by Rosalinda Diaz
Attachment: Findings and Decision of the Hearing Board

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

In The Matter of:)	Case No. 5855-7
BETA OFFSHORE OPERATING, LLC)	
Order Granting Modification to a Regular Variance)	
Section 42350 of the California Health and Safety Code)	

FINDINGS AND DECISION OF THE HEARING BOARD

Petitioner's request for modification to conditions to a regular variance was heard on the Hearing Board's Consent Calendar on **April 23, 2024**, as ordered pursuant to notice and in accordance with the provisions of California Health and Safety Code Section 40826. The following members of the Hearing Board were present: Cynthia Verdugo-Peralta, Chair; Robert Pearman, Esq., Vice Chair; Jerry P. Abraham, M.D., MPH, CMQ; Micah Ali and Mohan Balagopalan. Petitioner, Beta Offshore Operating, LLC (hereinafter also referred to as "Petitioner" or "Beta"), represented by Ivan Tether, Attorney at Law, did not appear. The Executive Officer of the South Coast Air Quality Management District ("District"), represented by Josephine Lee, Senior Deputy District Counsel, did not appear. The parties filed with the Hearing Board a Joint Stipulation to Have This Matter Placed on the Consent Calendar of the Hearing Board. Petitioner filed with the Hearing Board the Declaration of Jeff Ortloff (Director of Facilities Engineering for Amplify Energy Corp., Beta's parent company) in support of Status Report and/or Modification Hearing for a regular variance. The parties submitted a Proposed Findings and Decision and Order of the Hearing Board. The public was given an opportunity to testify. The matter was submitted and evidence received. The Hearing Board finds and decides as follows:

Nature of Business and Location of Facility

1. Petitioner, with a facility located on OCS Lease Parcels P300/P301 of the Outer Continental Shelf, approximately nine miles offshore from Huntington Beach, CA

(Facility ID No. 166073), is an oil and gas producer. Beta Offshore includes three offshore platforms, Ellen, Elly and Eureka.

Equipment and Permit to Construct/Operate

2. On December 7, 2023, the Hearing Board granted Beta a regular variance until November 16, 2024 from certain requirements under District Rules 203, 1110.2, 1134, 1100, 2004, 2012 and 3002, as well as permit conditions detailed below in Paragraph 6. The regular variance was granted for the following equipment: Six Internal Combustion (Rig) Engines: Devices D81 through D86, Application/Permit Numbers (A/N) 630158, 630160, 630161, 630221, 630222, and 630224; Six Selective Catalytic Reduction (SCR) systems to be retrofitted to those six IC (Rig) Engines: Devices C197 through C202, A/N 630226, 630230, 630231, 630266, 630267 and 630268; Three Centaur Gas Turbines: Devices D98 through D100, A/N 638605, 638607 and 638608; and Three SCR systems to be retrofitted to those three Centaur Turbines: Devices C203 through C205, A/N 638609, 638610 and 638611. The variance was also granted for Three Saturn Turbines, Devices D95 through D97, A/N 516038, 516039 and 516040, which have since ceased operation in compliance with Variance Condition 1.

SUMMARY OF THE CASE FOR THE REGULAR VARIANCE

3. Beta delivers the crude oil produced from the Platforms to the refinery by pipeline. Beta relies on the six internal combustion (IC) engines and six turbines (now only the three Centaur Turbines) referenced above to operate the platforms. Amendments to District Rules 1110.2 on November 1, 2019 and 1134 on February 4, 2022 require substantial NOx reductions from these engines and turbines. (The three Saturn Turbines have now been replaced by electric motors and that element of compliance has been completed.)

4. While Beta began its Air Quality (AQ) Compliance Project in August 2018 in anticipation of the rule amendments, that progress was interrupted in the fall of 2021 (until April 2023) when the impact of prohibited anchor dragging by two third-party container vessels that snagged and ruptured Beta's pipeline manifested into an oil spill.

For eighteen months Beta shut down all production and had little if any idea whether it would ever be able to resume normal operations. During that time, Beta was required by federal law to maintain personnel and facility safety systems on the platforms, yet had no revenue from the platforms. Beta primarily devoted resources to investigating and repairing damage to the pipeline. Beta did timely apply for the District permits required for the AQ Compliance Project.

5. On or about April 7, 2023, three federal agencies, with input from the California State Lands Commission, authorized Beta to resume use of the pipeline which allowed Beta to return to production. Immediately upon receipt of pipeline authorization, Beta reinstated and expedited the AQ Compliance Project, yet determined in the summer of 2023 that the Project could not be completed by the end of the year and that Beta would require variance relief.

