

DOCKETED

Docket Number:	12-AFC-02C
Project Title:	Huntington Beach Energy Project - Compliance
TN #:	210620-3
Document Title:	Resubmission of Data Responses Set 1, Updated Response to Data Requests 4-6, Part 3
Description:	N/A
Filer:	Cindy Salazar
Organization:	CH2M HILL
Submitter Role:	Applicant Consultant
Submission Date:	3/4/2016 5:12:20 PM
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Almega
ENVIRONMENTAL

```
Operator   : Douglass           Detector Type: 0800 (10 Volts)
Workstation:                    Bus Address  : B8
Instrument : Varian Star #1     Sample Rate : 1.25 Hz
Channel    : 2 = Foreflush 10  Run Time    : 15.013 min
```

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00

Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 14:59:17, a 126 - 011 a.run
 Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 011 A

Injection Date: 9/21/2015 2:59 PM Calculation Date: 9/23/2015 2:09 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

*Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	61.0353	1.913	-0.017	241030	BV	2.8	
2	Methane	45.9843	2.292	-0.008	179726	VB	3.6	
3	Carbon Dioxi	36458.7500	3.387	-0.082	142519136	BB	13.4	C
4	Ethane		7.489					M
5	NMOC	7.1638	12.980	0.656	23775	BB	34.1	
Totals:		36572.9334		0.549	142963667			

Status Codes:

M - Missing peak
 C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -87 microVolts LSB: 1 microVolts

Noise (used): 31 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 14:59:17, a 126 - 011 a.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 011 A

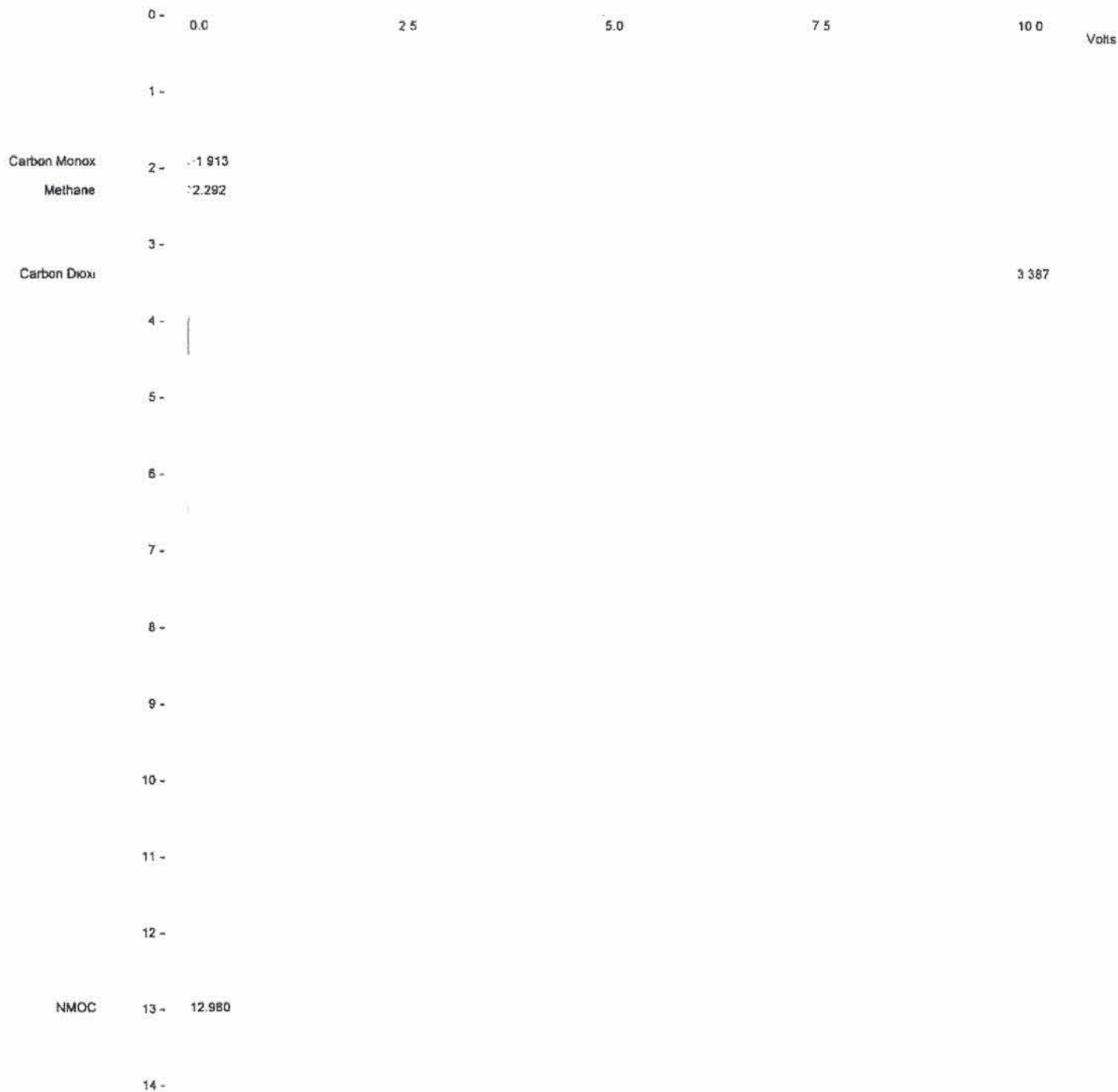


Action Date: 9/21/2015 2:59 PM Calculation Date: 9/23/2015 2:09 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-06B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 15:52:54, a 126 - 011 b.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 011 B

Injection Date: 9/21/2015 3:52 PM Calculation Date: 9/23/2015 2:09 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	60.9370	1.897	-0.033	240642	BV	2.9	
2	Methane	46.3542	2.276	-0.024	181172	VB	3.7	
3	Carbon Dioxi	36693.7422	3.380	-0.089	143437728	BB	13.4	C
4	Ethane		7.489					M
5	NMOC	5.3777	11.553	-0.771	17848	BB	92.8	
Totals:				-0.917	143877390			

Status Codes:

M - Missing peak
C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -86 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 15:52:54, a 126 - 011 b.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 011 B

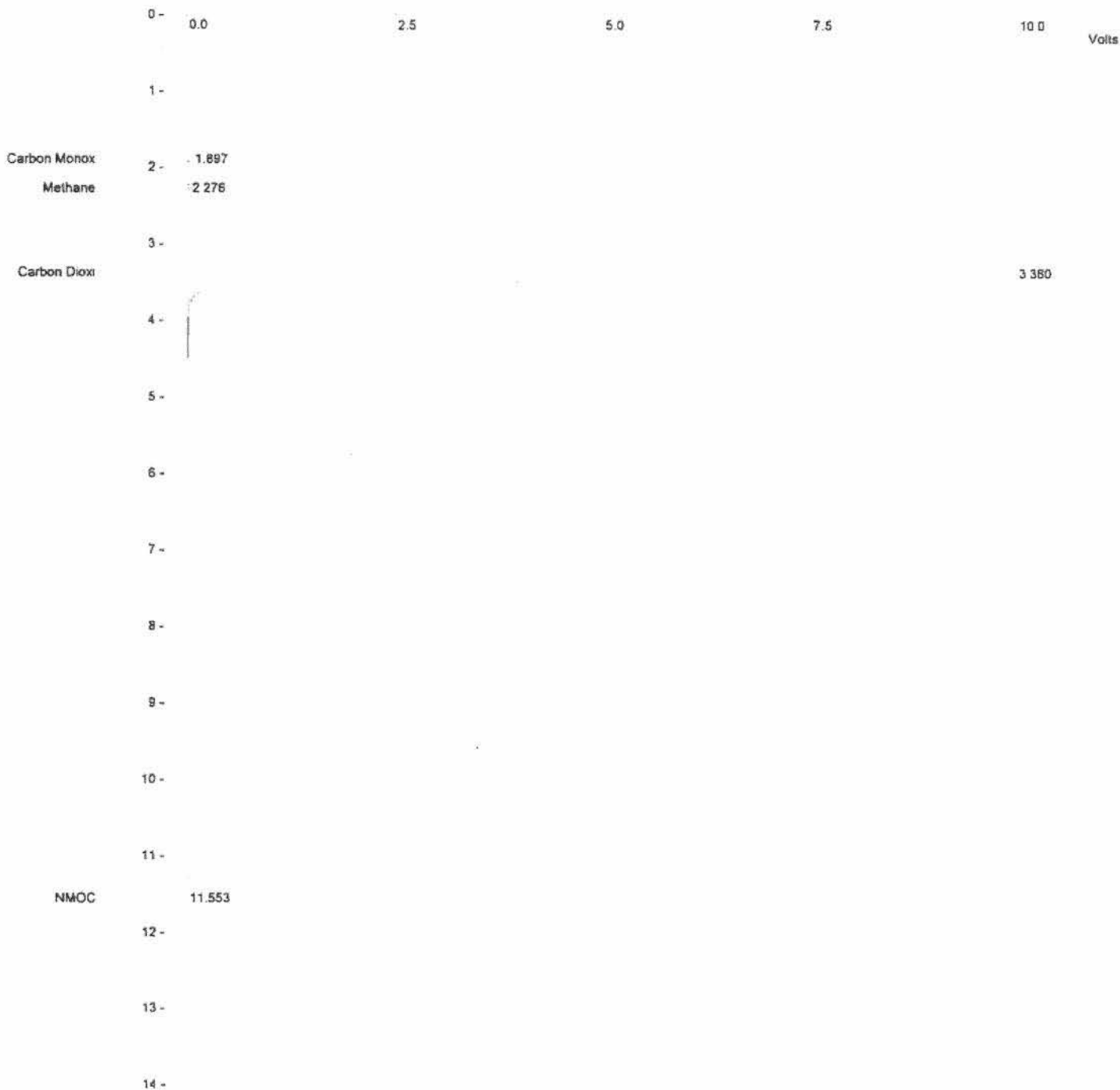


Action Date: 9/21/2015 3:52 PM Calculation Date: 9/23/2015 2:09 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 16:18:58, a 126 - 011 b dup.run
Method File : c:\docume-1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 011 B dup

Injection Date: 9/21/2015 4:18 PM Calculation Date: 9/23/2015 2:09 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 - Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	61.0247	1.896	-0.034	240989	BV	2.9	
2	Methane	46.5085	2.275	-0.025	181775	VB	3.6	
3	Carbon Dioxi	36707.3828	3.380	-0.089	143491056	BB	13.4	C
4	Ethane		7.489					M
5	NMOC	5.5456	11.567	-0.757	18405	BB	77.9	
Totals:		36820.4616		-0.905	143932225			

Status Codes:

M - Missing peak

C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -32 microVolts LSB: 1 microVolts

Noise (used): 19 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 16:18:58, a 126 - 011 b dup.run
 Method File : c:\docume-1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 011 B dup

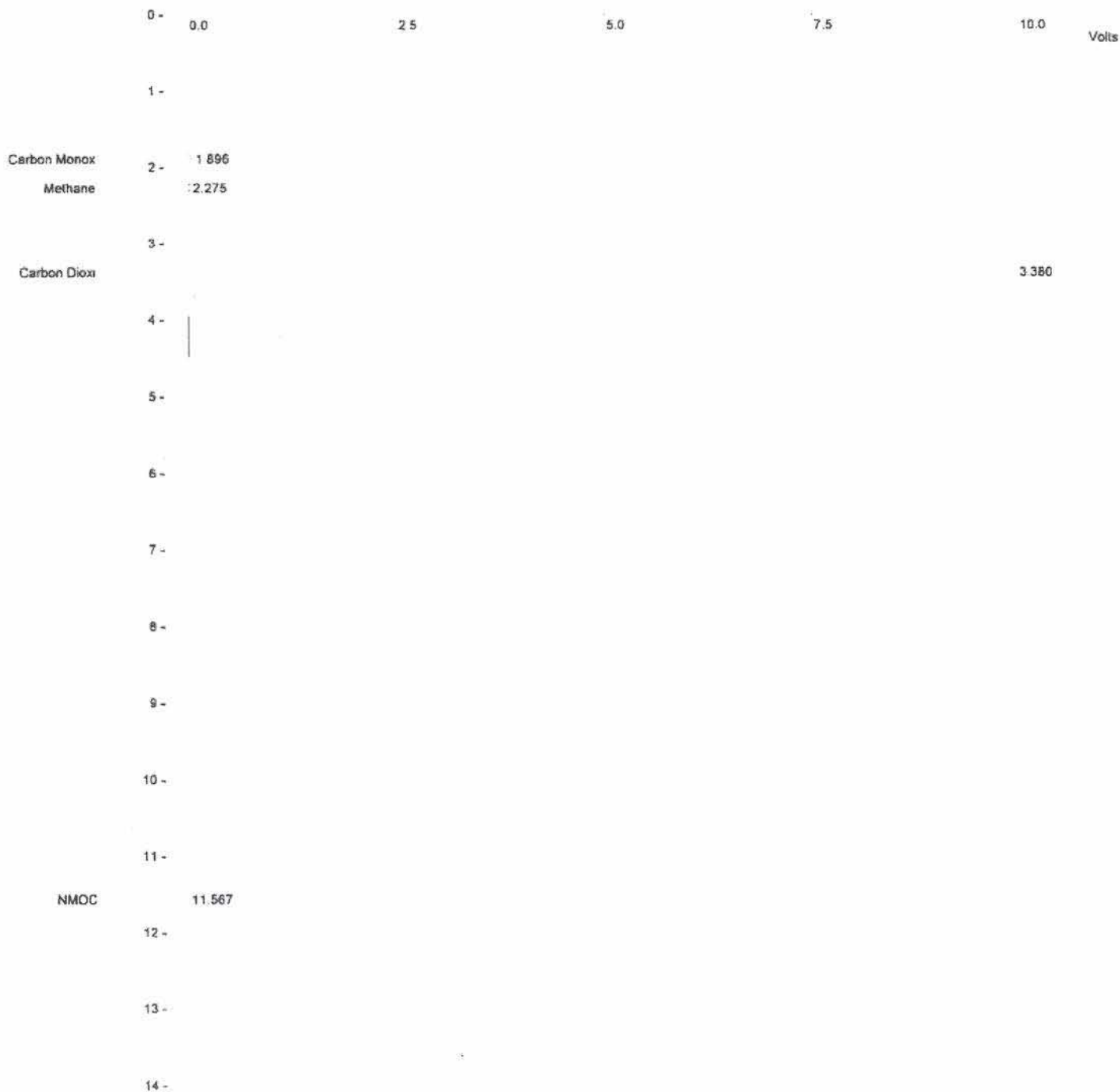


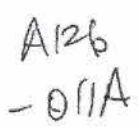
Print Date: 9/21/2015 4:18 PM Calculation Date: 9/23/2015 2:09 PM

