

ROUTING RECORD

DATE	FROM	TO	ACTION
JAN 20 2011	RGC	CSB	Z-elt
APR 12 2011	RGC	GT	SPA Review
5/31/11	SSB	RGC	P/C ReCommend.
MAY 31 2011	RGC	P/C	P/C → P/O
AUG 12 2011	RGC	HU	P/C → P/O
AUG 16 2012	HU	RGC	P/C → P/O
	RGC	P/S	G19814

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

See Master A/517840

TV 51737

G19814-mat

APPL # 517841
I.D. # 166073

BETA OFF SHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
INSTALL DIESEL OXIDATION CATALYST

Ellen Carter
Crane Dec

Date: 01/18/11

DSI

BETA OFF SHORE
INSTALL DIESEL OXIDATION CATALYST

AP 517841
ID 166073

0

XPP



South Coast Air Quality Management District
Form 400-A
Application Form for Permit or Plan Approval
 List only one piece of equipment or process per form.

Tel: (909) 396-3385
 www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit):
 Beta Offshore - Beta OCS Platforms Facility

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):
 166073

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: Fixed Location Various Location
 (For equipment operated at various locations, provide address of initial site.)

OCS Lease Parcels P300/P301 (Federal Waters)
 Street Address

City: _____, CA Zip: _____
 Marina Robertson HSE Manager
 Contact Name Title
 (562) 628-1526 (562) 628-1536
 Phone # Ext. Fax #
 E-Mail: mrobertson@betaoffshore.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
 Check here if same as equipment location address

111 West Ocean Blvd., Ste. 1240
 Address
 Long Beach, CA 90802
 City State Zip
 Marina Robertson HSE Manager
 Contact Name Title
 (562) 628-1526 (562) 628-1536
 Phone # Ext. Fax #
 E-Mail: mrobertson@betaoffshore.com

Section D - Application Type

6. The Facility Is: Not In RECLAIM or Title V In RECLAIM In Title V In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- New Construction (Permit to Construct)
- Equipment On-Site But Not Constructed or Operational
- Equipment Operating Without A Permit *
- Compliance Plan
- Registration/Certification
- Streamlined Standard Permit

7b. Facility Permits:

- Title V Application or Amendment (Also submit Form 500-A1)
- RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- Administrative Change
- Alteration/Modification (2)
- Alteration/Modification without Prior Approval *
- Change of Condition
- Change of Condition without Prior Approval *
- Change of Location
- Change of Location without Prior Approval *
- Equipment Operating with an Expired/Inactive Permit *

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

Existing or Previous Permit/Application

If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

485785

516032

612362

8a. Estimated Start Date of Construction (mm/dd/yyyy): 02/01/2011

8b. Estimated End Date of Construction (mm/dd/yyyy): 03/31/2011

8c. Estimated Start Date of Operation (mm/dd/yyyy): 04/01/2011

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
 Install diesel oxidation catalyst on diesel IC engine to reduce VOC emissions.

10. For identical equipment, how many additional applications are being submitted with this application?
 (Form 400-A required for each equipment / process)

11. Are you a Small Business as per AQMD's Rule 102 definition?
 (10 employees or less and total gross receipts are \$500,000 or less OR a not-for-profit training center) No Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?
 If Yes, provide NOV/NC#: No Yes

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?

14. What is your business primary NAICS Code?
 (North American Industrial Classification System) 211111

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? No Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? No Yes

Section F - Authorization/Signature I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official: *[Signature]*

18. Title of Responsible Official: VP and COO

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) No Yes

20. Print Name: Steve Liles

21. Date: 12-28-10

22. Do you claim confidentiality of data? (If Yes, see instructions.) No Yes

23. Check List: Authorized Signature/Date Form 400-CEQA Supplemental Form(s) (ie., Form 400-E-xx) Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED	PAYMENT TRACKING #	VALIDATION				
	517841	3267	\$12,719.72	11/11/11 53:92015	11/11/11 [Signature]				
DATE	APP REJ	DATE	APP REJ	CLASS I II	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN
						040901		CSB	

2/8/11
 3-17-11

5/6



Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): Beta Offshore - Beta OCS Platforms Facility
Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 166073
Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): OCS Lease Parcels P300/P301 (Federal Waters)
Fixed Location [X] Various Locations []