Rules and Permit Conditions for Which Beta Is Out of Compliance

6. As of January 1, 2024, Beta's Centaur Turbines and as of December 31, 2024, Beta's Rig Engines were out of compliance and continue to be out of compliance with the following Rules and Permit Conditions because of the interruption in operations triggered by the third-party anchor dragging and pipeline rupture:

- Rule 1134(d)(3), (e)(2) and (e)(3) -- The reduced NOx emission limits cannot be achieved by 01/01/2024
- Rule 2012 -- Cannot comply until after SCR retrofit for reporting lower NOx limits
- Rule 1110.2(d), (e)(2), (e)(4), (e)(10), (f)(1)(C) and (f)(1)(D) -- The RECLAIM facility cannot meet the applicable NOx emission limit by 12/31/2023
- Rule 1100(d)(1)(B) -- Operator cannot meet the RECLAIM transition requirements for Rule 1110.2 by 12/31/2023, as required by this reference in Rule 1100.
- Permit Condition (PC) A63.15 -- NOx emissions may exceed 6.1 lb/day limit for Rig Engines.

- PC A63.16 – NOx emissions may exceed 117.5 lb/day for gas turbines
- PC D12.8 – Temperature gauge cannot be monitored and maintained until SCR is installed to Rig Engines
- PC D12.9 – Pressure gauge cannot be monitored and maintained until SCR is installed to Rig Engines
- PC D12.10 – Flow meter cannot indicate the urea injection flow rate until SCR is installed to Rig Engines
- PC D12.11 -- Flow meter cannot indicate the urea injection flow rate until SCR is installed (rig engines)
- PC D12.12 -- Temperature gauge cannot be monitored and maintained until SCR is installed (Centaur gas turbines)
- PC D12.13 -- Pressure gauge cannot be monitored and maintained until SCR is installed (Centaur gas turbines)
- PC D12.14 -- Flow meter cannot indicate the urea injection flow rate until SCR is installed (Centaur gas turbines)
- PC D29.5 -- Source test at the outlet of the SCR serving the equipment cannot be performed until SCR is installed (rig engines)
- PC D29.6 -- Source test at the outlet of the SCR serving the equipment cannot be performed until SCR is installed (Centaur gas turbines)
- PC E193.2 -- Cannot assure compliance with backpressure limit until equipment is installed and operating
- PC E448.4 -- Rig engines will be in noncompliance of the I&M plan
- PC E448.9 -- Operator may not be able to comply with timeline requirements of the I&M plan submittal
- PC H23.10 -- Rig engines cannot comply with requirements in Rule 1110.2 by 12/31/2023
- PC H23.9 -- Gas turbines cannot comply with requirements in Rule 1134 by 1/1/2024 (Centaur gas turbines)

Rules for Which Beta Achieved Compliance

7. As of January 27, 2024, Beta's Saturn Turbines ceased operation and were no longer in noncompliance with the following Rules and Permit Conditions:

- Rule 1134(d)(3), (e)(2) and (e)(3) -- The reduced NOx emission limits cannot be achieved by 01/01/2024 (still applies to the Centaur Turbines)
- Permit Condition (PC) A63.16 – NOx emissions may exceed 117.5 lb/day for gas turbines (still applies to the Centaur Turbines)
- PC E448.9 -- Operator may not be able to comply with timeline requirements of the I&M plan submittal (still applies to the Centaur Turbines)
- PC H23.9 -- Gas turbines cannot comply with requirements in

Variance Conditions and Requested Modification and Clarification

8. Under the Regular Variance, Beta is subject to twenty-two (22) Conditions (Number 13 of 23 was omitted) detailed in the December 15, 2023 Minute Order recording the Hearing Board's grant of the regular variance on December 7, 2023. These conditions together lead to final compliance with all applicable Rules and Permit Conditions. Beta has complied with all Variance Conditions that have required action to this time. Beta requests modification of future deadlines in two Variance Conditions, Condition 5 and Condition 12.d, as detailed below. Beta requests clarification of one Variance Condition, Condition 9, as detailed below, to enumerate scenarios falling within an exception. Beta anticipates compliance with all other Variance Conditions and anticipates achieving final compliance under the Regular Variance before the final compliance date of November 16, 2024.