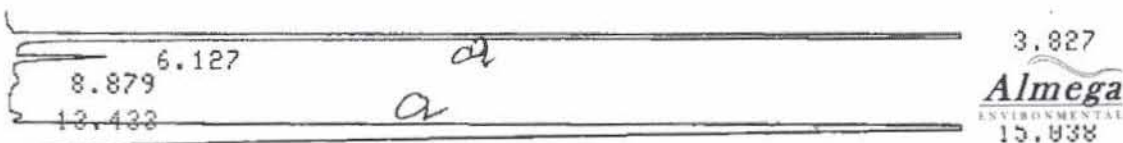
Operator : Douglass Detector Type: 0E00 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00







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-0113

CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 93

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.827	7930301			34.8315	
2	6.127	401725	V		1.7645	
3	8.879	76798			0.3373	
4	13.433	101497			0.4458	
5	15.038	14257323	V		62.621	
TOTAL		22767640			100	



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CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 94

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.823	7912094			34.9358	
2	6.122	394024			1.7398	
3	8.889	82145			0.3627	
4	13.403	103555			0.4572	
5	14.997	14155684	V		62.5044	
TOTAL		22647502			100	

QAQC

Print Date: Wed Sep 23 13:30:15 2015

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Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 09:24:56, lab air.run
Method File : c:\\docume~1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : lab air

Injection Date: 9/21/2015 9:24 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	16.5482	1.899	-0.031	65349	BV	5.8	
2	Methane	4.5966	2.292	-0.008	17966	VV	4.3	
3	Carbon Dioxi	488.4914	3.447	-0.022	1909538	VB	8.0	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:				-0.061	1992853			

Status Codes:
M 9 Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -202 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Print Date: Wed Sep 23 13:30:39 2015

Page 1 of 1

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 09:51:53, n2 blank 777.run
Method File : c:\docume~1\douglass\locals~1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : n2 blank 777

Injection Date: 9/21/2015 9:51 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Vocstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	0.2772	1.916	-0.014	1095	BB	3.8	
2	Methane		2.300					M
3	Carbon Dioxi	0.5755	3.463	-0.006	2250	BB	9.0	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		0.8527		-0.020	3345			

Status Codes:

4 - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -188 microVolts LSB: 1 microVolts

Noise (used): 26 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

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Title : SCAQMD Methods 25.x
Run File : \\almeqa01\files\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 09:51:53, n2 blank 777.run
Method File : c:\docume~1\douglass\locals~1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : n2 blank 777

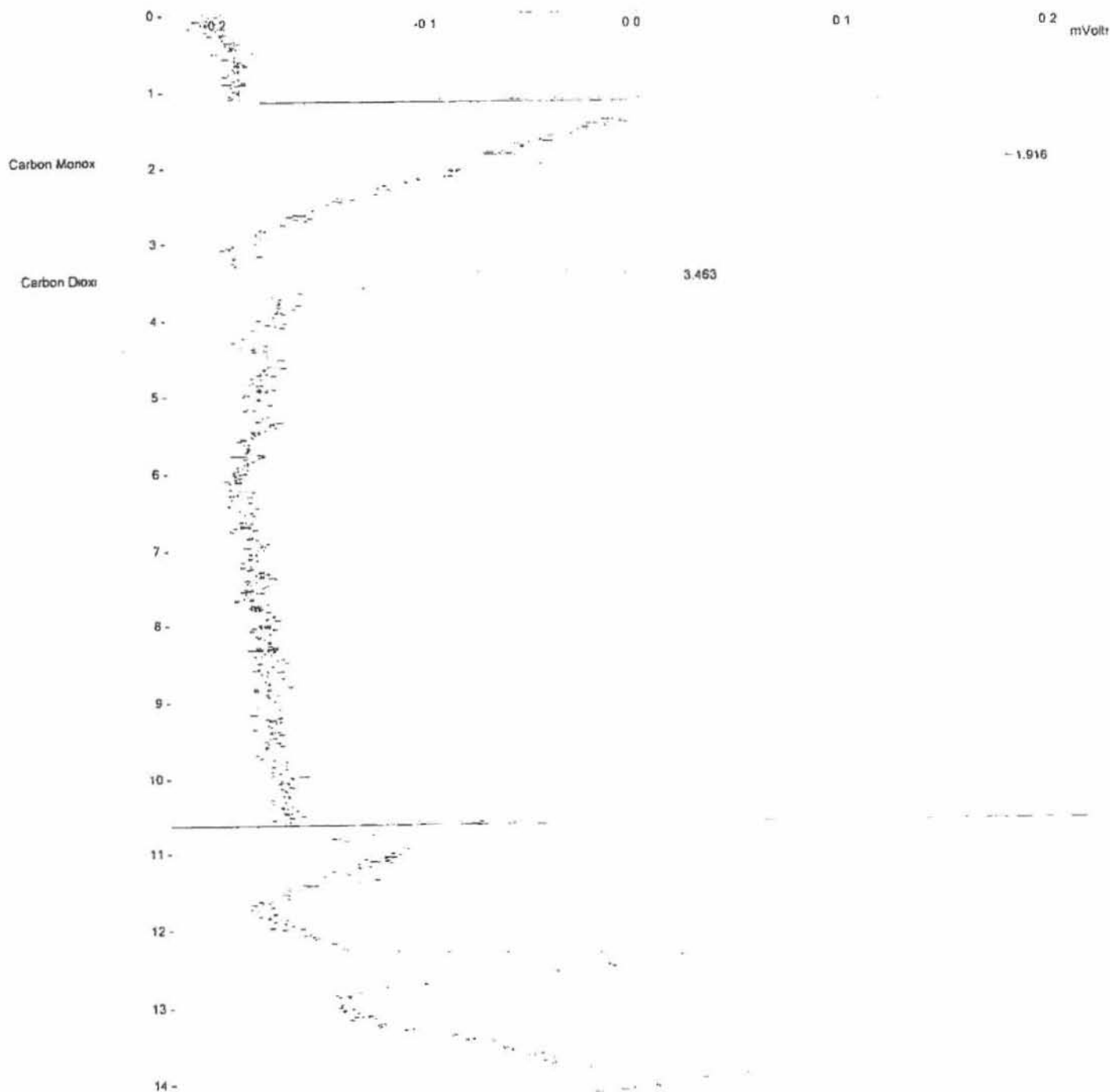


Action Date: 9/21/2015 9:51 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 1 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-06B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 8%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 10:45:13, 2ppm mix.run
 Method File : c:\docume-1\douglass\locals-1\temp\9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : 2ppm mix

Injection Date: 9/21/2015 10:45 AM Calculation Date: 9/23/2015 1:32 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	2.3245	1.888	-0.042	9180	BV	3.0	
2	Methane	2.0484	2.264	-0.036	8006	VB	3.7	
3	Carbon Dioxi	2.5960	3.420	-0.049	10148	BB	8.2	
4	Ethane	1.9174	7.429	-0.060	7468	BB	21.0	
5	NMOC	2.4082	12.593	0.269	7992	BB	10.3	
Totals:		11.2945		0.082	42794			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -320 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 10:45:13, 2ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 2ppm mix

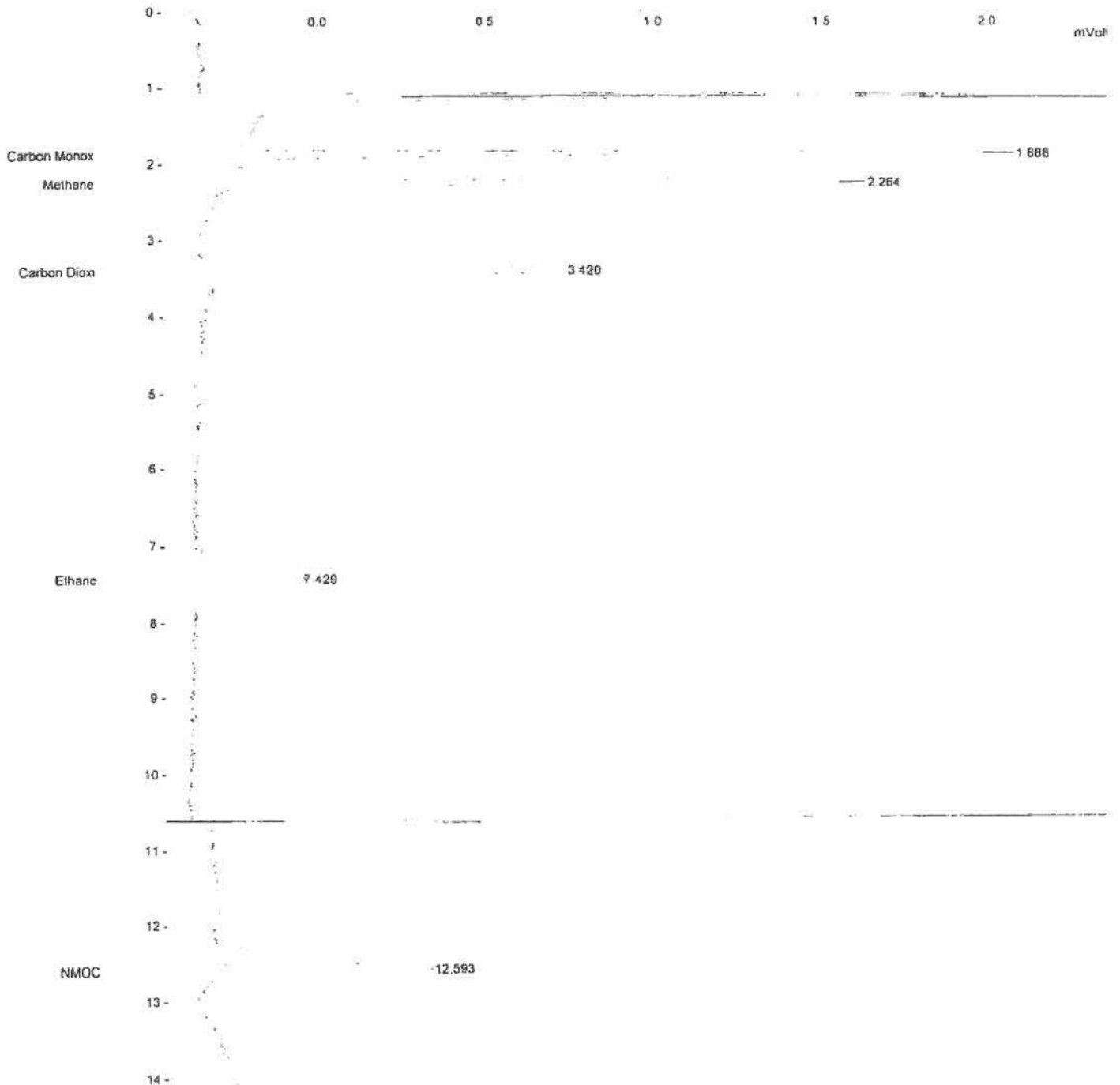


ection Date: 9/21/2015 10:45 AM Calculation Date: 9/23/2015 1:32 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 17%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 11:13:35, 2ppm mix.run
 Method File : c:\docume~1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : 2ppm mix

Injection Date: 9/21/2015 11:13 AM Calculation Date: 9/23/2015 1:33 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	2.0453	1.909	-0.021	8077	BV	3.1	
2	Methane	1.9629	2.285	-0.015	7672	VB	3.6	
3	Carbon Dioxi	2.5451	3.433	-0.036	9949	BB	8.2	
4	Ethane	1.9991	7.407	-0.082	7786	BB	21.6	
5	NMOC	2.4886	12.620	0.296	8259	BB	11.1	
Totals:		11.0410		0.142	41743			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -351 microVolts LSB: 1 microVolts

Noise (used): 35 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 11:13:35, 2ppm mix.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 2ppm mix

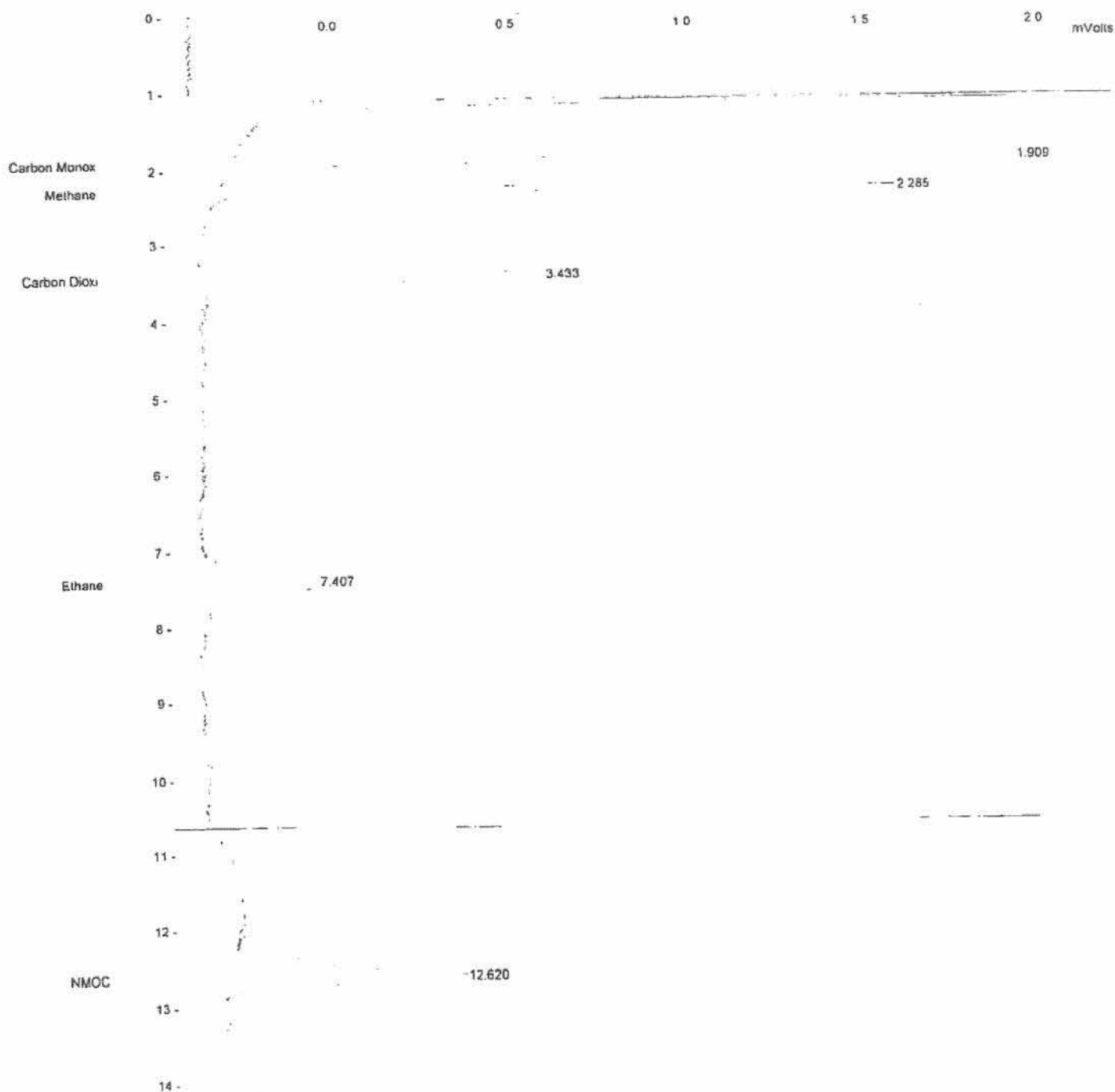


ction Date: 9/21/2015 11:13 AM Calculation Date: 9/23/2015 1:33 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 17%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 11:41:47, n2 blank s016.run
 Method File : c:\docume~1\douglass\locals~1\temp\~9-18-2015, 19:00:56, 2ppm max-2.tmp
 Sample ID : n2 blank s016