Section B - Equipment Description

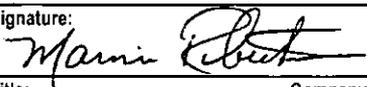
Internal Combustion Engine
Is the ICE an EPA Certified or Qualifying Non-Road Engine? [X] No [] Yes
If yes, provide EPA Certificate No., and attach copy:
Manufacturer: Detroit Diesel Model: 1063-7008 Serial No.:
Date of Manufacture: pre-1990 (mm/dd/yyyy) Date of Installation: pre-1990 (mm/dd/yyyy)
Note: For an ICE manufactured after 7/18/94, please provide manufacturer's specification and guarantee.
Manufacturer Maximum Rating: 195 BHP@ 1800 RPM
ICE Function (Check all that apply): [] Electrical Generator [] Fire Pump [] Compressor [] Co-Generation [] Flood Control [] Pump Driver [X] Other (specify): Crane Driver
Type: [X] Stationary [] Portable
How Is This Type of Equipment Used? (Check All That Apply) [X] Within Facility [] Off-Site [] Rental [] Non-Rental
Fuel: [] Natural Gas [] LPG [] Refinery Gas* [] Digester Gas* [] Landfill Gas* [X] Diesel Oil No. 2 [] Other*:
*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.
Stand-By Fuel: [] Natural Gas [] LPG [] Refinery Gas* [] Digester Gas* [] Landfill Gas* [] Diesel Oil No. 2 [] Other*:
*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.
Cycle Type: [X] Two Cycle [] Four Cycle
Combustion Type: [X] Lean Burn [] Rich Burn
No. of Cylinders: [] Four [X] Six [] Eight [] Ten [] Twelve [] Sixteen [] Other:
Aspiration Type: [] Turbocharged [] Turbocharged/Aftercooled [X] Naturally Aspirated [] Timing Retarded >= 4 degrees (relative to standard timing)
Air Pollution Control (If Applicable): [] Selective Catalytic Reduction (SCR)* [] No Controls [] Selective Non-Catalytic Reduction (SNCR)* [] Air Fuel Ratio Controller [] Non-selective Catalytic Reduction (NSCR) [X] Other (specify): Diesel Oxidation Catalyst
* Separate application is required.
Manufacturer: Johnson-Matthey Model: JM P/N CXX0-S-8-4
If already permitted, indicate Permit No.: 485765 Device No.: D91

Form 400-E-13b

Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Operation Information						
Fuel Consumption	Maximum Rated Load: <u>10.40</u> gal./hr. OR _____ cu.ft./hr					
	Average Load: _____ gal./hr. OR _____ cu.ft./hr.					
Emissions Data	Maximum Emissions Before Control		Maximum Emissions After Control		Emissions Reference (attach): <input type="checkbox"/> Manufacturer's Guarantee <input checked="" type="checkbox"/> Catalytic Manufacturer's Guarantee <input type="checkbox"/> Source Test Data <input type="checkbox"/> EPA Emission Factors <input type="checkbox"/> Other (specify): _____	
	Pollutants	gm/Bhp-hr	PPM (15% O ₂)	gm/Bhp-hr		PPM (15% O ₂)
	ROG					< 250
	NOx					
	CO					
	PM					
SOx						
Operating Schedule	Normal: _____ hours/day _____ days/week _____ weeks/yr					
	Maximum: _____ hours/day _____ days/week _____ weeks/yr					

Section D - Authorization/Signature						
I hereby certify that all information contained herein and information submitted with this application is true and correct.						
Preparer Info	Signature:			Date:	<u>12-28-10</u>	
	Title:	<u>HSE Manager</u>		Company Name:	<u>Beta Offshore</u>	
				Name:	<u>Marina Robertson</u>	
Contact Info				Phone #:	<u>(562) 628-1526</u>	
				Fax #:	<u>(562) 628-1536</u>	
				Email:	<u>mrobertson@betaoffshore.com</u>	
			Name:	<u>Marina Robertson</u>		
			Phone #:	<u>(562) 628-1526</u>	Fax #:	<u>(562) 628-1536</u>
			Email:	<u>mrobertson@betaoffshore.com</u>		

**SCAQMD PERMIT PROCESSING SYSTEM (PPS)
FEE DATA - SUMMARY SHEET**

Application No : 517841
Previous Application No: 516032

IRS/SS No:
Previous Permit No: G12362

Company Name : BETA OFFSHORE
Equipment Street: OCS LEASE PARCELS P300/P301 , HUNTINGTON BEACH CA 92648
Equipment Desc : 1 C E (50-500 HP) N-EM STAT DIESEL