- Condition 5, requested modification: The Fitch Company, which manufactures the Urea Injection Skids which are a component of the SCR systems required for retrofit of the Centaur Turbines, experienced major flooding in mid-December 2023, resulting in destruction two of the three required Skids. Beta documented this destruction by a letter and photographs from the manufacturer. Because of this flood damage, Beta requests that the specific date deadlines for retrofit of the Centaur Turbines in Condition 5 be extended – by one month for the first two and by fifteen days for the third. Beta learned of this problem and delay from a January 24, 2024 letter from the Fitch Company. The requested change to the original condition is shown below with strikethroughs and underlines:

5. Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:

- a. Within seventy-five (75) days of receipt of the selective catalytic

reduction (“SCR”) system for at least one of the three Centaur Turbines and no later than ~~May 30, 2024~~ June 30, 2024.

- b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than ~~July 31, 2024~~ August 30, 2024. (Commissioning is required to ensure the safety and reliability of each device, and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) sign-offs by the company.).
- c. For the third of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the prior two Centaur Turbines and no later than ~~September 30, 2024~~ October 15, 2024.

- Condition 9, requested clarification: Because safety and environmental protection require operating three Centaur Turbines during maintenance, source testing, commissioning of new turbines and commissioning after turbine retrofit, Beta requests clarification of Condition 9 to expressly state these exceptions to its limit on operating only two Centaurs at one time. Two of Beta’s three Centaur Turbines run continuously to prevent possible unplanned power outages. If one of the two running turbines were to fail, it would be necessary to rely on the third Centaur Turbine. Maintenance, testing and commissioning all require some period of running three turbines at once to keep all three turbines in good working order and readily available to replace a failed turbine. Without two turbines running, the platforms would lose critical power which would inhibit the facility safety systems from functioning as designed and would lead to unnecessary risks to facility personnel and the environment. All these scenarios fall within Condition 9’s existing exception for “an emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating an additional Centaur Turbine.” Beta requests clarification that the stated scenarios fall within that exception. The requested change to the original

condition is shown below with underlines:

9. During the term of this variance, Petitioner shall operate no more than any two of the three Centaur Turbines at a given time, except when maintenance or source testing of these Turbines (as described in Paragraph 8 of Petitioner's variance petition) requires operation of three Turbines, during commissioning of a new Centaur Turbine, during commissioning after retrofit of a Centaur Turbine, or in the event of another emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating an additional Centaur Turbine.

- Condition 12.d, requested modification: Because of more challenging working conditions (no crane access and safety procedures for working over water) on Platform Ellen, Beta requests more time for retrofitting the 4th Rig Engine, the first Rig Engine on Platform Ellen, by modifying Condition 12.d to allow 30 days instead of 14 days for the retrofit. The requested change to the original condition is shown below with strikethroughs and underlines:

12.d. For the fourth of the six Rig Engines, within ~~fourteen (14)~~ thirty (30) days of completion of structural modification and deck extension on Platform Ellen;

Additional Findings:

9. Final Compliance: Beta can reasonably be expected to achieve compliance by no later than November 16, 2024.

10. Excess Emissions: Beta's actual excess emissions, calculated, reported and paid for month-by-month have proven to be substantially less than calculated in their Petition for the regular variance. For the month of January 2024, net emissions were 517 lbs/day, as compared to the potential to emit (PTE) with no mitigation of 3,495 lbs/day, showing a reduction of 2,978 lbs/day. For the month of February 2024, net emissions were

642 lbs/day, as compared to the PTE with no mitigation of 3,495 lbs/day, showing a reduction of 2,853 lbs/day. For the month of March 2024, net emissions were 670 lbs/day, as compared to the PTE with no mitigation of 3,495 lbs/day, showing a net reduction of 2,825 lbs/day.

11. Harm to Beta if Modifications Not Granted: If the requested modifications to the existing variance are not granted, Beta would be in violation of Conditions 5 and 12.d of the existing Variance. Because the deadlines in question are not resolved by shutdown of the related equipment until compliance is achieved, Beta would face potential revocation of the Variance.

ORDER

THEREFORE, good cause appearing, the Hearing Board orders as follows:

A. Petitioner is granted the following modifications and clarification to the Conditions imposed by the Regular Variance granted on December 7, 2023:

- Condition 5 is modified to read: “Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:
 - a. Within seventy-five (75) days of receipt of the selective catalytic reduction (“SCR”) system for at least one of the three Centaur Turbines and no later than ~~May 30, 2024~~ June 30, 2024.
 - b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than ~~July 31, 2024~~ August 30, 2024.
(Commissioning is required to ensure the safety and reliability of each device, and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) sign-offs by the company.).
 - c. For the third of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the prior two Centaur Turbines and no later than ~~September 30, 2024~~ October 15, 2024.”