Injection Date: 9/21/2015 11:41 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument: Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox		1.930					M
2	Methane		2.300					M
3	Carbon Dioxi	0.3829	3.465	-0.004	1497	BB	9.3	M
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		0.3829		-0.004	1497			

Status Codes:
 M - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 2 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -204 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

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Title : SCAQMD Methods 25.x
Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 11:41:47, n2 blank s016.run
Method File : c:\docume~1\douglass\locals~1\comp\~9-i8-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : n2 blank s016

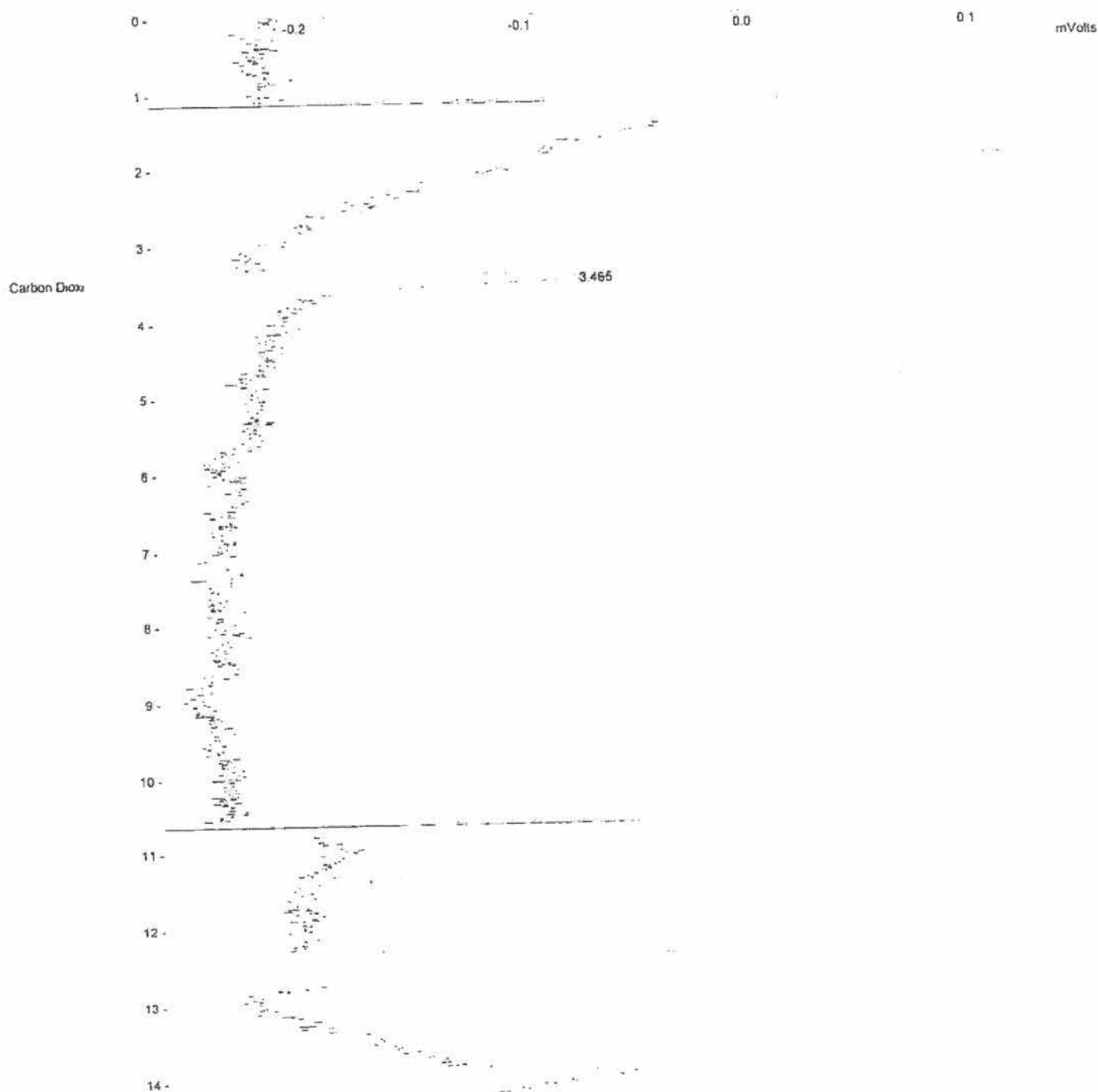


Print Date: 9/21/2015 11:41 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0E00 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 10%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 19:31:52, 20ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 20ppm mix

Injection Date: 9/21/2015 7:31 PM Calculation Date: 9/23/2015 1:31 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	19.4900	1.877	-0.053	76967	BV	2.9	
2	Methane	21.2206	2.256	-0.044	82939	VB	3.8	
3	Carbon Dioxi	27.4180	3.407	-0.062	107178	BB	7.9	
4	Ethane	19.8128	7.392	-0.097	77166	BB	22.0	
5	NMOC	32.9203	11.913	-0.411	109256	BB	18.0	
Totals:		120.8617		-0.667	453506			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -397 microVolts LSB: 1 microVolts

Noise (used): 35 microVolts - monitored before this run

Stream: 2 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 19:31:52, 20ppm mix.run
 Method File : c:\\docume~1\\douglass\\locals-1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : 20ppm mix

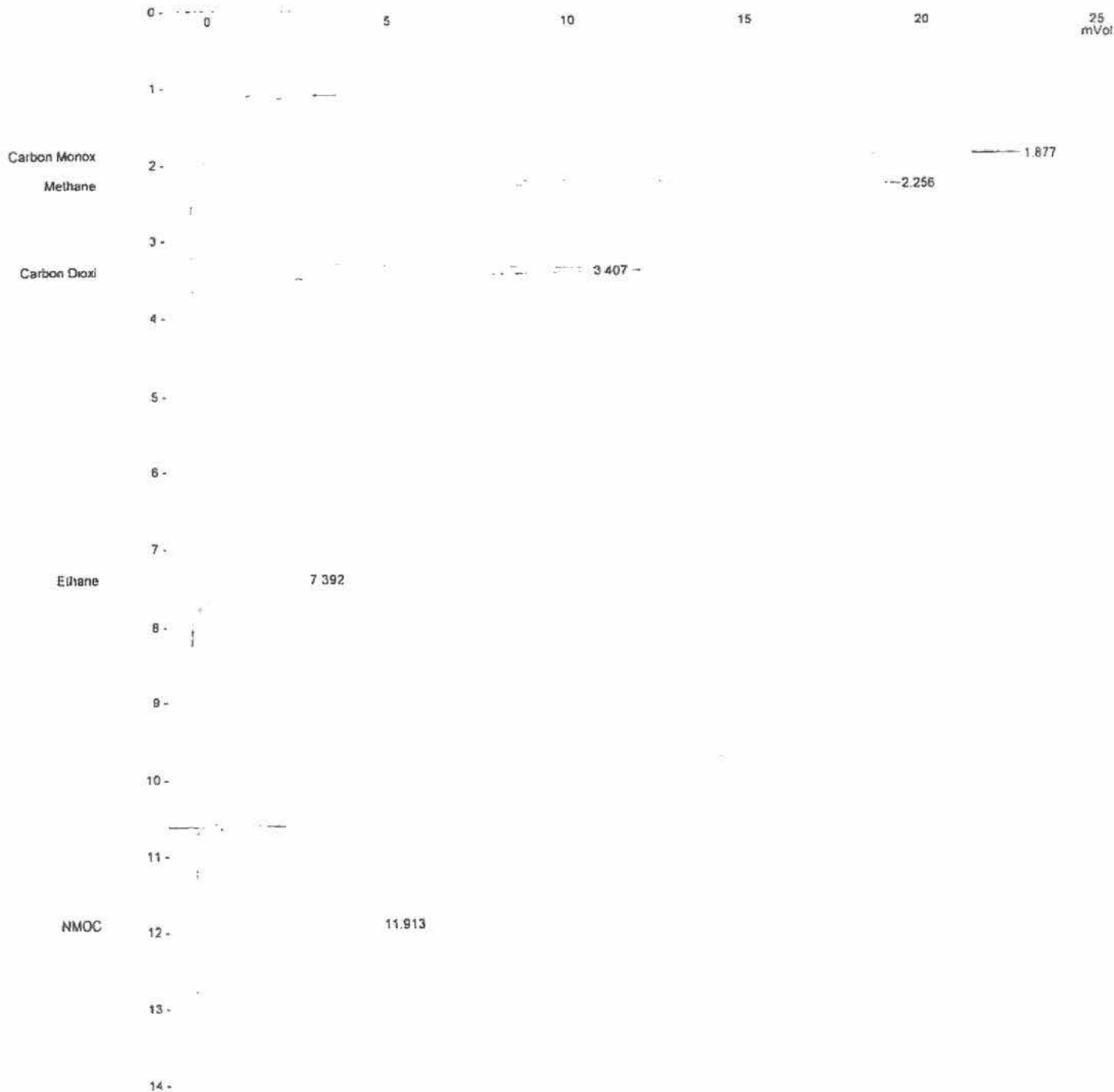


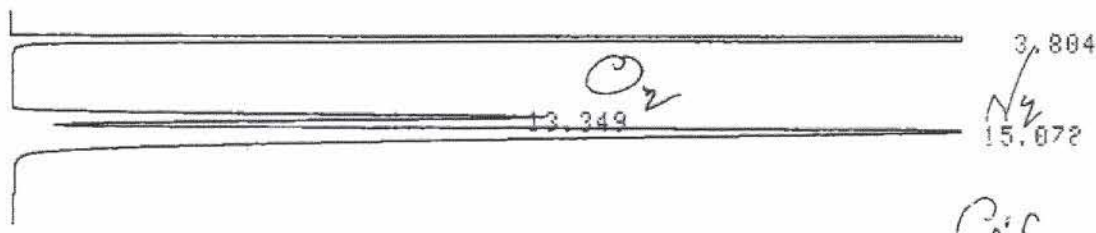
Injection Date: 9/21/2015 7:31 PM Calculation Date: 9/23/2015 1:31 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 11 Zero Offset = 4%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00





CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

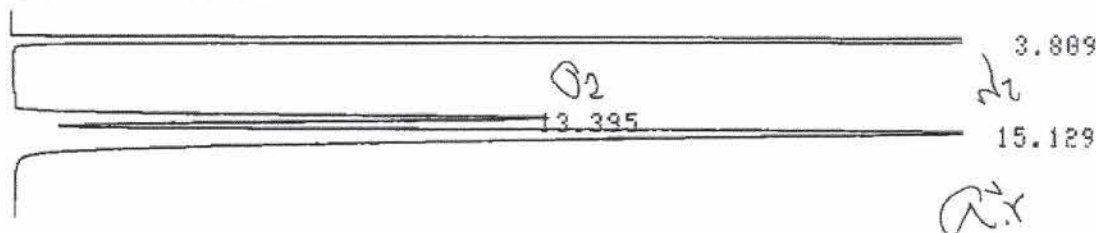
SAMPLE NO 0

REPORT NO 81

FILE 0

METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.804	8775481			35.5141	
2	13.349	4056641			16.4171	
3	15.072	11877733	V		48.0688	
TOTAL		24709856			100	



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

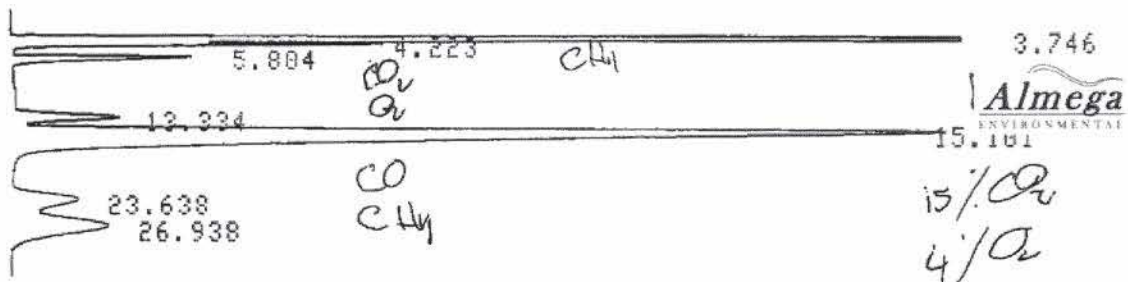
SAMPLE NO 0

REPORT NO 82

FILE 0

METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.809	8803522			35.4808	
2	13.395	4068233			16.3962	
3	15.129	11940342	V		48.1231	
TOTAL		24812096			100	



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

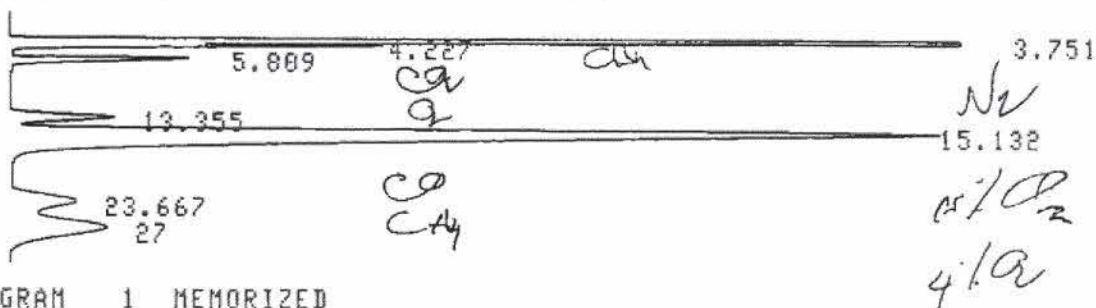
CHANNEL NO 1

SAMPLE NO 0

REPORT NO 83

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.746	6872640			29.4076	
2	4.223	1078583	V		4.6152	
3	5.804	870563			3.7251	
4	13.334	793270			3.3943	
5	15.101	10843788	V		46.3998	
6	23.638	1020641			4.3673	
7	26.938	1890826	V		8.0907	
TOTAL		23370306			100	