Facility ID: 166073

Equipment Type : BASIC
B-CAT NO. : 040901
Facility Zone : 18
C-CAT NO: 00
Deemed Compl. Date: 2/17/2011

Fee Charged by: B-CAT
Fee Schedule: B
Public Notice: NO

Evaluation Type : ALTERATION/MODIFICATION (PO)
Disposition : Approve PO, Recommended by Engineer
Lead Appl. No :

Small Business:
Higher Fees for Failing to Obtain a Permit:
Identical Permit Unit:

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$3,141.90
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$2,094.60
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$-1,047.30
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		\$1,047.30
Source Test Review	Hours: 0.00		\$0.00
Time & Material	Hours: 0.00		\$0.00
		Total Additional Fee:	\$1,047.30
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 07/31/2012

REVIEWED BY: _____

DATE: _____

AUG 10 2012

* ADJUSTED FOR SMALL BUSINESS, IDENTICAL EQUIPMENT AND P/O NO P/C PENALTY

**SCAQMD PERMIT PROCESSING SYSTEM (PPS)
FEE DATA - SUMMARY SHEET**

Application No : 517841
Previous Application No: 516032

IRS/SS No:
Previous Permit No: G12362

Company Name : BETA OFF SHORE
Equipment Street: OCS LEASE PARCELS P300/P301 , HUNTINGTON BEACH CA 92648
Equipment Desc : I C E (50-500 HP) N-EM STAT DIESEL

Facility ID: 166073

Equipment Type : BASIC
B-CAT NO. : 040901
Facility Zone : 18

C-CAT NO: 00
Deemed Compl. Date: 2/17/2011

Fee Charged by: B-CAT
Fee Schedule: B
Public Notice: NO

Evaluation Type : ALTERATION/MODIFICATION (PC)
Disposition : Approve PC, Recommended by Engineer
Lead Appl. No :

Small Business:
Higher Fees for Failing to Obtain a Permit:
Identical Permit Unit:

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$3,141.90
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$2,094.60
Significant Project	\$0.00	Permit Processing Fee Adjustment:	\$-1,047.30
Expedited Processing	Hours: 0.00 \$1,047.30		
Source Test Review	Hours: 0.00 \$0.00		
Time & Material	Hours: 0.00 \$0.00		
		Total Additional Fee:	\$1,047.30
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: C S BHATT

DATE: 05/31/2011

REVIEWED BY: _____

DATE: _____

MAY 31 2011

* ADJUSTED FOR SMALL BUSINESS, IDENTICAL EQUIPMENT AND P/O NO P/C PENALTY

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

AEIS DATA SHEET

Company Name : BETA OFFSHORE

Facility ID : 166073

Equipment Address : OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH CA 92648

Application Number : 517841

Equipment B-Cat : 040901

Estimated Completion Date : 07/31/12

Equipment C-Cat :

Equipment Type : Basic

Equipment Description : I C E (50-500 HP) N-EM STAT DIESEL

Emissions

Emittants	Emissions	
	R1 LB/HR	R2 LB/HR
CO	0.02	0.02
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.01	0.01

Applicable Rules

1110.2	02/01/2008	Emissions from Gaseous-and Liquid-fueled Engines
1148.1	03/05/2004	Oil and Gas Production Wells
1183	03/12/1993	Outer Continental Shelf (OCS) Air Regulations
2012	05/06/2005	Requirements of MRR for NOx Emissions (RECLAIM)
401	11/09/2001	Visible Emissions
402	05/07/1976	Nuisance
404	02/07/1986	Particulate Matter - Concentration
431.2	09/15/2000	Sulfur Content of Liquid Fuels

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Daily Start Times :	08:00	08:00	08:00	08:00	08:00	08:00	08:00
Daily Stop Times :	09:40	09:40	09:40	09:40	09:40	09:40	09:40

User's Initials : MV02 Date: 07/31/12 Supervisor's Name : _____ Review Date : ____ / ____ / ____

N S R D A T A S U M M A R Y S H E E T

Application No: 517841
Application Type: Alteration/Modification
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 516032, 0 - , NONE