- Condition 9 is clarified to read: “During the term of this variance, Petitioner shall operate no more than any two of the three Centaur Turbines at a given time, except when maintenance or source testing of these Turbines (as described in Paragraph 8 of Petitioner’s variance petition) requires operation of three Turbines, during commissioning of a new Centaur Turbine, during commissioning after retrofit of a Centaur Turbine, or in the event of another emergency that creates a risk to the health and safety of personnel and/or environment that cannot be avoided without operating an additional Centaur Turbine.”
- Condition 12.d is modified to read: “For the fourth of the six Rig Engines, within ~~fourteen (14)~~ thirty (30) days of completion of structural modification and deck extension on Platform Ellen;

B. Other than the modifications and clarifications immediately above, Petitioner is subject to the Conditions imposed upon Petitioner under the Regular Variance granted on December 7, 2023, to the extent these Conditions remain applicable.

BOARD MEMBER: Cynthia Verdugo-Peralta
Cynthia Verdugo-Peralta, Chair

DATED: 5/21/24

I VOTE NO: Mohan Balagopalan
Mohan Balagopalan

Prepared by Ivan Tether, Attorney for Petitioner
and Reviewed by Josephine Lee, Senior Deputy District Counsel

Beta Offshore, Case No. 5855-7
Petition to Modify Conditions and Extend Final Compliance Date
September 24, 2024

Prior Hearing Board Orders

July 18, 2024 Hearing
Modification of Variance Conditions
Minute Order and Findings and Decision

Orders – July 18, 2024 Hearing

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MINUTE ORDER**

**BETA OFFSHORE OPERATING, LLC
OCS Lease Parcels P300/301
Huntington Beach, CA 92648**

**Case No: 5855-7
Facility ID: 166073**

Hearing Date: 07/18/2024 **Hearing Type:** Mod. Variance Conditions **Consent Calendar:** Yes

Previous Hearings: 12/7/23 and 4/23/24

HEARING BOARD ACTION

Action: Granted

Starting Date: 07/18/2024

Ending Date: 11/16/2024

Present:

Micah Ali, Chair
Robert Pearman, Esq., Vice Chair
Jerry P. Abraham, M.D., MPH, CMQ
Mohan Balagopalan

Absent:

Cynthia Verdugo-Peralta

Representing the Petitioner:

No Appearance

Representing the Respondent:

No Appearance

Petitioner's Exhibits:

#11 - Stipulation to Place Matter On Consent Calendar
#12 - Declaration of Jeff Ortloff
#13 - Declaration of Ivan Tether
#14 - Proposed Findings and Decision

Hearing Board's Exhibit:

HB-2 - Email from Balagopalan to the Parties

Comments:

The Board modified Variance Condition No.5 of the regular variance granted to petitioner on December 7, 2023, and initially modified on April 23, 2024, as set forth on pages 8 and 9 of the attached Findings and Decision of the Hearing Board.

Other than the modification(s) specified above, petitioner is subject to the conditions imposed on the regular variance, to the extent that they remain applicable, including the final compliance date of November 16, 2024.

Motion:

Pearman/Abraham

3-1, Balagopalan votes No

Board
Review/Approval


Robert Pearman, Esq., Vice Chair

Dated

July 31, 2024

Prepared by: Altheresa Rothschild

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

In The Matter of:)
) Case No. **5855-7**
BETA OFFSHORE OPERATING, LLC)
)
Order Granting Modification to a Regular)
Variance)
)
Section 42350 of the California)
Health and Safety Code)
_____)

FINDINGS AND DECISION OF THE HEARING BOARD

Petitioner's request for modification to conditions to a regular variance was heard on the Hearing Board's Consent Calendar on **July 18, 2024**, as ordered pursuant to notice and in accordance with the provisions of California Health and Safety Code Section 40826. The following members of the Hearing Board were present: Micah Ali, Chair; Robert Pearman, Esq., Vice Chair; Jerry P. Abraham, M.D., MPH, CMQ; Mohan Balagopalan. Board member, Cynthia Verdugo-Peralta was absent. Petitioner, Beta Offshore Operating, LLC (hereinafter also referred to as "Petitioner" or "Beta Offshore" or "Beta"), represented by Ivan Tether, Attorney, Tether Law, did not appear. The Executive Officer of the South Coast Air Quality Management District ("District"), represented by Josephine Lee, Senior Deputy District Counsel, did not appear. The parties filed with the Hearing Board a Joint Stipulation to Have This Matter Placed on the Consent Calendar of the Hearing Board. Petitioner filed with the Hearing Board the Declaration of Jeff Ortloff (Director of Facilities Engineering for Amplify Energy Corp., Beta Offshore's parent company) and the Declaration of Ivan Tether, both declarations in support of the Hearing on modification of variance conditions for a regular variance. The parties submitted Proposed Findings and Decision of the Hearing Board. The public was given an opportunity to testify. The matter was submitted and evidence received. The Hearing Board finds and decides as follows:

Nature of Business and Location of Facility

1. Petitioner, with a facility located on OCS Lease Parcels P300/P301 of the Outer Continental Shelf, approximately nine miles offshore from Huntington Beach, CA

(Facility ID No. 166073), is an oil and gas producer. Beta Offshore includes three offshore platforms, Ellen, Elly and Eureka.

Equipment and Permit to Construct/Operate

2. On December 7, 2023, the Hearing Board granted Beta Offshore a regular variance until November 16, 2024 from certain requirements under District Rules 1110.2, 1134, 1100 and 2012 and 3002, as well as permit conditions detailed below in Paragraph 6. The variance was granted for the following equipment: Six Internal Combustion (Rig) Engines: Devices D81 through D86, Application/Permit Numbers (A/N) 630158, 630160, 630161, 630221, 630222, and 630224; Six Selective Catalytic Reduction (SCR) systems to be retrofitted to those six IC (Rig) Engines: Devices C197 through C202, A/N 630226, 630230, 630231, 630266, 630267 and 630268; Three Centaur Gas Turbines: Devices D98 through D100, A/N 638605, 638607 and 638608; and Three SCR systems to be retrofitted to those three Centaur Turbines: Devices C203 through C205, A/N 638609, 638610 and 638611. The variance was also granted for Three Saturn Turbines, Devices D95 through D97, A/N 516038, 516039 and 516040, which have since ceased operation in compliance with Variance Condition 1.

SUMMARY OF THE CASE FOR THE REGULAR VARIANCE

3. Beta delivers the crude oil produced from the Platforms to the refinery by pipeline. Beta relies on the six internal combustion (IC) engines and six turbines (now only the three Centaur Turbines) referenced above to operate the platforms. Amendments to District Rules 1110.2 on November 1, 2019 and 1134 on February 4, 2022 require substantial NOx reductions from these engines and turbines. (The three Saturn Turbines have now been replaced by electric motors and that element of compliance has been completed.)

4. While Beta began its Air Quality (AQ) Compliance Project in August 2018 in anticipation of the rule amendments, that progress was interrupted in the fall of 2021 (until April 2023) when the impact of prohibited anchor dragging by two third-party container vessels that snagged and ruptured Beta's pipeline manifested into an oil spill.

For eighteen months Beta shut down all production and had little if any idea whether it would ever be able to resume normal operations. During that time, Beta was required by federal law to maintain personnel and facility safety systems on the platforms, yet had no revenue from the platforms. Beta primarily devoted resources to investigating and repairing damage to the pipeline. Beta did timely apply for the District permits required for the AQ Compliance Project.

5. On or about April 7, 2023, three federal agencies, with input from the California State Lands Commission, authorized Beta to resume use of the pipeline which allowed Beta to return to production. Immediately upon receipt of pipeline authorization, Beta reinstated and expedited the AQ Compliance Project, yet determined in the summer of 2023 that the Project could not be completed by the end of the year and that Beta would require variance relief.

Rules and Permit Conditions for Which Beta Is Out of Compliance

6. As of January 1, 2024, Beta's Saturn Turbines and Centaur Turbines were out of compliance and as of December 31, 2023, Beta's Rig Engines were out of compliance. With the exception of the equipment detailed in Paragraph 7 as having achieved compliance, below, Beta's equipment continue to be out of compliance with the following Rules and Permit Conditions because of the interruption in operations triggered by the third-party anchor dragging and pipeline rupture:

- Rule 1134(d)(3), (e)(2) and (e)(3) -- The reduced NOx emission limits cannot be achieved by 01/01/2024
- Rule 2012 – Cannot comply until after SCR retrofit for reporting lower NOx limits
- Rule 11110.2(d), (e)(2), (e)(4), (e)(10), (f)((1)(C) and (f)(1)(D) -- The RECLAIM facility cannot meet the applicable NOx emission limit by 12/31/2023
- Rule 1303 (a)(1)-BACT -- Operator cannot comply with equipment being equipped with BACT until SCR are installed