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

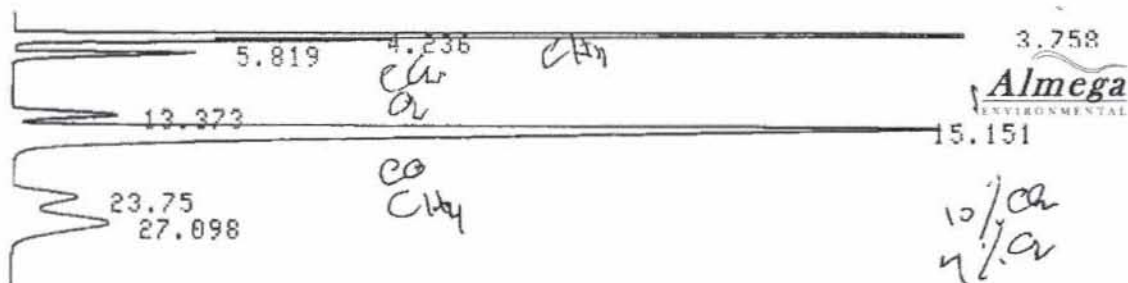
CHANNEL NO 1

SAMPLE NO 0

REPORT NO 84

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.751	6872401			29.2683	
2	4.227	1072651	V		4.5682	
3	5.809	876956	V		3.7348	
4	13.355	800006			3.4071	
5	15.132	10913961	V		46.4806	
6	23.667	1031596			4.3934	
7	27	1913099	V		8.1475	
TOTAL		23480666			100	



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 96

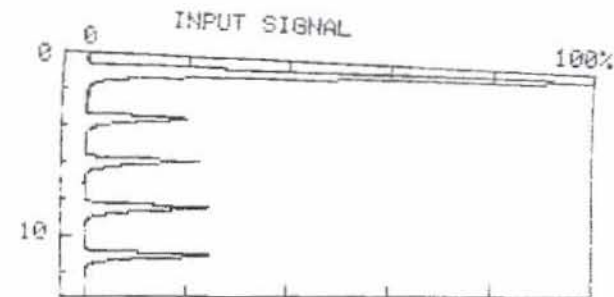
FILE 0
METHOD 41

029

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.758	6944926			29.5736	
2	4.236	1065376	V		4.5367	
3	5.819	883407			3.7618	
4	13.373	794357			3.3826	
5	15.151	10846653	V		46.1883	
6	23.75	1033952			4.4029	
7	27.098	1914874	V		8.1541	
TOTAL		23483544			100	

2/21/2007-02

TOC ANALYSIS
on the TRAPS



TIME [min]

SAMPLE# 12 TC

[x 1, 27µl, C# 14, #WASH 2, SP 0min]

#	AREA PPM	C#	µl	RG
1	42789	21.69	H	
2	9290	21.36	16	
3	9733	22.39		
4	10409	23.97		
+ 5	10409	23.97		

MN 10183 23.44

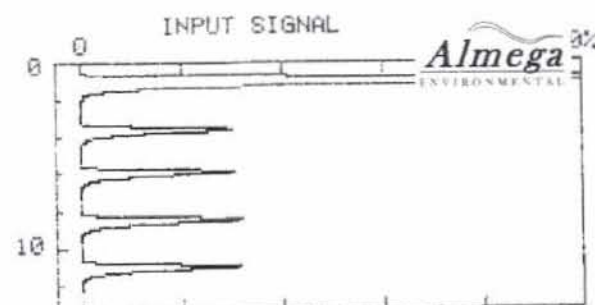
SD 390 0.910

CV 3.83 %

COR CONC DIL 23.44 [x 1.0]

COR CONC INJ 23.44 [x 1.0]

DATE 09(SEP)-18-2015 15:06



TIME [min]

SAMPLE# 13 TC

[x 1, 27µl, C# 14, #WASH 2, SP 0min]

#	AREA PPM	C#	µl	RG
1	57965	29.48	H	
2	12718	29.35	16	
3	13153	30.37		
4	13433	31.02		
+ 5	13340	30.80		

MN 13308 30.73

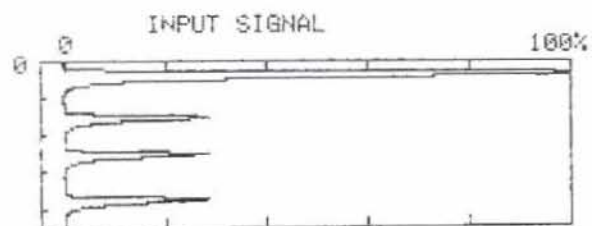
SD 142 0.332

CV 1.07 %

COR CONC DIL 30.73 [x 1.0]

COR CONC INJ 30.73 [x 1.0]

DATE 09(SEP)-18-2015 15:32



TIME [min]

SAMPLE# 12 IC

[x 1, 33µl, C# 13, #WASH 2, SP 0min]

#	AREA PPM	C#	µl	RG
1	50014	19.88	H	
2	10872	18.91	15	
3	10958	19.06		
4	11177	19.45		

MN 11002 19.14

SD 157 0.275

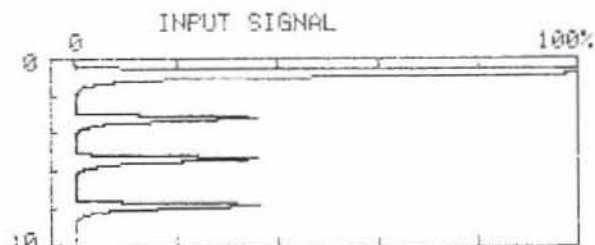
CV 1.42 %

COR CONC DIL 19.14 [x 1.0]

COR CONC INJ 19.14 [x 1.0]

SAMPLE# 12 TOC(TC-IC) 4.300 PPM

DATE 09(SEP)-18-2015 15:17



TIME [min]

SAMPLE# 13 IC

[x 1, 33µl, C# 13, #WASH 2, SP 0min]

#	AREA PPM	C#	µl	RG
1	59883	23.86	H	
2	14327	24.96	15	
3	14433	25.14		
4	14465	25.20		

MN 14408 25.10

SD 72 0.126

CV 0.50 %

COR CONC DIL 25.10 [x 1.0]

COR CONC INJ 25.10 [x 1.0]

SAMPLE# 13 TOC(TC-IC) 5.630 PPM

DATE 09(SEP)-18-2015 15:43

**SCAQMD Method 25.3
TOC Analysis on the Trap**

Calibration Curve No.:

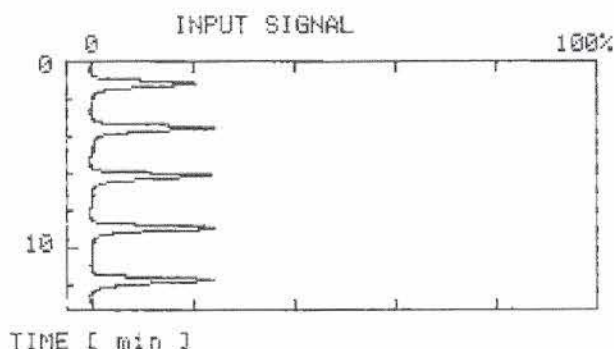
TC

IC

Page: # 48

No	Sample ID	Date	Sample Volume, ml		Dilution Factor	Concentration, ppmC		
			Initial	Final		TC	IC	TOC
1	Blank	7/18	—	—	1	.078	-.03	.100
2	TEST		—	—	1	4.765	-.07	4.835
3	TEST		—	—	1	7.670	7.585	.082
4	LCS		—	—	1	6.106	-.04	6.196
5	Blank		—	—	1	.069	-.01	.079
41 6	A122-012A		2	4	2	7.127	6.075	1.052
42 7	-012B		2	4	2	11.14	8.514	2.626
46 8	-022A		2	4	2	9.006	8.220	.786
47 9	-022B		2	4	2	11.45	8.041	3.409
51 10	-032A		2	4	2	7.175	5.896	1.279
52 11	-032B		2	4	2	7.593	6.223	1.370
33 12	A126-012A		2	4	2	23.44	19.14	4.300
32 13	-012B		2	4	2	30.73	25.10	5.630
28 14	-022A		2	4	2	34.41	27.02	7.390
26 15	-022B		2	4	2	27.49	16.65	6.840
16	LCS		—	—	1	6.512	.405	6.107
17								
18								
19								
20								
21								

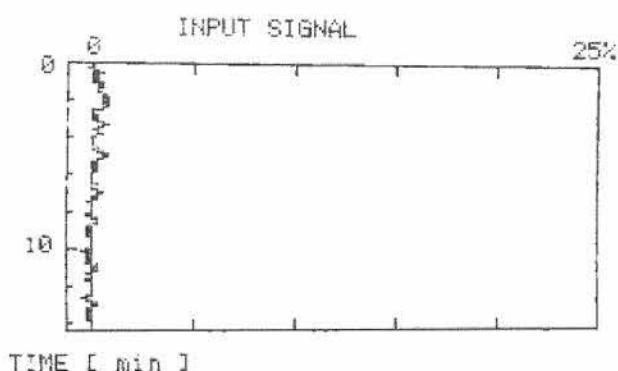
Comments Val #26 — Broken Glass at bottom.



SAMPLE# 2 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RS
1- 8514 4.121
2- 9541 4.646
3 9686 4.720
+ 4 9799 4.778
+ 5 9837 4.797

MN 9774 4.765
SD 78 0.040
COR 0000 DIL 4.765 [x 1.0]
COR CONC INJ 4.765 [x 1.0]

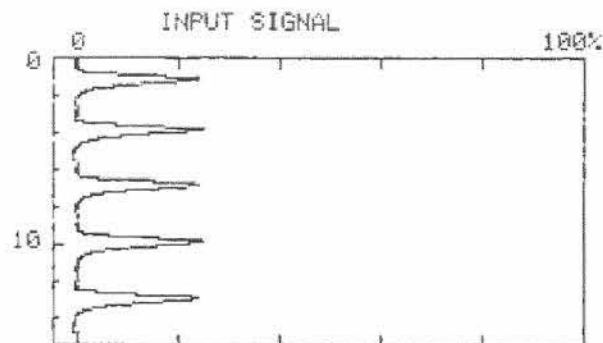
DATE 09(SEP)-18-2015 08:37



SAMPLE# 2 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RS
1 109 -0.08
2- 149 -0.06
3- 186 -0.05
+ 4- 94 -0.09
+ 5 137 -0.07
+ 6- 0 -0.12
+ 7 116 -0.07

MN 120 -0.07
SD 14 0.005
CV 12.0 %
COR CONC DIL -0.07 [x 1.0]
COR CONC INJ -0.07 [x 1.0]

SAMPLE# 2 TOC(TC-IC) 4.835 PPM

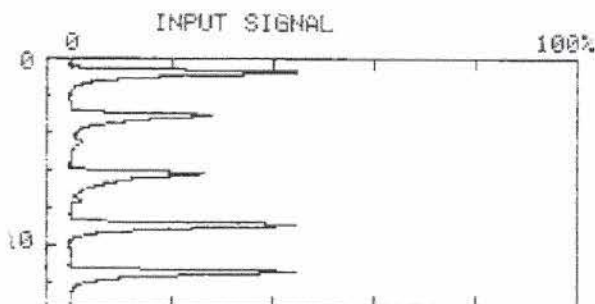


TIME [min]

SAMPLE# 3 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1-14189 7.022
2 15661 7.774
3-14749 7.308
+ 4 15523 7.704
+ 5 15185 7.531

MN 15456 7.670
SD 244 0.125
CV 1.58 %
COR CONC DIL 7.670 [x 1.0]
COR CONC INJ 7.670 [x 1.0]

DATE 09(SEP)-18-2015 09:44



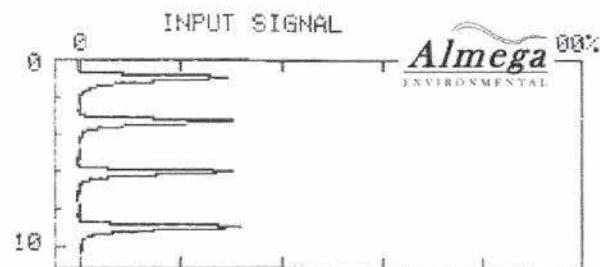
TIME [min]

SAMPLE# 3 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1 20143 7.833
2-15120 5.811
3-14711 5.647
+ 4 19317 7.500
+ 5 19144 7.430

MN 19534 7.588
SD 533 0.214
CV 2.73 %
COR CONC DIL 7.588 [x 1.0]
COR CONC INJ 7.588 [x 1.0]

SAMPLE# 3 TOC(TC-IC) 0.082 PPM

DATE 09(SEP)-18-2015 10:07

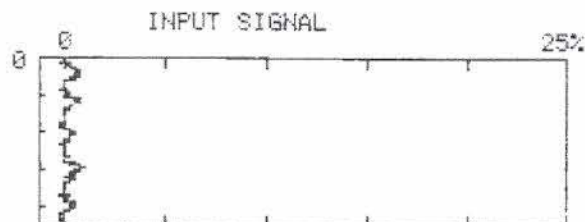


TIME [min]

SAMPLE# 4 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1-12822 6.323
2 12100 5.954
3 12375 6.095
+ 4 12719 6.270

MN 12398 6.106
SD 310 0.158
CV 2.50 %
COR CONC DIL 6.106 [x 1.0]
COR CONC INJ 6.106 [x 1.0]

DATE 09(SEP)-18-2015 10:22



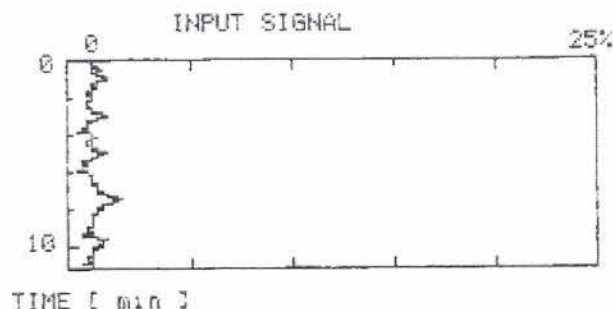
TIME [min]

SAMPLE# 4 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1- 115 -0.07
2 212 -0.04
3 213 -0.04
+ 4- 253 -0.02
+ 5 189 -0.05

MN 204 -0.04
SD 13 0.005
CV 6.63 %
COR CONC DIL -0.04 [x 1.0]
COR CONC INJ -0.04 [x 1.0]

SAMPLE# 4 TOC(TC-IC) 6.146 PPM

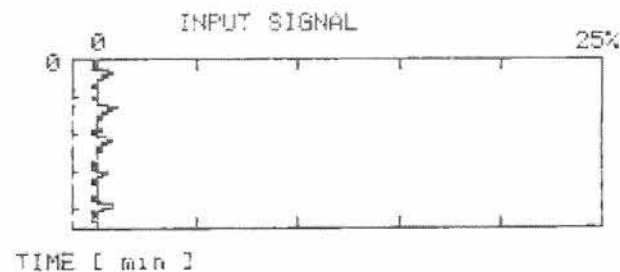
DATE 09(SEP)-18-2015 10:39



SAMPLE# 5 TC
 [x 1, 27µl, C# 14, #WASH 2, SP 0min]
 # AREA PPM C# µl RG
 1 584 0.064
 2- 393 -0.03
 3- 128 -0.16
 + 4 641 0.093
 + 5 556 0.049