Company Name: BETA OFFSHORE
Company ID: 166073
Address: OCS LEASE PARCELS P300/P301,HUNTINGTON BEA
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 -
Estimated Completion Date: 05-31-2011
Heat Input Capacity: 0 Million BTU/hr
Priority Reserve: NONE - No Priority Access Requested
Recommended Disposition: 31 - PERMIT TO OPERATE GRANTED
PR Expiration:
School Within 1000 Feet: NO
Operating Weeks Per Year: 52
Operating Days Per Week: 7
Monday Operating Hours: 08:00 to 09:40
Tuesday Operating Hours: 08:00 to 09:40
Wednesday Operating Hours: 08:00 to 09:40
Thursday Operating Hours: 08:00 to 09:40
Friday Operating Hours: 08:00 to 09:40
Saturday Operating Hours: 08:00 to 09:40
Sunday Operating Hours: 08:00 to 09:40

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.04 lbs/hr
Max Daily: 0.06 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.04 lbs/hr
Max Daily: 0.06 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 20.38 lbs/yr
District Exemption: None

Emittant: NOX
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.2 lbs/hr
Max Daily: 0.28 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.2 lbs/hr
Max Daily: 0.28 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 101.92 lbs/yr
District Exemption: None

Emittant: PM10
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.01 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.01 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 5.1 lbs/yr
District Exemption: None

Emittant: ROG
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.02 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.02 lbs/hr
Max Daily: 0.03 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 6.07 lbs/yr
District Exemption: None

SUPERVISOR'S APPROVAL: _____ SUPERVISOR'S REVIEW DATE: _____

Processed By: mvibal 7/31/2012 3:29:12 PM

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: July 30, 2012
To: Rob Castro, Senior Air Quality Engineer
From: Maria Vibal
Subject: P/C to P/O – A/N's 517838, 517839, 517840, 517841 and 517842

Objective: Applications are for modification of existing crane diesel-fueled engines by installing diesel oxidation catalysts to comply with the Rule 1110.2 requirements of 250 ppmvd VOC and 2000 ppmvd of CO, both measured at 15% O₂.

Highlights of Findings :

1. The referenced applications were issued Permits to Construct (PC) in June, 2011.
2. Beta Offshore completed the installation of the diesel oxidation catalysts on the crane engines in the first half of 2011.
3. Almega Environmental and Technical Services conducted source tests on the engines right after the completion of the retrofits. The tests were conducted in August-September, 2011.
4. Beta Offshore submitted the test report on the five crane engines to SCAQMD on Oct. 12, 2011. Report shows that all five engines comply with the Rule 1110.2 limits of 250 ppmvd VOC and 2000 ppmvd of CO, both measured at 15% O₂.
5. Source Test Engineering reviewed the test report and deemed it "acceptable" on April 27, 2012.

Recommendations : Disposition the referenced applications as P/O's and incorporate the updates in the RECLAIM Title V facility permit 517837/531454.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

M E M O R A N D U M

→ GT,
RC

Looks good.

DATE: April 27, 2012
TO: Billy Thompson
FROM: Rudy Eden *R. Eden*
SUBJECT: Evaluation of Source Test Report:
(Requested by Maria Vibal, October 20, 2011)

AQMD ID: *FACILITY ID NO. 166073 A/N.: 517840, 517841, 517839, 517838, 517842*
COMPANY: **Beta Offshore, Long Beach**
EQUIPMENT: **ICE - Ellen East Crane, ICE - Ellen Center Crane (D87, D91)**
ICE - Eureka East Crane, ICE - Eureka Center Crane (D89, D90)
ICE - Elly East Crane (D92)
TEST LOCATION: **OCS Lease Parcels P300/P301, Huntington Beach, CA 92648**
TEST DATE: **August 16-18 & September 9 & 13, 2011**

REFERENCE: R 11503 (STE Source Test File)

Source Test Engineering has completed the evaluation of the subject source test report and has concluded that it is:

ACCEPTABLE

Compliance with all applicable Rules and/or Permit Conditions, as well as compliance limits, has been acceptably demonstrated. All of the reported gaseous emissions and flows are considered accurate, and they may be used quantitatively as well as qualitatively for emission calculations. Source testing methods and analytical procedures are correct, and results are fully supported with respect to Quality Assurance (QA), accurate calculations, and representative raw data.

The attached evaluation has not been forwarded to the facility or the source testing firm. It is the responsibility of the requestor to review the attached evaluation and forward it to the parties involved, if you concur with our findings. If there are any questions, please contact Michael Cecconi at Ext. 2244.