- Rule 1100(d)(1)(B) -- Operator cannot meet the RECLAIM transition requirements for Rule 1110.2 by 12/31/2023, as required by this reference in Rule 1100.
- Permit Condition (PC) A63.15 – NOx emissions may exceed 6.1 lb/day limit for Rig Engines.
- PC A63.16 – NOx emissions may exceed 117.5 lb/day for gas turbines
- PC D12.8 – Temperature gauge cannot be monitored and maintained until SCR is installed to Rig Engines
- PC D12.9 – Pressure gauge cannot be monitored and maintained until SCR is installed to Rig Engines
- PC D12.10 – Flow meter cannot indicate the urea injection flow rate until SCR is installed to Rig Engines
- PC D12.11 -- Flow meter cannot indicate the urea injection flow rate until SCR is installed (rig engines)
- PC D12.12 -- Temperature gauge cannot be monitored and maintained until SCR is installed (gas turbines)
- PC D12.13 -- Pressure gauge cannot be monitored and maintained until SCR is installed (gas turbines)
- PC D12.14 -- Flow meter cannot indicate the urea injection flow rate until SCR is installed (gas turbines)
- PC D29.5 -- Source test at the outlet of the SCR serving the equipment cannot be performed until SCR is installed (rig engines)
- PC D29.6 -- Source test at the outlet of the SCR serving the equipment cannot be performed until SCR is installed (gas turbines)
- PC E193.2 -- Cannot assure compliance with backpressure limit until equipment is installed and operating
- PC E448.4 -- Rig engines will be in noncompliance of the I&M plan
- PC E448.9 -- Operator may not be able to comply with timeline requirements of the I&M plan submittal
- PC H23.10 -- Rig engines cannot comply with requirements in Rule 1110.2 by 12/31/2023
- PC H23.9 -- Gas turbines cannot comply with requirements in Rule 1134 by 1/1/2024

Rules, Permit Conditions and Variance Conditions for Which Beta Achieved

Compliance

7. As of January 27, 2024, Beta's Saturn Turbines ceased operation and were no longer in noncompliance with the following Rules and Permit Conditions:

- Rule 1134(d)(3), (e)(2) and (e)(3) -- The reduced NOx emission limits cannot be achieved by 01/01/2024 (still applies to the Centaur)

Turbines)

- o PC A63.16 – NOx emissions may exceed 117.5 lb/day for gas turbines (still applies to the Centaur Turbines)
- o PC E448.9 -- Operator may not be able to comply with timeline requirements of the I&M plan submittal (still applies to the Centaur Turbines)
- o PC H23.9 -- Gas turbines cannot comply with requirements in Rule 1134 by 1/1/2024 (still applies to the Centaur Turbines)

Ceasing operation of the Saturn Turbines completed compliance with Variance Condition 1 (Ceasing operation of the three Saturn Turbines) and Variance Condition 2 (Only gave Beta discretion to decide the sequence). Timely submittal of a Form 200-C to inactivate the Permits for the Saturn Turbines complied with Variance Condition 3.

Beta complied with Variance Condition 11 by timely submitted the source test protocol to the District to determine Rule 1110.2 compliance of the Rig Engines on February 5, 2024. Beta completed retrofit of three of the six Rig Engines, timely complying with Variance Condition 12, subparts a, b and c.

Variance Condition 5 and Requested Modification

8. Under the Regular Variance, Beta is subject to twenty-two (22) Conditions (Number 13 of 23 was omitted) detailed in the December 15, 2023 Minute Order recording the Hearing Board's granting of the regular variance on December 7, 2023. At the April 23, 2024 Hearing, the Hearing Board granted limited calendar date extensions for Beta to complete retrofitting the three Centaur Turbines (Variance Condition 5, subparts a, b and c) and for retrofitting the fourth Rig Engine (Variance Condition 12, subpart d). The Hearing Board also clarified the breadth of the emergency exception to the limit in Variance Condition 9 on operating more than two of the three Centaur Turbines at a given time.

In their petition for the July 18, 2024 hearing, Beta requested modification of Conditions 5.a and 5.b, to extend only the calendar date deadlines to complete the retrofitting of the first two Centaur Turbines. To be sure that Beta will have adequate time to comply with the Centaur retrofitting calendar date deadlines, Beta requested an additional sixty (60) days (to August 29, 2024) to complete the retrofitting of the first Centaur and an additional

thirty (30) days (to September 29, 2024) to complete the retrofitting of the second Centaur. Beta made a request of this duration out of an abundance of caution to provide time for any further unanticipated events, including potential future extreme weather. Directly below are the underlined specific changes Beta requested to Variance Condition 5:

Variance Condition 5. Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:

- a. Within seventy-five (75) days of receipt of the selective catalytic reduction (“SCR”) system for at least one of the three Centaur Turbines and no later than ~~June 30, 2024~~ August 29, 2024.
- b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than ~~August 30, 2024~~ September 29, 2024. (Commissioning is required to ensure the safety and reliability of each device, and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) sign-offs by the company.)