 MN 593 0.069
 SD 43 0.022
 CV 7.29 %
 COR CONC DIL 0.069 [x 1.0]
 COR CONC INJ 0.069 [x 1.0]

DATE 09(SEP)-18-2015 11:44



SAMPLE# 5 IC
 [x 1, 33µl, C# 13, #WASH 2, SP 0min]
 # AREA PPM C# µl RG
 1 291 -0.01
 2 252 -0.02
 3- 293 -0.04
 + 4- 206 -0.04
 + 5 282 -0.01

 MN 275 -0.01
 SD 20 0.007
 CV 7.42 %
 COR CONC DIL -0.01 [x 1.0]
 COR CONC INJ -0.01 [x 1.0]

SAMPLE# 5 TOC(TC-IC) 0.079 PPM

DATE 09(SEP)-18-2015 12:00

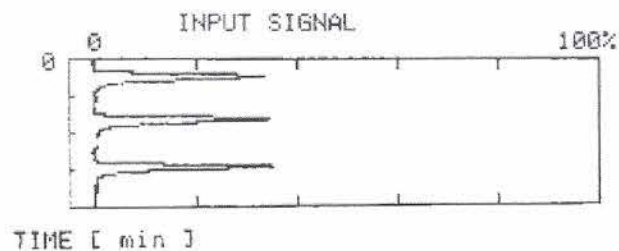
TOC-5000 DATA REPORT

DATE 09(SEP)-18-20

Almega
 ENVIRONMENTAL

SPL#	TC, PPM	RMK	IC, PPM	RMK	TOC, PPM
1	0.183	14****	-0.10	13****	0.283
2	4.765	14****	-0.07	13****	4.835
3	7.670	14****	7.588	13****	0.082
4	6.106	14****	-0.04	13****	6.146
5	0.069	14****	-0.01	13****	0.079
6	7.127	14****	6.075	13****	1.052
7	11.14	14****	8.514	13****	2.626
8	9.106	14****	8.220	13****	0.886
9	11.45	14****	8.041	13****	3.409
10	7.175	14****	5.896	13****	1.279
11	7.593	14****	6.223	13****	1.370
12	23.44	16***	19.14	15***	4.300
13	30.73	16***	25.10	15***	5.630
14	34.41	16***	27.02	15***	7.390
15	23.49	16***	16.65	15***	6.840
16	6.512	14****	0.405	13****	6.107

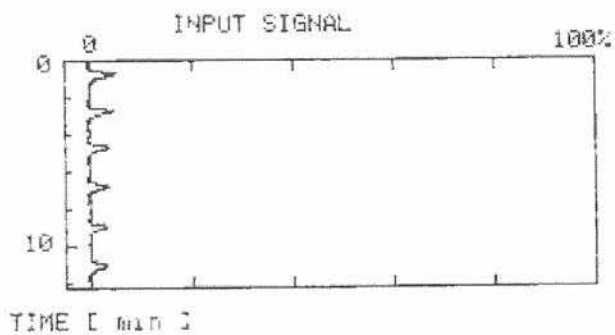
ANALYST :
 SAMPLE :



SAMPLE# 16 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1 12910 6.368
2 13381 6.609
3 13283 6.559

MN 13191 6.512
SD 248 0.127
CV 1.98 %
COR CONC DIL 6.512 [x 1.0]
COR CONC INJ 6.512 [x 1.0]

DATE 09(SEP)-18-2015 17:12



SAMPLE# 16 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1- 1785 0.557
2- 1866 0.588
3 1391 0.407
+ 4 1364 0.396
+ 5- 1189 0.330
+ 6 1405 0.412

MN 1386 0.405
SD 20 0.008
CV 1.5 %
COR CONC DIL 0.405 [x 1.0]
COR CONC INJ 0.405 [x 1.0]

SAMPLE# 16 TOC(TC-IC) 6.107 PPM

DATE 09(SEP)-18-2015 17:33

TANK PREPARATION

TANK PREPARATIONS

Client: Mesa Water
 Project No.: c9840
 Unit Tested: Reservoir #2 - Engine #2
 Sampling Date: 16-Sep-15
 Date pressurized: 17-Sep-15

Lab No.: A 126

Tank ID	Sample ID	Pre-test pressure mm Hg		Post-test pressure mm Hg	Final Pressure	Comments
		1	2			
S011	A 126 - 011 A	-758	-758	-198 *	166	Run #1 A
W0100	A 126 - 011 B	-758	-758	-212	168	Run #1 B

* - Post -test Pressure is less then 200 mm Hg.

CALIBRATIONS

11-Jun-15
Current

	100 ppm mix				1000 ppm mix				2000 ppm mix				Ave	RSD	
	conc	area 1	area 2	RF 1	RF 2	conc	area 1	area 2	RF 1	RF 2	conc	area 1			area 2
Carbon Monoxide	101.08	370255	370534	2.73E-04	2.73E-04	1000.4	3675579	3677664	2.72E-04	2.72E-04	2006.8	7837647	7847982	2.56E-04	2.56E-04
Methane	101.92	404558	404178	2.52E-04	2.52E-04	1001.8	3996870	3999636	2.51E-04	2.50E-04	2010	7841024	7848899	2.56E-04	2.56E-04
Carbon Dioxide	104.3	398920	398859	2.61E-04	2.61E-04	1002	3952298	3958485	2.54E-04	2.53E-04	1999	7759139	7771729	2.58E-04	2.57E-04
Ethane	97.06	401612	402485	2.42E-04	2.41E-04	1004	3918356	3915213	2.56E-04	2.56E-04	2015	7841898	7841835	2.57E-04	2.57E-04
TGNMO	101.9	344008	342942	2.96E-04	2.97E-04	1002	3288823	3284294	3.05E-04	3.05E-04	2002	6488336	6473601	3.09E-04	3.09E-04
Average	387275	387116	Average	2.63E-04	2.63E-04	Average	3766385	3767058.4	2.67E-04	2.67E-04	Average	7553609	7556809	2.67E-04	2.67E-04
RSD%				1.2				Average	-0.5			Average		0.4	

RSD _{CO} =	4.278	r _{CO} =	0.99911
RSD _{CH4} =	0.724	r _{CH4} =	0.99997
RSD _{CO2} =	1.504	r _{CO2} =	0.99995
RSD _{C2H6} =	1.435	r _{C2H6} =	1.00000
RSD _{NMOC} =	3.459	r _{NMOC} =	0.99999

Carbon Monoxide

External Standard Analysis

Curve Type: Linear

Origin: Force

y = +3.890797e+003x

Replicates 2

8000000

7000000

P 6000000

e 5000000

a 4000000

k 3000000

S 2000000

i 1000000

z 0

e

Resp. Fact. RSD: 4.278%

Coeff. Det.(r²): 0.998216

500 1000 1500
 Amount (ppmC)

Methane

External Standard Analysis

Curve Type: Linear

Origin: Force

y = +3.890298e+003x

Replicates 2

8000000

7000000

P 6000000

e 5000000

a 4000000

k 3000000

S 2000000

i 1000000

z 0

e

Resp. Fact. RSD: 0.7244%

Coeff. Det.(r²): 0.999947

500 1000 1500
 Amount (ppmC)

Carbon Dioxide

External Standard Analysis

Curve Type: Linear

Origin: Force

y = +3.885038e+003x

Replicates 2

8000000

7000000

P 6000000

e 5000000

a 4000000

k 3000000

S 2000000

i 1000000

z 0

e

Resp. Fact. RSD: 1.504%

Coeff. Det.(r²): 0.999910

500 1000 1500
 Amount (ppmC)

Ethane

External Standard Analysis

Curve Type: Linear

Origin: Force

$$y = +3.872272e+003x$$

Replicates 2

8000000

7000000

P 6000000

e 5000000

a 4000000

k 3000000

S 2000000

i 1000000

z 0

e

Resp. Fact. RSD: 1.435%

Coeff. Det.(r²): 0.999994

2

2

500

1000

1500

Amount (ppmC)

NMOC

External Standard Analysis

Curve Type: Linear

Origin: Force

$$y = +3.232029e+003x$$

Replicates 2

6000000

P 5000000

e 4000000

a 3000000

k 2000000

S 1000000

i 0

z

e

Resp. Fact. RSD: 3.459%

Coeff. Det.(r²): 0.999986

2

2

500

1000

1500

Amount (ppmC)

Print Date: Fri Jun 12 11:02:09 2015

Page 1 of 1

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 10:31:00, lab air.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : lab air

Injection Date: 6/11/2015 10:31 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 - Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	100.4453	1.889	-0.041	396662	BB	3.8	
2	Methane	1.5123	2.283	0.012	5911	TS	0.0	
3	Carbon Dioxi	496.0579	3.429	-0.040	1939116	BB	7.9	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:				-0.069	2341689			

Status Codes:
M Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -246 microVolts LSB: 1 microVolts

Noise (used): 51 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 10:31:00, lab air.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : lab air

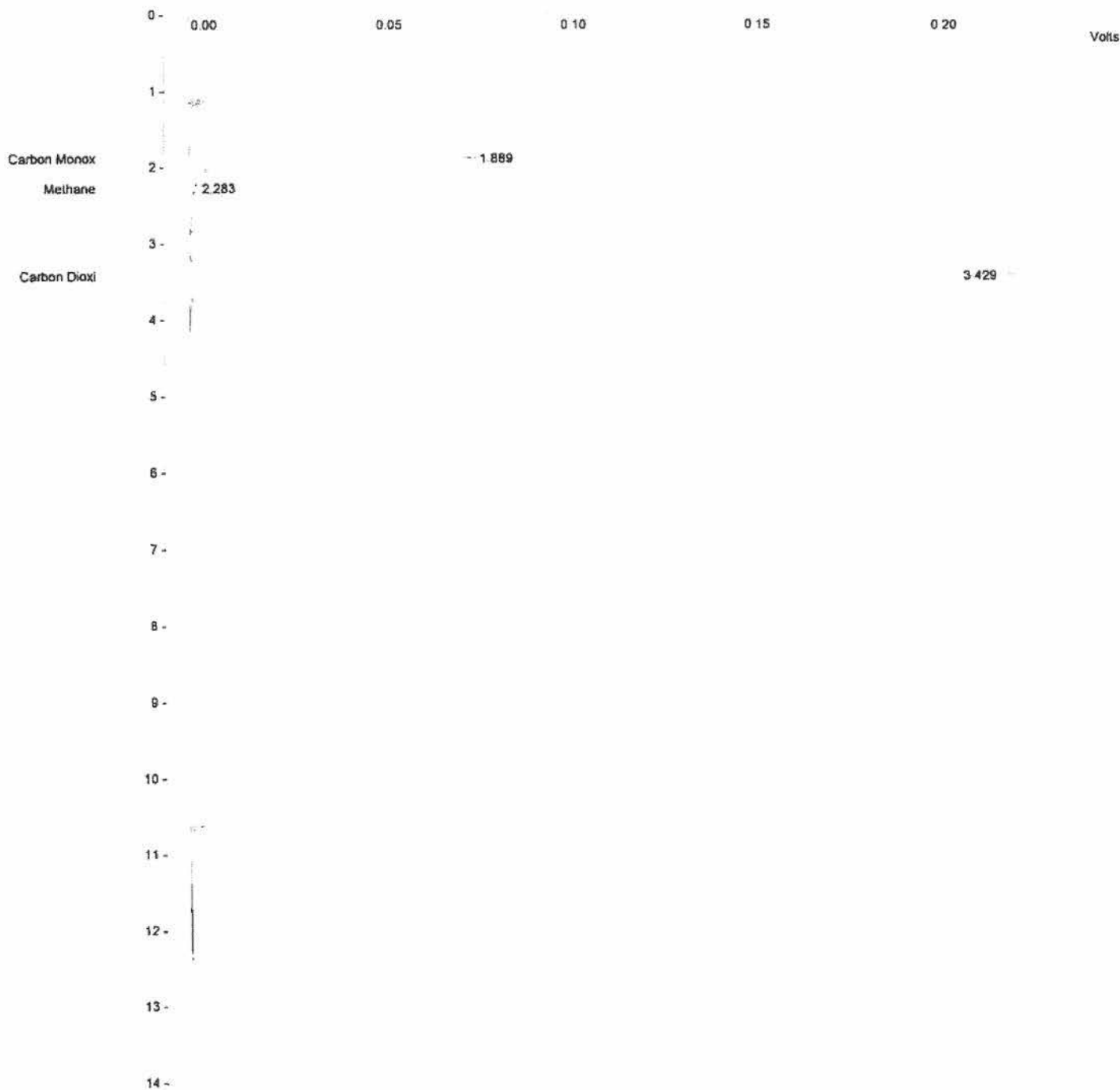


Action Date: 6/11/2015 10:31 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 106 Zero Offset = 28
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Print Date: Fri Jun 12 11:02:19 2015 Page 1 of 1
Title : SCAQMD Methods 25.x
Run File : \\almega01\files\server\laboratory\gc chromatograms\2015\June 15\6-11-2015, 10:59:03, n2 blank w0100.run
Method File : c:\document-1\douglas\locals-1\temp\6-8-2015, 09:42:15, lab-air-2.tmp
Sample ID : n2 blank w0100

Injection Date: 6/11/2015 10:59 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass
Workstation: Detector Type: 0800 (10 Volts)
Instrument : Varian Star #1 Bus Address : 88
Channel : 2 = Foreflush 10 Sample Rate : 1.25 Hz
Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00298-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	0.5921	1.904	-0.026	2338	BB	3.8	M
2	Methane		2.271					
3	Carbon Dioxi	0.9205	3.435	-0.034	3598	BB	8.3	M
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		1.5126		-0.060	5936			

Status Codes:
M - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -259 microVolts LSB: 1 microVolts

Noise (used): 33 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\files\server\laboratory\gc chromatograms\2015\june_15\6-11-2015, 10:59:03, n2 blank w0100.run
Method File : c:\docume~1\douglass\locals~1\temp\~6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : n2 blank w0100