MG:MAC
Attachment
cc: Mike Garibay
Maria Vibal

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

ST ID: **R 11503**

AQMD ID: **FACILITY ID NO. 166073** **A/N: 517840, 517841, 517839, 517838, 517842**

COMPANY: **Beta Offshore, Long Beach**

EQUIPMENT: **ICE - Ellen East Crane, ICE - Ellen Center Crane (D87, D91)**
ICE - Eureka East Crane, ICE - Eureka Center Crane (D89, D90)
ICE- Elly East Crane (D92)

LOCATION: **OCS Lease Parcels P300/P301, Huntington Beach, CA 92648**

REQUESTED BY: **Maria Vibal (Memo Dated October 20, 2011)**

TYPE OF TEST: **PERFORMANCE/COMPLIANCE REPORT** **DOCUMENT DATE: September 30, 2011**

REASON FOR TEST: TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS:
- VOC - 250 ppm @15% O₂
- CO - 2000 ppm @15% O₂

REQUESTED EVAL: **VOC, CO**

TEST DATE: **August 16-18 & September 9 & 13, 2011**

TEST FIRM: **Almega**

STE EVALUATOR: **Michael Cecconi EXT: 2244** **REVIEW DATE: April 27, 2012**

OVERVIEW OF EVALUATION:

OVERALL CONFIDENCE IN REPORTED TEST RESULTS: **ACCEPTABLE** **CONDITIONALLY ACCEPTABLE** **UNACCEPTABLE**

RESTRICTIONS FOR USE OF REPORTED RESULTS:

- No Restrictions. Results for all reported emissions may be used for compliance determination and emission calculations.

COMPLIANCE DETERMINATION:

- Results for all emissions, as reported, are in compliance by an acceptable margin¹, with the Rules/Permit Compliance Limits specified above.

(REFER TO NEXT SECTION FOR COMPLETE DISCUSSION OF TEST RESULTS AND CORRECTED EMISSION INFORMATION, IF APPLICABLE)

¹ **NOTE:** STE assigns a 10% "margin of error" to most emission rates when evaluating emissions for compliance determination. This is due to uncertainties assigned to source testing, in general, and errors associated with individual analytical procedures. As a result, some reported emissions may be judged as being in compliance although they appear to be non-compliant or marginally non-compliant. Similarly, non-compliance is judged using the same margin-of-error.

SOURCE TEST REPORT EVALUATION**DETAILED REVIEW**

This source test report has been reviewed by the Evaluations Unit staff. The following specifically explains the restrictions concerning the treatment of the reported source test information:

- Completeness of Application/Protocol/Report
- Representativeness of Data & Process
- Rule/Permit Fulfillment
- Sampling & Analytical Methods
- Quality Assurance
- Calculations

RULE/PERMIT FULFILLMENT

- Section (D)(1)(B) of Rule 1110.2 provides an exemption from the emission limits in Table II of the rule for engines that operate less than 500 hours per year. Permit Condition C1.3 limits the operating time of the engines to less than 500 hours per year. The limits shown below are the applicable limits for these ICEs.
- The testing was performed to show compliance with the following Rule/Permit requirements:
 - VOC - 250 ppm @15% O₂
 - CO - 2000 ppm @15% O₂

All required testing has been performed and is properly formatted.



SOURCE TEST REPORT

Emission Testing of Five Internal Combustion Engines for CO and VOC under SCAQMD Rule 1110.2.

Facility ID: 166073
Device ID: D87, D89, D90, D91 & D92

Prepared for:
Beta Offshore
111 West Ocean Blvd. Ste 1240
Long Beach, CA 90802

Equipment Location:
Beta Outer Continental Shelf (OCS) Platforms- Ellen/Elly and Eureka

Test Date(s): August 16-18 & September 9 & 13, 2011
Report Date: September 30, 2011

Project: 9164

Prepared by:
Almega Environmental & Technical Services
5251 McFadden Avenue
Huntington Beach, CA 92649

Prepared by & Title: *Tulasi R. Gyawali*
Tulasi R. Gyawali, Quality Assurance Engineer

Reviewed by & Title: *Charles M. Figueroa*
Charles M. Figueroa, Sr. Project Manager

1.0 EXECUTIVE SUMMARY

Key project information is provided in the summary below. Test results are summarized in Table 1-1.