Beta will be able to comply with the parts of Variance Condition 5 that specify the time allowed for retrofit after a specific event, i.e., (a) “Within seventy-five (75) days of receipt of the selective catalytic reduction (‘SCR’) system” for the first retrofit and (b) for the second retrofit “within sixty (60) days of completing the commissioning of the first Centaur Turbine.” Beta has not, however, been able to meet the June 30, 2024 date deadline for the first retrofit and is concerned that further unanticipated events, such as extreme weather, may delay meeting the August 30, 2024 deadline for the second retrofit.

Several factors contribute to the delay: Components for the Centaur retrofits are produced by manufacturers in Florida, Connecticut, New Jersey, Maine, Oklahoma and Louisiana. Beta consistently pressed these vendors to expedite manufacturing and delivery. Once all components were gathered at the Amplify Facility in Broussard, Louisiana, however, it soon became clear that certain components did not fit together properly or were otherwise defective, and required significant rework before shipping to Beta Offshore’s facility. Rather than creating additional delay by going back to the

original manufacturers and/ or vendors for this rework, Amplify took responsibility to make and pay for the necessary alterations to the defective components. Beta provided to the Hearing Board annotated photographic examples of the types of defects causing the delay in receipt of the SCR Systems by Beta in California. During its quality assurance/quality control (QA/QC) and rework of the received SCR components, Beta experienced additional delay from extreme weather events in Broussard, Louisiana and Houston, Texas. Beta provided to the Hearing Board news reports about this extreme weather in or very near the location of Amplify's component assembly facility and Amplify's Houston headquarters, and a timeline, starting at the April 23, 2024 Status and Modification hearing, and listing the events causing delay and Amplify's responses to minimize delay in getting the SCR Systems to Beta in California.

Beta received in California the repaired and now-matched SCR components for retrofit of the first Centaur Turbine on June 19, 2024. Please note that the first Centaur to be retrofitted is not operating and will not be operating until the retrofit is completed, so no additional emissions will result from the delay.

Additional Findings:

9. **Final Compliance:** Beta can reasonably be expected to achieve compliance by November 16, 2024.

10. **Excess Emissions:** Beta's actual excess emissions, which are calculated, reported to the District and paid for month-by-month have proven to be substantially less than calculated in their Petition for the regular variance. Beta's Report of Excess Emissions and Fees for the Month of May 2024 showed actual excess emissions of 568 lbs/day, and mitigation of 2,937 lbs/day. There will be no (0%) Excess Opacity under the requested relief.

11. **Harm to Beta if Modifications Not Granted:** If the requested modifications to the existing variance were not granted, Beta would no longer be able to operate the Centaur Turbines, which are relied on to power Platform operations. This would result in

a complete shutdown of production and termination of production revenues. While substantial, the expected economic losses for Beta are extremely variable and dependent on multiple factors, including but not limited to commodity prices, operating expenses, and required capital investments. The revenues currently generated from Beta production continue to be critical to funding the large investment required to achieve the compliance discussed in this petition. If the requested modifications are not granted and this results in noncompliance and shutdown of operations, about eighty-five (85) employees would be laid off, and many supply chains would be negatively impacted or closed. These services directly impact the local community and taxable state revenue. In the community, the following would be among those negatively affected: marine / dock services, local transportation, skilled laborers and professionals, such as engineers and consultants, as well as local manufacturing and material suppliers. Additionally, the royalties paid by Beta to the Federal government help fund local offices and personnel at the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM). Beta also works closely with the University of Southern California, NASA and NOAA by supporting their oceanic and atmospheric research as they utilize Beta offshore equipment when that equipment is operating.