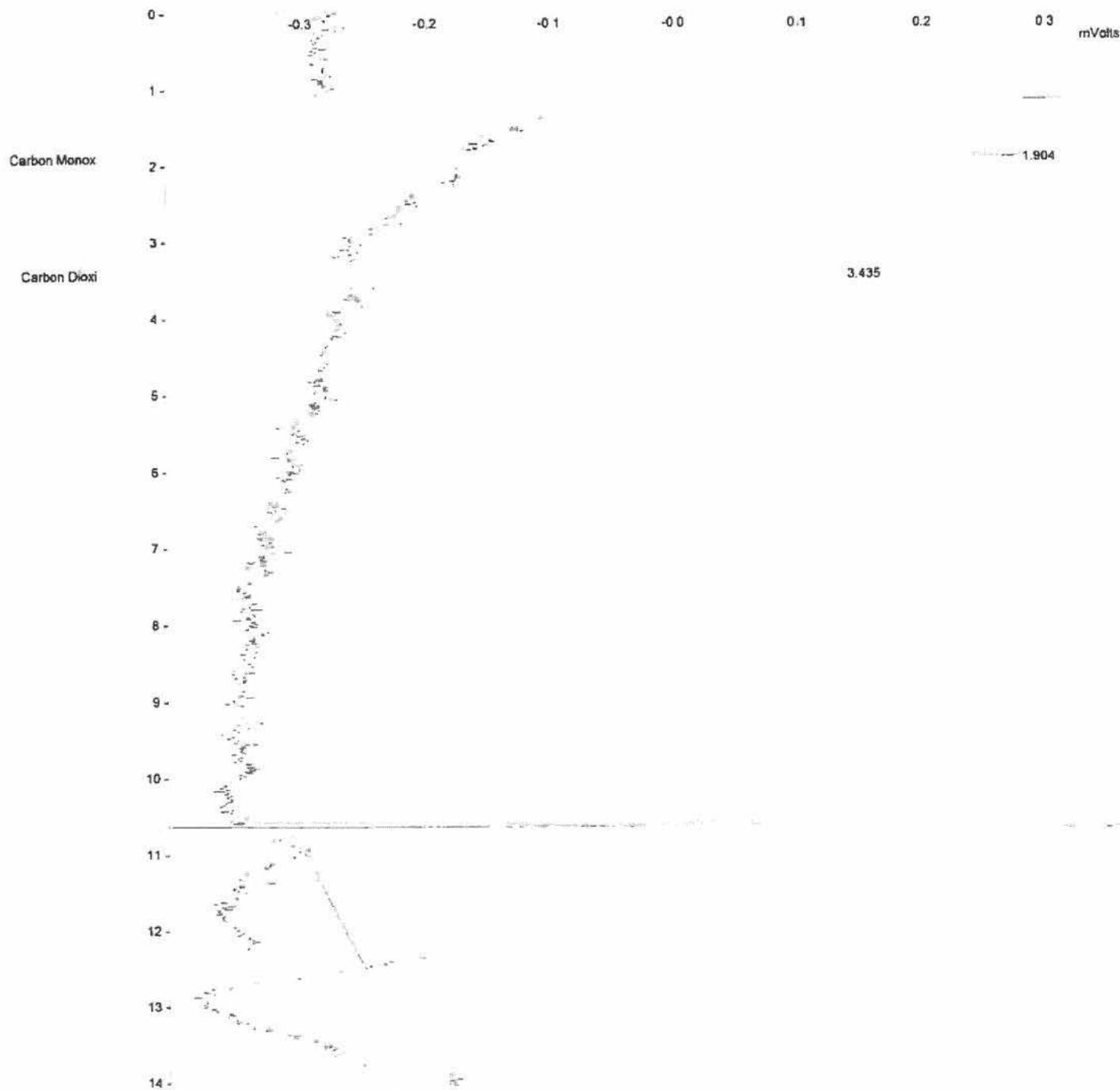


Print Date: 6/11/2015 10:59 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0900 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 16%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 11:48:06, 100ppm mix.run
Method File : c:\docume-1\douglass\locals-1\temp\6-12-2015, 11:30:17, n2 blank a111-2.tmp
Sample ID : 100ppm mix

Injection Date: 6/11/2015 11:48 AM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3568-D6B-21E1 **

Run Mode : Calibration
Peak Measurement: Peak Area
Calculation Type: External Standard
Level : 3

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.923	-0.007	370255	BV	3.4	
2	Methane	2.296	-0.004	404558	VF	3.8	
3	Carbon Dioxi	3.436	-0.033	398920	PB	8.0	
4	Ethane	7.400	-0.089	401612	BB	21.8	
5	NMOC	12.335	0.011	344008	BB	17.0	
Totals:			-0.122	1919353			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -153 microVolts LSB: 1 microVolts

Noise (used): 22 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileservers\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 11:48:06, 100ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-12-2015, 11:30:17, n2 blank a111-2.tmp
Sample ID : 100ppm mix

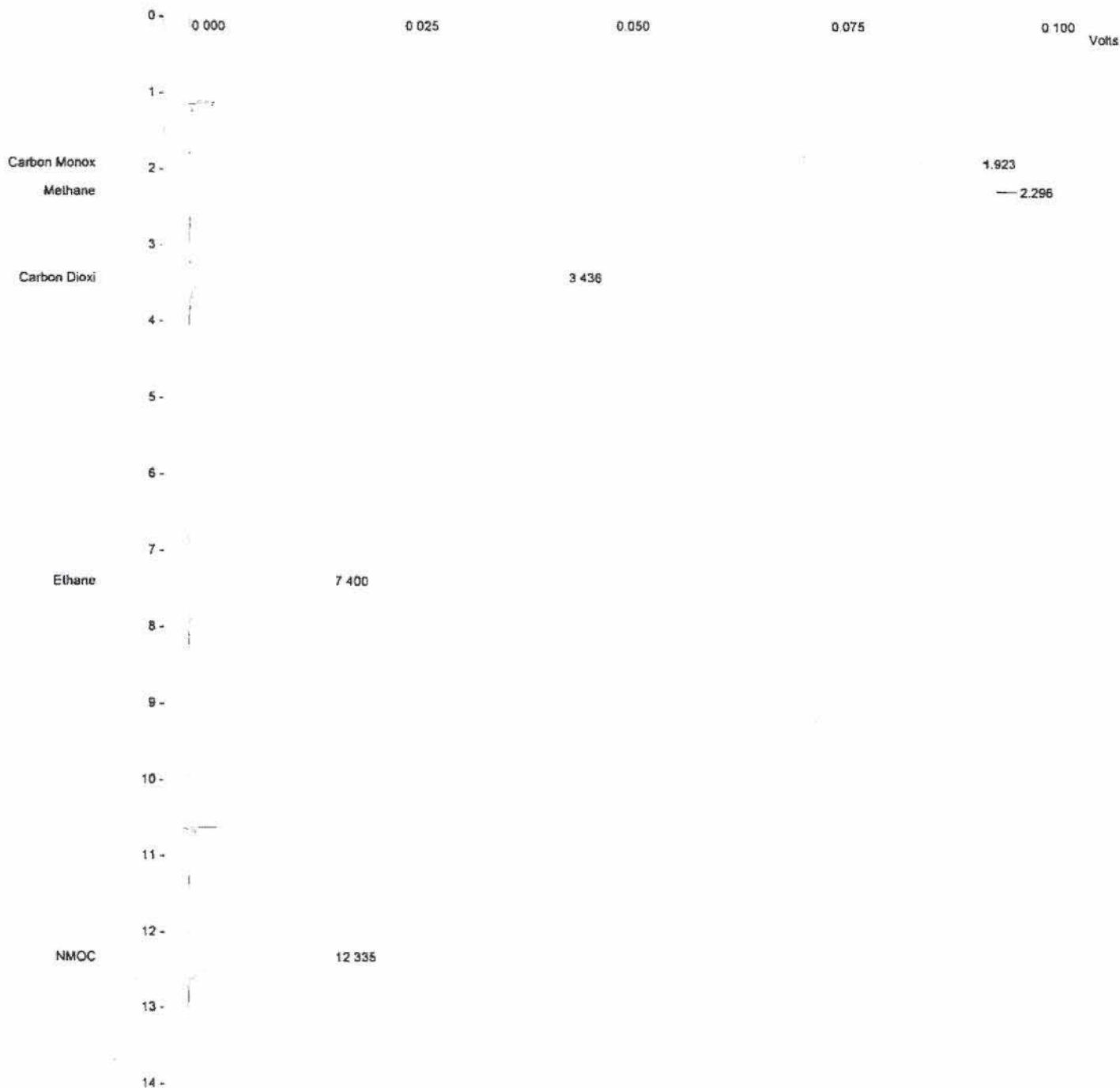


Action Date: 6/11/2015 11:48 AM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 46 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 12:14:47, 100ppm mix.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-12-2015, 11:30:17, n2 blank a111-2.tmp
 Sample ID : 100ppm mix

Injection Date: 6/11/2015 12:14 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 3

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.913	-0.009	370534	BV	3.3	
2	Methane	2.288	-0.008	404178	VB	3.8	
3	Carbon Dioxi	3.431	-0.005	398859	BB	8.0	
4	Ethane	7.404	0.004	402485	BB	21.8	
5	NMOC	12.333	-0.001	342942	BB	17.4	
Totals:			-0.019	1918998			

Total Unidentified Counts : 0 counts

Defected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -296 microVolts LSB: 1 microVolts

Noise (used): 36 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 12:14:47, 100ppm mix.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-12-2015, 11:30:17, n2 blank a111-2.tmp
 Sample ID : 100ppm mix

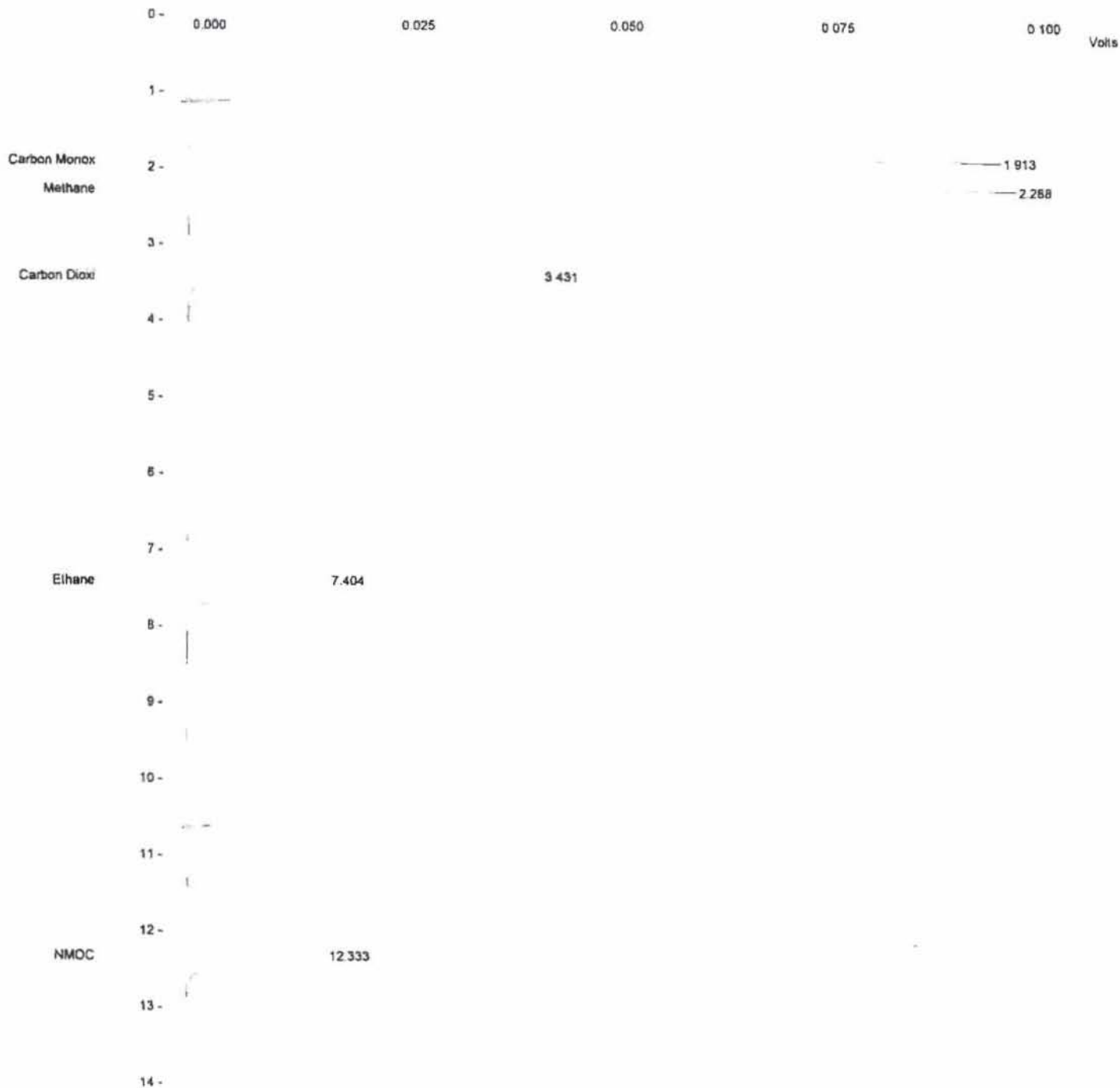


action Date: 6/11/2015 12:14 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 47 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Print Date: 1 Jun 12 10:59:37 2015 Page: 1 of 1
Title: SCAQMD Methods 25.x
Run File: \\almega01\fileserver\laboratory\gc chromatograms\2015\June 15\6-11-2015, 13:10:59, 1000ppm mix.run
Method File: c:\documents-1\douglas\locals-1\temp\6-12-2015, 11:30:17, n2 blank s111-2.tmp
Sample ID: 1000ppm mix

Injection Date: 6/11/2015 1:10 PM Calculation Date: 6/12/2015 10:56 AM

Operator: Douglas
Workstation: Detector Type: 0800 (10 Volts)
Bus Address: 88
Instrument: Varian Star #1 Sample Rate: 1.25 Hz
Channel: 2 = Foreflush 10 Run Time: 15.013 min

***Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode: Calibration

Peak Measurement: Peak Area

Calculation Type: External Standard

Level: 2

Peak ID	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.933	0.020	3675579	BV	3.0	
2	Methane	2.309	0.021	3996870	VV	3.8	
3	Carbon Dioxi	3.448	0.018	3952298	VB	7.9	
4		5.632	0.000	21690	BB	15.2	
5	Ethane	7.413	0.009	3918356	BB	21.9	
6	NMOC	12.349	0.016	3268823	BB	17.1	
Totals:			0.084	18853616			

Total Unidentified Counts: 21690 counts

Detected Peaks: 6 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -231 microVolts LSB: 1 microVolts

Noise (used): 41 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:10:59, 1000ppm mix.run
Method File : c:\docume~1\douglass\locals~1\temp~-6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 1000ppm mix