Customer	Beta Offshore 111 W. Ocean Blvd. Ste 1240 Long Beach, CA 90802 Contact: Ms. Marina Robertson, tel. (562) 683-3497
Equipment Location	Beta Outer Continental Shelf (OCS) Platform- Ellen Located ~ nine miles west of Huntington Beach, California
Facility ID	166073
Equipment	Internal Combustion Engine (ICE)
Device ID Numbers	D87, D89, D90, D91, & D92
Test Objective	Measure concentrations of carbon monoxide (CO) and volatile organic compounds (VOCs) to demonstrate compliance with SCAQMD Rule 1110.2 (f) (1) (C)
Test Requested by	Ms. Marina Robertson of Beta Offshore
Test Date(s)	August 16-18 & September 9 & 13, 2011
Testing Firm	Almega Environmental & Technical Services 5251 McFadden Avenue Huntington Beach, CA 92649 Contact: Mr. Charles M. Figueroa, tel (714) 889-4000
Test Personnel	Charles Figueroa, Bryan Harrison, and Dorian Johnson of Almega Environmental & Technical Services
Regulatory Agency	South Coast Air Quality Management District (SCAQMD) 21865 East Copley Drive Diamond Bar, CA 91765-4182

TABLE 1-1 SUMMARY OF RESULTS

Facility: **Beta Offshore**
City: **Long Beach, CA**
Source: **Cranes**

Parameter/Unit Tested	Device ID	Test Date	Carbon Monoxide (ppmv) 15 @ O2	TGNMO, as Methane (ppmv) 15 @ O2
Allowed Limits			2000 ppmv (Rule 1110.2)	250 ppmv (Rule 1110.2)
Ellen East Crane	D87	08/17/11	480	160
<i>Low</i>		09/13/11	22.1	
<i>Mid</i>		08/17/11	278	
Eureka East Crane	D89	08/16/11	222	87.8
<i>Low</i>		09/09/11	35.1	
<i>Mid</i>		08/16/11	70.7	
Eureka Center Crane	D90	08/16/11	716	91.9
<i>Low</i>		09/13/11	36.7	
<i>Mid</i>		08/16/11	263	
<u>Ellen Center Crane</u>	D91	08/17/11	721	95.5
<i>Low</i>		08/17/11	196	
<i>Mid</i>		08/17/11	170	
Elly East Crane	D92	08/18/11	810	81.3
<i>Low</i>		09/09/11	32.7	
<i>Mid</i>		08/18/11	270	

TABLE 3.1 VOLATILE ORGANIC COMPOUNDS TEST RESULTS

Facility: Beta Offshore
City: Long Beach, CA
Source: Cranes

Parameter	units	Ellen East			Eureka East			Eureka Center			Ellen Center			Elly East		
		IA	IB	AVG	IA	IB	AVG	IA	IB	AVG	IA	IB	AVG	IA	IB	AVG
Run Data	m/d/y	09/13/11														
Test Date:		09/13/11														
Start Time:	hh:mm	14:52	14:52	14:52	15:49	15:49	15:49	10:59	10:59	10:59	12:42	12:42	12:42	12:38	12:38	12:38
End Time:	hh:mm	15:22	15:22	15:22	16:19	16:19	16:19	11:29	11:29	11:29	13:12	13:12	13:12	13:08	13:08	13:08
Sampling Method	deg. F	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Standard Temperature		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Stack Gas Parameters		09/13/11														
Barometric Pressure	in. Hg	30.02	30.02	30.02	29.76	29.76	29.76	30.02	30.02	30.02	29.97	29.97	29.97	29.82	29.82	29.82
O2 Content	% dry	16.1	16.1	16.1	16.8	16.8	16.8	15.1	15.1	15.1	18.1	18.1	18.0	16.2	15.7	16.0
CO2 content	% dry	3.90	3.90	3.90	3.20	3.20	3.20	3.60	3.60	3.60	2.10	2.10	1.80	3.80	4.20	4.00
TGNMO, as Methane *																
CONCENTRATION	ppmv	32.2	130.8	** 131	63.1	59.0	61.0	80.0	81.6	80.8	43.5	48.8	46.2	51.6	86.3	68.9
Measured as Methane @15%O2 as Methane	ppmv@	39.6	160.7	** 161	90.8	84.8	87.8	81.4	102.4	91.9	91.7	99.3	95.5	64.8	97.9	81.3

* corrected based on carbon number: Methane = 1
** Relative precision between runs is greater than 20%. Maximum result is reported.