ORDER

THEREFORE, good cause appearing, the Hearing Board orders as follows:

A. Petitioner is granted the following modifications to Variance Condition 5 imposed by the Regular Variance granted on December 7, 2023 and modified on April 23, 2024:


Variance Condition 5 is modified to read: Petitioner shall complete the retrofit of the Centaur Turbines according to the following schedule:

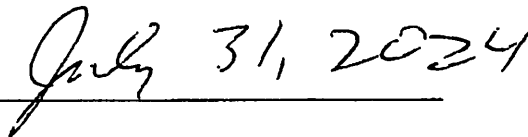
a. Within seventy-five (75) days of receipt of the selective catalytic reduction (“SCR”) system for at least one of the three Centaur Turbines and no later than ~~June 30, 2024~~ August 29, 2024.

b. For the second of the three Centaur Turbines, within sixty (60) days of completing the commissioning of the first Centaur Turbine and no later than ~~August 30, 2024~~ September 29, 2024. (Commissioning is

required to ensure the safety and reliability of each device, and includes processes and tests to ensure all systems and components have been installed, hooked up, and programmed properly. This also includes management of change (MOC), pre-start safety review (PSSR) and quality assurance/quality control (QA/QC) sign-offs by the company.)

B. Other than the modifications immediately above, Petitioner is subject to the Conditions imposed upon Petitioner under the Regular Variance granted on December 7, 2023 and modified on April 23, 2024 to the extent these Conditions remain applicable.

BOARD MEMBER: 
Robert Pearman, Esq., Vice Chair

DATED: 

Prepared by Ivan Tether, Attorney for Petitioner
and Reviewed by Josephine Lee, Senior Deputy District Counsel

Beta Offshore, Case No. 5855-7
Petition to Modify Variance Conditions
July 2, 2024

Attachment A

Beta's Summary Report of Excess Emissions and Fees
For the Month of August 2024

Attachment A

EXCESS EMISSIONS FEES DUE TO SCAQMD¹

NEW RATE OF \$4,589.18 PER TON STARTING JULY 1, 2024

EQUIPMENT	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Saturns	\$ 4,523.18	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Rig Engines	\$ 9,430.21	\$ 8,525.57	\$ 12,739.08	\$ 10,224.36	\$ 10,885.20	\$ 8,504.83	\$ 4,665.92	\$ 1,521.95				
Centaurus	\$ 21,601.40	\$ 32,744.27	\$ 33,371.36	\$ 30,781.14	\$ 27,737.99	\$ 32,995.85	\$ 38,559.28	\$ 40,893.35				
TOTAL	\$ 35,554.80	\$ 41,269.84	\$ 46,110.44	\$ 41,005.50	\$ 38,623.20	\$ 41,500.68	\$ 43,225.20	\$ 42,415.30				

PTE EXCESS EMISSIONS WITH NO MITIGATION, LBS/DAY

EQUIPMENT	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Saturns	262.17	262.17	262.17	262.17	262.17	262.17	262.17	262.17				
Rig Engines	1,468.43	1,468.43	1,468.43	1,468.43	1,468.43	1,468.43	1,468.43	1,468.43				
Centaurus	1,764.62	1,764.62	1,764.62	1,764.62	1,764.62	1,764.62	1,764.62	1,764.62				
TOTAL	3,495.21	3,495.21	3,495.21	3,495.21	3,495.21	3,495.21	3,495.21	3,495.21				

NET EMISSION AFTER MITIGATION EMISSIONS, LBS/DAY¹

Days per Month	31	29	31	30	31	30	31	31	30	31	30	31
EQUIPMENT	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Saturns	65.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Rig Engines	137.21	132.61	185.36	153.73	158.38	127.87	65.60	21.40				
Centaurus	314.31	509.30	485.57	462.81	403.60	496.10	542.08	574.89				
TOTAL	517.33	641.90	670.92	616.53	561.98	623.98	607.67	596.29				

REDUCTION IN EMISSIONS DUE TO MITIGATION, LB/DAY¹

EQUIPMENT	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Saturns	196.36	262.17	262.17	262.17	262.17	262.17	262.17	262.17				
Rig Engines	1,331.21	1,335.82	1,283.07	1,314.70	1,310.04	1,340.55	1,402.83	1,447.03				
Centaurus	1,450.31	1,255.32	1,279.05	1,301.81	1,361.02	1,268.51	1,222.54	1,189.73				
TOTAL	2,977.88	2,853.31	2,824.29	2,878.68	2,933.23	2,871.24	2,887.54	2,898.93				

- Note 1:
- D84 successful compliant source test 7/11/24 below 11 ppmv @15% oxygen; begin no excess emissions on 8/1/24
 - D85 successful compliant source test 7/11/24 below 11 ppmv @15% oxygen; begin no excess emissions on 8/1/24
 - D86 source test 7/11/24 at 13.57 ppmv @ 15% oxygen; begin excess emission factor of 1.37 lb/mgal on 8/1/24 until next source test