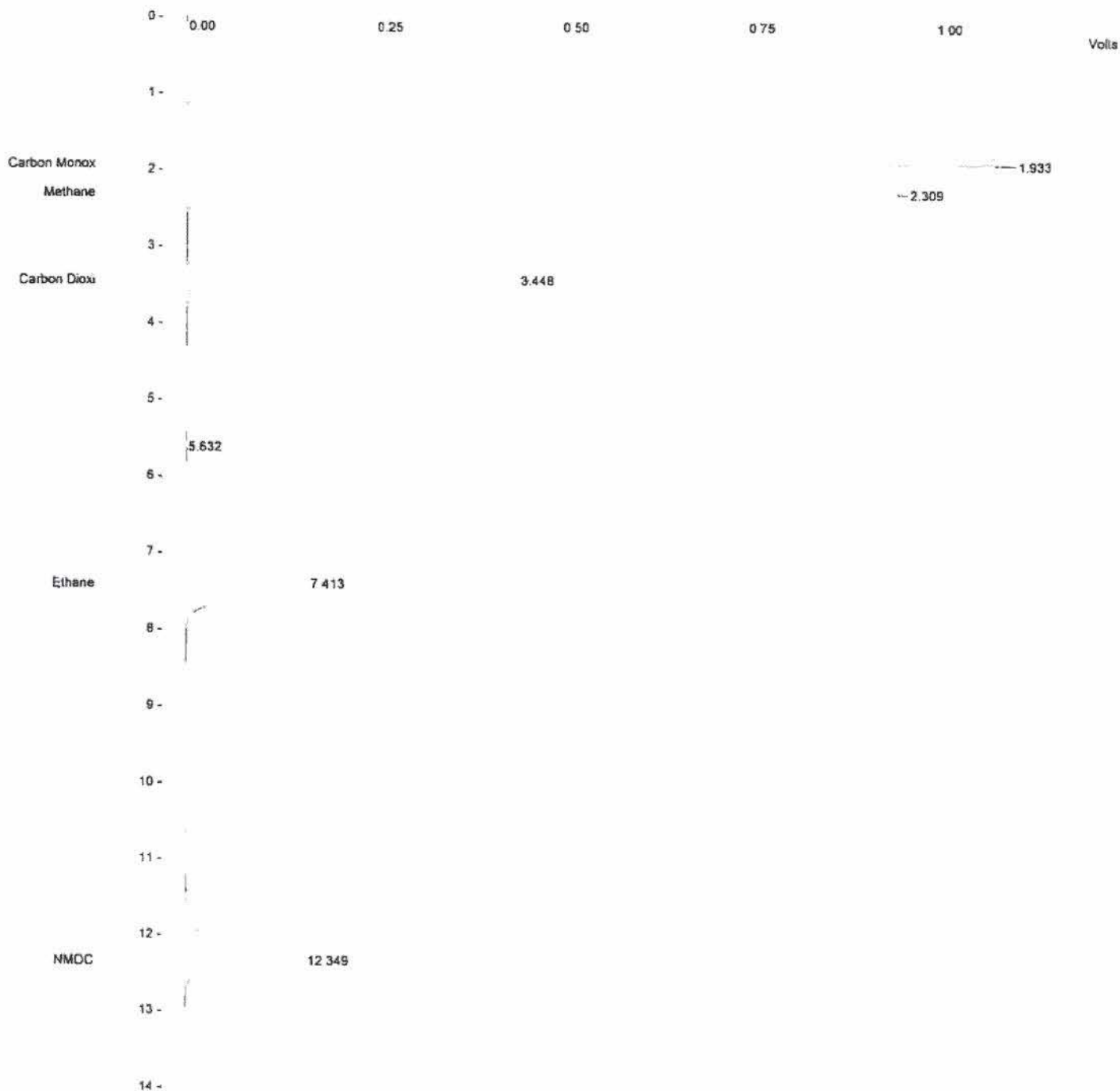


Action Date: 6/11/2015 1:10 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-06B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 526 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:39:09, 1000ppm mix.run
 Method File : c:\docume-1\douglass\locals-1\temp\6-12-2015, 11:30:17, n2 blank all-2.tmp
 Sample ID : 1000ppm mix

Injection Date: 6/11/2015 1:39 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 2

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.905	-0.028	3677664	BV	2.9	
2	Methane	2.281	-0.028	3999636	VV	3.8	
3	Carbon Dioxi	3.420	-0.028	3958485	VB	7.9	
4		5.603	0.000	22169	BB	15.4	
5	Ethane	7.384	-0.029	3915213	BB	21.8	
6	NMOC	12.323	-0.026	3284294	BB	17.2	
Totals:			-0.139	18857461			

Total Unidentified Counts : 22169 counts

Detected Peaks: 6 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -351 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:39:09, 1000ppm mix.run
Method File : c:\docume~1\douglass\locals~1\temp\~6-12-2015, 11:30:17, n2 blank a111-2.tmp
Sample ID : 1000ppm mix

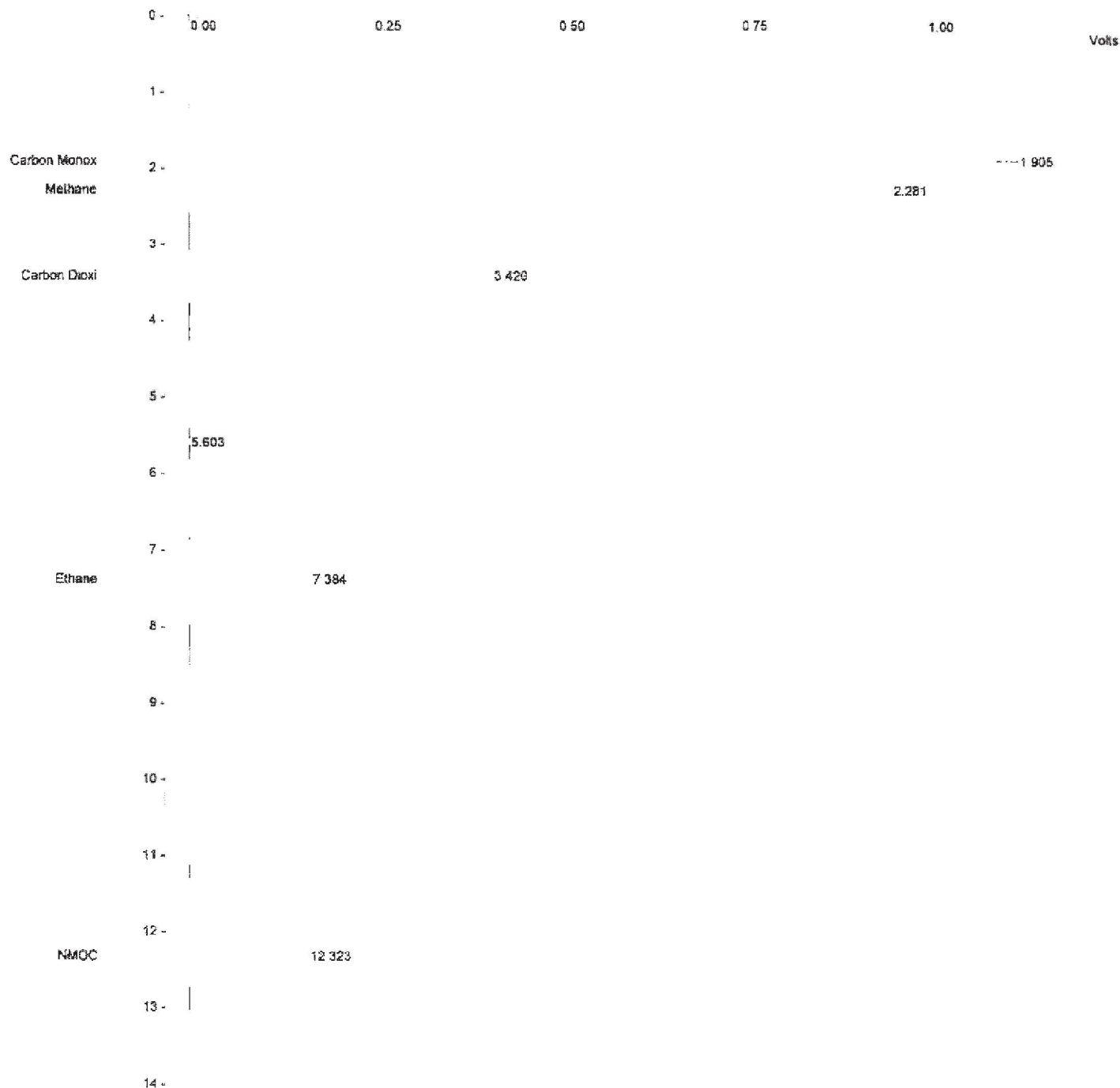


ection Date: 6/11/2015 1:39 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 3800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00299-3588-D66-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 533 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileservers\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 14:30:32, 2000ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-12-2015, 11:30:17, n2_blank a111-2.tmp
Sample ID : 2000ppm mix

Injection Date: 6/11/2015 2:30 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
Peak Measurement: Peak Area
Calculation Type: External Standard
Level : 1

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.905	0.000	7837647	BV	2.9	
2	Methane	2.283	0.002	7841024	VV	3.8	
3	Carbon Dioxi	3.420	0.000	7759139	VB	7.9	
4	Ethane	7.383	-0.001	7841898	BB	21.8	
5	NMOC	12.325	0.003	6488336	BB	17.1	
Totals:			0.004	37768044			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -274 microVolts LSB: 1 microVolts

Noise (used): 43 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 14:30:32, 2000ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 2000ppm mix

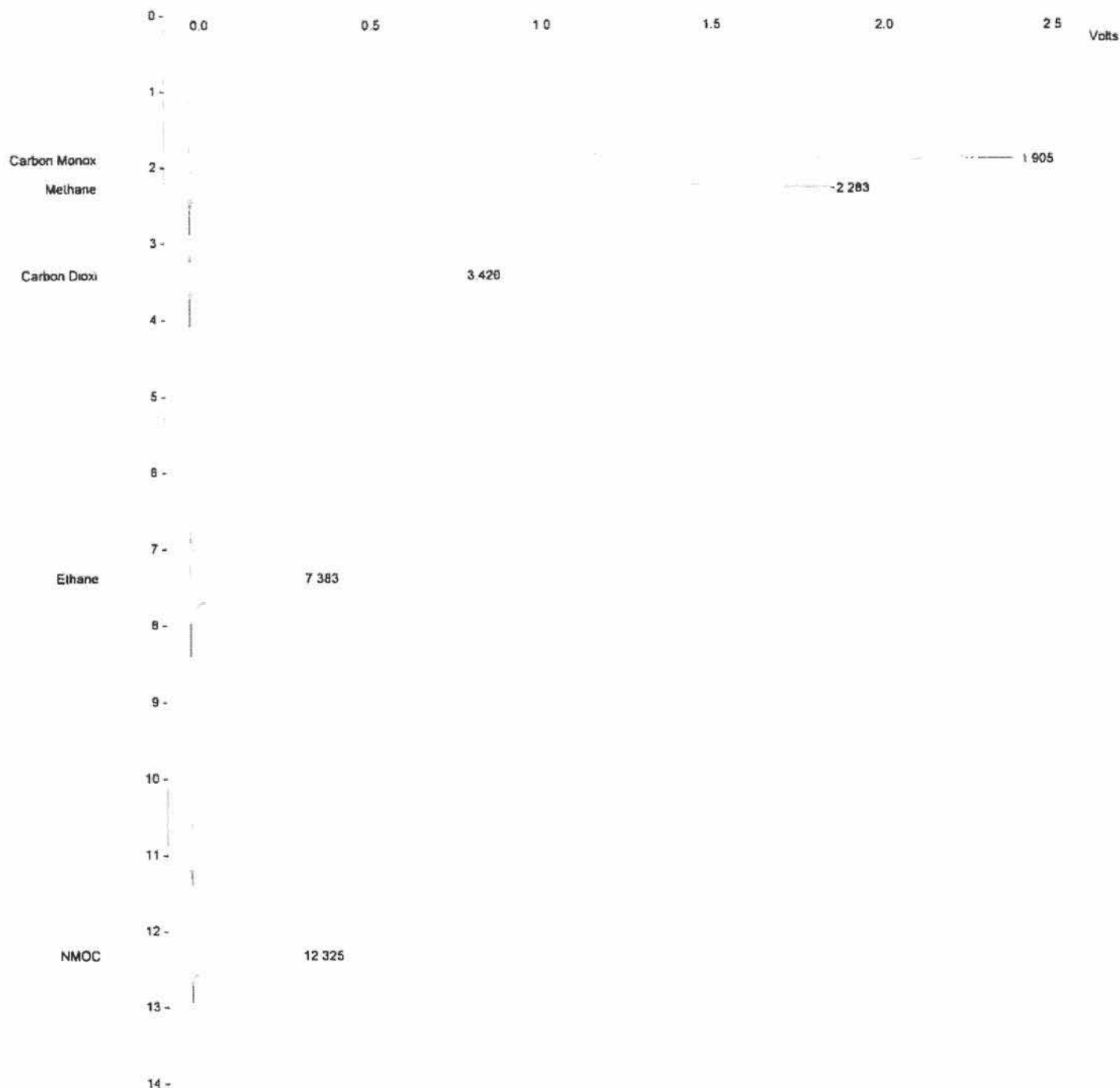


Action Date: 6/11/2015 2:30 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3568-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1150 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 14:58:40, 2000ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 2000ppm mix

Injection Date: 6/11/2015 2:58 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
Peak Measurement: Peak Area
Calculation Type: External Standard
Level : 1

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.928	0.023	7847982	BV	2.9	
2	Methane	2.305	0.023	7848899	VV	3.8	
3	Carbon Dioxi	3.443	0.023	7771729	VB	7.9	
4	Ethane	7.403	0.021	7841835	BB	21.9	
5	NMOC	12.351	0.026	6473601	BB	17.2	
Totals:			0.116	37784046			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -293 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\fileserver\laboratory\gc chromatograms\2015\june 15\6-11-2015, 14:58:40, 2000ppm mix.run
Method File : c:\docume-1\douglass\locals-1\temp\~6-12-2015, 11:30:17, n2 blank a111-2.tmp
Sample ID : 2000ppm mix