TABLE 3.2 CARBON MONOXIDE TEST RESULTS

Facility: Beta Offshore
City: Long Beach, CA
Source: Cranes

Parameter	units	Ellen East			Eureka East			Eureka Center			Ellen Center			Elly East		
		Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High
Run Data		08/17/11	09/13/11	08/17/11	08/16/11	09/09/11	08/16/11	08/16/11	09/13/11	08/17/11	08/17/11	08/17/11	08/17/11	08/18/11	09/09/11	08/18/11
Test Date:	m/d/y	12:45	14:52	9:51	15:10	15:49	12:55	12:59	10:59	14:15	12:42	14:44	6:10	12:38	7:10	
Start Time:	hh:mm	13:01	15:22	10:21	15:40	16:19	13:25	13:29	11:29	14:45	13:12	11:14	6:40	13:08	7:40	
End Time:	hh:mm	25.3	25.1	25.3	25.3	25.1	25.3	25.3	25.1	25.3	25.1	25.3	25.3	25.1	25.3	
Sampling Method		60	60	60	60	60	60	60	60	60	60	60	60	60	60	
Standard Temperature	deg. F	29.97	30.02	29.97	29.90	29.76	29.90	29.90	30.02	29.97	29.97	29.97	29.91	29.82	29.91	
Stack Gas Parameters		17.8	16.1	18.1	17.5	16.8	16.3	18.0	15.7	16.9	18.1	17.3	17.6	16.0	18.3	
Barometric Pressure	in. Hg	2.00	3.90	1.80	2.00	3.20	2.40	2.30	3.70	2.70	1.95	2.40	2.00	4.00	1.60	
O2 Content	%dry															
CO2 content	%dry															
Carbon Monoxide																
CONCENTRATION																
Measured	ppmv	252	18.0	132	128	24.4	55.1	352	31.9	489	94.5	104	453	27.2	119	
@15%O2 Corrected	ppmv	480	22.1	278	222	35.1	70.7	716	36.7	721	196	170	810	32.7	270	

* corrected based on carbon number: Methane = 1
Note: Mid is the average value of run 1A and 1B.

4.0 EQUIPMENT AND PROCESS DESCRIPTION

The Beta Offshore, Beta OCS Platforms Facility is an oil and gas production facility located on the Federal OCS approximately nine miles west of Huntington Beach. The facility consists of three fixed platform structures – Ellen, Elly, and Eureka. The oil and gas wells and some minor process equipments are located on Platforms Ellen and Eureka. The oil, gas, and water produced from the wells on Ellen and Eureka are transported via pipelines to Platform Elly for additional processing. The resulting oil product is shipped to shore via pipeline, the gas product is used on Platform Elly as fuel in turbines that generate electricity and drive pumps, and the water is re-injected in the oil reservoir via wells used exclusively for that purpose.

The equipment tested is described below.

4.1 Equipment Description

a) Ellen East Crane

The Internal Combustion Engine (ICE) at the Ellen East Crane is the Engine with device I. D. D87, Non-Emergency, L-11B, Detroit Diesel Model 1064-7001, with Oxidation Catalyst, Johnson Matthey Model JM P/N CXXO-S--8-4, and the Diesel fueled engine with the rating of 195 BHP.

b) Eureka East Crane

The Internal Combustion Engine (ICE) at the Eureka East Crane is the Engine with device I. D. D89, Non-Emergency, CR-010-A2, Detroit Diesel Model 1064-7001, with Oxidation Catalyst, Johnson Matthey Model JM P/N CXXO-S-8-4, and the Diesel fueled engine with the rating of 195 BHP.

c) Eureka East Crane

The Internal Combustion Engine (ICE) at the Eureka Center Crane is the Engine with device I. D. D90, Non-Emergency, CR-020-A2, Detroit Diesel Model 1064-7001, with Oxidation Catalyst, Johnson Matthey Model JM P/N CXXO-S-8-4, and the Diesel fueled engine with the rating of 195 BHP.

d) Ellen Center Crane

The Internal Combustion Engine (ICE) at the Ellen Center Crane is the Engine with device I. D. D91, Non-Emergency, L-11A, Detroit Diesel Model 1063-7008, with Oxidation Catalyst, Johnson Matthey Model JM P/N CXXO-S-8-4, and the Diesel fueled engine with the rating of 195 BHP.

e) Elly East Crane

The Internal Combustion Engine (ICE) at the Elly East Crane is the Engine with device I. D. D92, Non-Emergency, L-01A, Detroit Diesel Model 1064-7001, with Oxidation Catalyst, Johnson Matthey Model JM P/N CXXO-S-8-4, and the Diesel fueled engine with the rating of 195 BHP.

4.2 Operating Conditions during Test

The process was operated at normal operating conditions during the test period. The engine was operated at low, normal, and high during the sampling period.

Tested Source	Parameters							Load Rate, (lbs)
	Test Date	Barometric Pressure (in. Hg)	Relative Humidity (%)	Ambient Temp. (°F)	Meter Operating Hours (h)	Exhaust Gas Temperature (°F)	Inlet Temperature (°F)	
Ellen East Crane								
Low	08/17/11	29.97	65	73		451	433	3,000
Mid	09/13/11	30.02	53	76	6161.6	466	522	6,450
High	08/17/11	29.97	83	66		510	488	23,000
Eureka East Crane								
Low	08/16/11	29.90	65	73		400	380	3,000
Mid	09/09/11	29.97	66	72	1401.1	440	360	8,000
High	08/16/11	29.90	65	73		500	450	22,000
Eureka Center Crane								
Low	08/16/11	29.90	65	73		398	385	3,000
Mid	09/13/11	30.02	65	73	838.0	458	434	7,650
High	08/16/11	29.90	68	72		423	410	22,000
Ellen Center Crane								
Low	08/17/11	29.97	53	75		483	460	3,000
Mid	08/17/11	29.97	65	73	n/a	476	455	10,500
High	08/17/11	29.97	83	66		471	452	23,000
Elly East Crane								
Low	08/18/11	29.91	93	64		453	436	3,000
Mid	09/09/11	29.82	66	72	1787.1	400	424	6,500
High	08/18/11	29.91	93	64		429	407	16,000

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

AEIS DATA SHEET

Company Name : BETA OFF SHORE

Facility ID : 166073

Equipment Address : OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH CA 92648

Application Number : 517841

Equipment B-Cat : 040901

Estimated Completion Date : 05/31/11

Equipment C-Cat :

Equipment Type : Basic

Equipment Description : I C E (50-500 HP) N-EM STAT DIESEL

Emittants	Emissions	
	R1 LB/HR	R2 LB/HR
CO	0.02	0.02
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.01	0.01

Applicable Rules

1110.2	02/01/2008	Emissions from Gaseous-and Liquid-fueled Engines
1148.1	03/05/2004	Oil and Gas Production Wells
1183	03/12/1993	Outer Continental Shelf (OCS) Air Regulations
2012	05/06/2005	Requirements of MRR for NOx Emissions (RECLAIM)
401	11/09/2001	Visible Emissions
402	05/07/1976	Nuisance
404	02/07/1986	Particulate Matter - Concentration
431.2	09/15/2000	Sulfur Content of Liquid Fuels

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Daily Start Times :	08:00	08:00	08:00	08:00	08:00	08:00	08:00
Daily Stop Times :	09:40	09:40	09:40	09:40	09:40	09:40	09:40

User's Initials : CB05 Date: 05/31/11 Supervisor's Name : _____ Review Date : / /

N S R D A T A S U M M A R Y S H E E T

Application No: 517841
Application Type: Alteration/Modification
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 516032, 0 - , NONE

Company Name: BETA OFF SHORE
Company ID: 166073
Address: OCS LEASE PARCELS P300/P301,HUNTINGTON BEA
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 -
Estimated Completion Date: 05-31-2011
Heat Input Capacity: 0 Million BTU/hr
Priority Reserve: NONE - No Priority Access Requested
Recommended Disposition: 25 - PERMIT TO CONSTRUCT GRANTED
PR Expiration:
School Within 1000 Feet: NO
Operating Weeks Per Year: 52
Operating Days Per Week: 7
Monday Operating Hours: 08:00 to 09:40
Tuesday Operating Hours: 08:00 to 09:40
Wednesday Operating Hours: 08:00 to 09:40
Thursday Operating Hours: 08:00 to 09:40
Friday Operating Hours: 08:00 to 09:40
Saturday Operating Hours: 08:00 to 09:40
Sunday Operating Hours: 08:00 to 09:40

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.04 lbs/hr
Max Daily: 0.06 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.04 lbs/hr
Max Daily: 0.06 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 20.38 lbs/yr
District Exemption: None

Emittant: NOX
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.2 lbs/hr
Max Daily: 0.28 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.2 lbs/hr
Max Daily: 0.28 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 101.92 lbs/yr
District Exemption: None

Emittant: PM10
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.01 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.01 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 5.1 lbs/yr
District Exemption: None

Emittant: ROG
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.01 lbs/hr
Max Daily: 0.02 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.02 lbs/hr
Max Daily: 0.03 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 6.07 lbs/yr
District Exemption: None

SUPERVISOR'S APPROVAL: _____ SUPERVISOR'S REVIEW DATE: _____

Processed By: chandrab 5/31/2011 12:21:37 PM