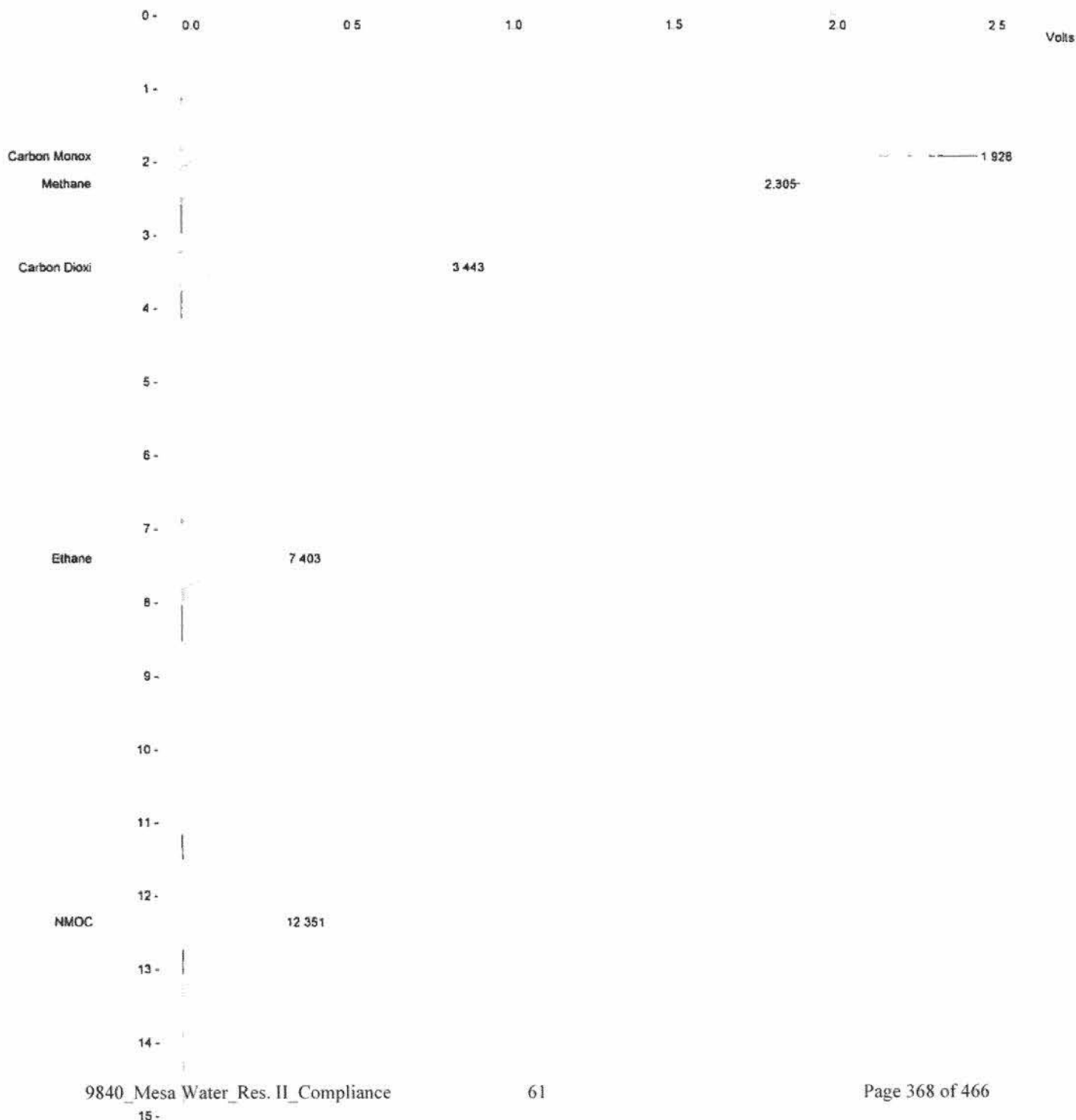


ion Date: 6/11/2015 2:58 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1170 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 15:28:48, n2 blank s011.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-8-2015, 09:42:15, lab air-2.tmp
 Sample ID : n2 blank s011

Injection Date: 6/11/2015 3:28 PM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	0.9257	1.904	-0.026	3656	BV	3.1	
2	Methane	0.6937	2.279	0.008	2711	VB	3.4	
3	Carbon Dioxi	0.6908	3.417	-0.052	2700	BB	8.1	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		2.3102		-0.070	9067			

Status Codes:
 M - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -161 microVolts LSB: 1 microVolts

Noise (used): 26 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 15:28:48, n2 blank s011.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : n2 blank s011

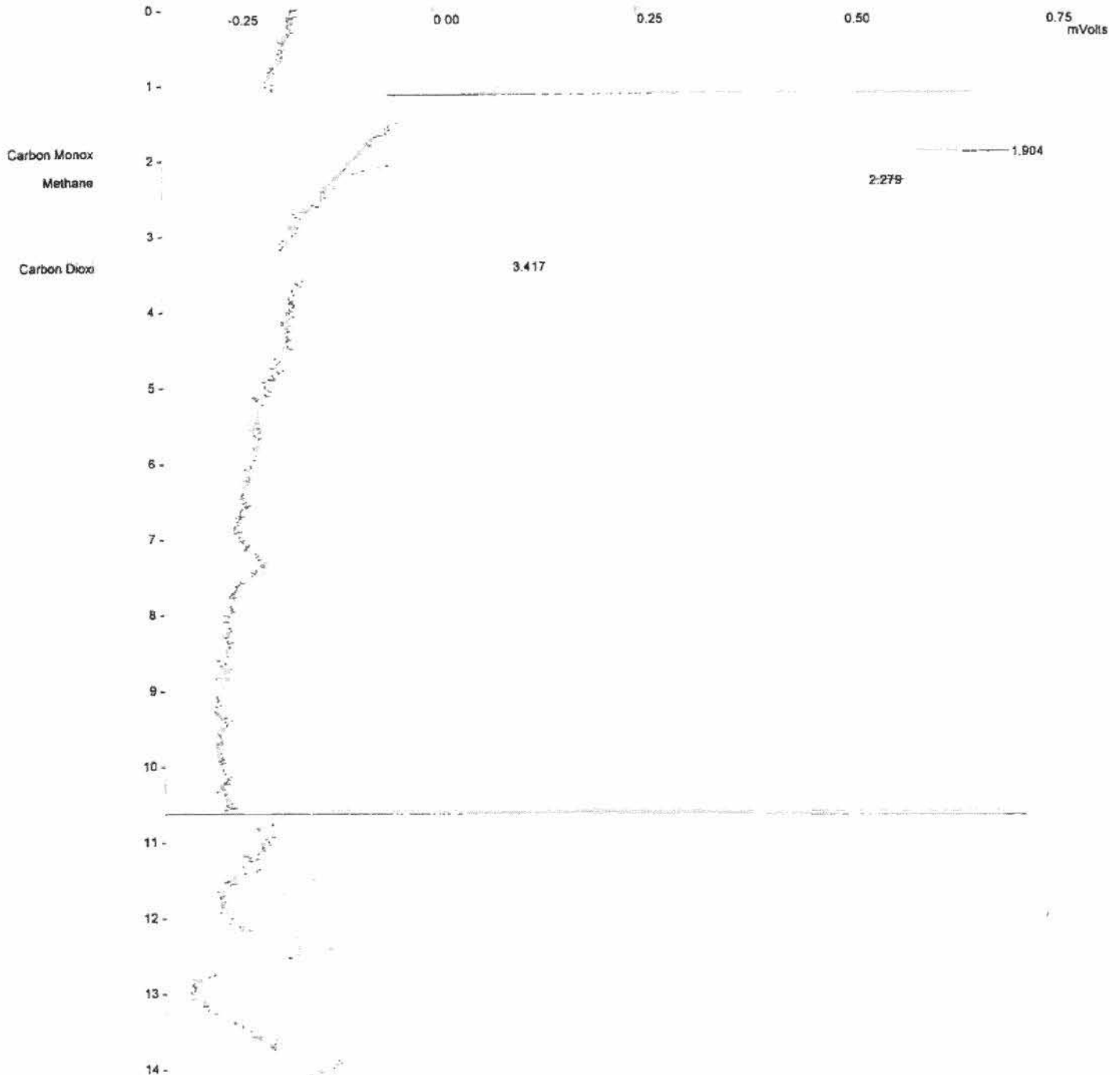


Print Date: 6/11/2015 3:28 PM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3568-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 13%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



ICE No. 3

LABORATORY REPORT

Non-Methane Non-Ethane Organic compound Emissions by SCAQMD Method 25.3 (TCA/FID)

Client: Mesa Water
Project No.: c9840
Unit Tested: Reservoir #2 - Engine #3
Sampling Date: 17-Sep-15
Analyzed Date: 21-Sep-15
Lab No.: A 126

Client Sample ID	Lab ID	Almega Sample ID		Total* NMNEO	NMNEO	NMNEO	CH ₄	C ₂ H ₆	CO ₂	O ₂
		Tank	Trap	ppm	ppm condensable	ppm noncondensable	ppm	ppm	% v/v by TCD	% v/v by TCD
Res2-Eng3-Norm-A	A 126 - 021 A	A 129	28	32.0	20.9	11.1	616	5.17	11.6	0.5
Res2-Eng3-Norm-B	A 126 - 021 B	298	26	35.1	20.0	15.1	617	4.97	11.7	0.3
Detection Limit					1	2	2	2	0.3	0.3

* NOTE - the BIAS FACTOR (of 1.086) is NOT applied in these results.

ND=Not Detected

Water Blank, ppmC 0.079

TGNMNEO concentration values are reported in ppm (v/v) as Methane (carbon#=-1)

The sample cylinder is analyzed for NMNEO, CO, CH₄, CO₂ and C₂H₆. It is then directed to a separation column where all heavy organics (C₃+) separate from the light organics (CO, CO₂, CH₄ and C₂H₆). The light organics are then passed through a reduction catalyst to convert CO and CO₂ to CH₄, and are then directed to a FID for detection and quantification. The heavy organics are backflushed off the holding column, passed through an oxidation catalyst, which convert all organics to CO₂, then through a reduction catalyst to convert CO₂ to CH₄ and then to a FID for detection and quantification.

Reviewed by: DW

CALCULATIONS



Client: Mesa Water
 Project No.: c9840
 Unit Tested: Reservoir #2 - Engine #3
 Sampling Date: 17-Sep-15
 Date tested: 21-Sep-15

Lab No.: A 126

Parameter	Symbol	Units	Run #1 A Res2-Eng3-Norm-A A 126 - 021 A	Run #1 B Res2-Eng3-Norm-B A 126 - 021 B
Sample ID				
Lab ID				
<u>Sample Tank</u>				
Tank No			A 129	298
Sample Tank Volume	V_T	L	6.000	6.000
Barometric Pressure	P_b	mm Hg	763	763
Pre-test Pressure	P_{TI}	mm Hg (abs)	2	2
Pre-test Temperature	t_{TI}	°C	21	21
Abs. Pre-test Temperature	T_{TI}	°K	294	294
Post-test Pressure	P_{TS}	mm Hg (abs)	362	350
Post-test Temperature	t_{TS}	°C	21	21
Abs. Post-test Temperature	T_{TS}	°K	294	294
Final Pressure	P_{TF}	mm Hg (abs)	936	930
Abs. Final Temperature	T_{TF}	°K	293	293
Dilution Factor	DF_T		2.61	2.68
Concentration Methane	C_{CH4}	ppm	236.09	229.94
Concentration Carbon Monoxide	C_{CO}	ppm	58.84	57.99
NMNEO (noncond)	C_{SA}	ppm	4.25	5.63
Sample Volume	V_S	L	2.791	2.698
Methane in Tank($C_{CH4} * DF_T$)	C_{CH4T}	ppm	615.9	616.6
Carbon Monoxide in Tank($C_{CO} * DF_T$)	C_{COT}	ppm	153.5	155.5
NMNEO (noncond)	C_{SAT}	ppm	11.08	15.10

Condensate Recovery - Trap

Sample ID			Res2-Eng3-Norm-A	Res2-Eng3-Norm-B
Trap No			28	26
Lab No.:			A 126 - 022 A	A 126 - 022 B
Sample Impinger Volume	V_{IMP}	ml	2.0	2.0
Sample Volume	V_S	L	2.791	2.698
TC Concentration	C_{TC}	mg/L	68.820	46.987
IC Concentration	C_{IC}	mg/L	54.040	33.313
TOC Concentration	C_{TOC}	mg/L	14.780	13.673
NMNEO, Condensable	C_T	ppm	20.89	19.99
TNMNEOC ($C_{SA} + C_T$)	C	ppmC	<u>31.97</u>	<u>35.09</u>

Calculations

$$V_S = k_1 * V_T * (P_{TS}/T_{TS} - P_{TI}/T_{TI})$$

$$k_1 = (273 + 15.56)/760 = 0.3799$$

$$C_{SAT} = DF * C_{SA}$$

$$C_{CH4T} = DF * C_{CH4}$$

$$DF = (P_{TF}/T_{TF}) / (P_{TS}/T_{TS} - P_{TI}/T_{TI})$$

$$C_T = (C_{TOC} * V_{IMP} * V_{ID}) / (V_S * A_c)$$

$$V_{ID} = 23.6902 \text{ L/mole}$$

QA/QC SUMMARY
(Repeat Analysis)



Client Project No.: c9840
Sampling Date: 17-Sep-15
Run #1 A

Lab No.: A 126
Analyzed Date: 21-Sep-15

Analyte	Sample ID	Area Count #1	Area Count #2	Area % diff' (±20%)	Conc # 1	Conc # 2	Mean Conc ppm	% diff' from Mean
Tank Analysis								
CO	A 126 - 021 A	220747	220081	0.30	58.9	58.8	58.8	0.30
CH4	A 126 - 021 A	935575	931191	0.47	236.6	235.5	236.1	0.47
CO2*	A 126 - 021 A	262050	262047	0.00	4.5	4.5	4.5	0.00
O2*	A 126 - 021 A	40758	41927	-2.87	0.2	0.2	0.2	-2.83
C2H6	A 126 - 021 A	7897	7849	0.61	1.99	1.97	1.98	0.61
NMNEO	A 126 - 021 A	14255	13731	3.68	4.33	4.17	4.25	3.74
Analyte	Sample ID	Conc # 1	Conc # 2	Conc # 3	Mean Conc ppm	COV 10%		
Trap Analysis								
TC	A 126 - 022 A	34.85	34.81	33.57	68.82	2.08	DF=2	
IC	A 126 - 022 A	26.81	27.21	27.04	54.04	0.75		
Run #1 B								
Analyte	Sample ID	Area Count #1	Area Count #2	Area % diff' (±20%)	Conc # 1	Conc # 2	Mean Conc ppm	% diff' from Mean
Tank Analysis								
CO	A 126 - 021 B	217181	217246	-0.03	58.0	58.0	58.0	-0.03
CH4	A 126 - 021 B	909045	909115	-0.01	229.9	230.0	229.9	-0.01
CO2*	A 126 - 021 B	255617	256442	-0.32	4.4	4.4	4.4	-0.32
O2*	A 126 - 021 B	24409	24098	1.27	0.1	0.1	0.1	1.28
C2H6	A 126 - 021 B	7075	7653	-8.17	1.78	1.93	1.85	-7.85
NMNEO	A 126 - 021 B	18248	18866	-3.39	5.54	5.73	5.63	-3.33
Analyte	Sample ID	Conc # 1	Conc # 2	Conc # 3	Mean Conc ppm	COV 10%		
Trap Analysis								
TC	A 126 - 022 B	23.73	23.77	22.98	46.99	1.88	DF=2	
IC	A 126 - 022 B	16.75	16.71	16.51	33.31	0.75		

Water blank

TC 0.069
IC -0.010
TOC 0.079

* - by GC/TCD

$Conc_{C11}$ in tank = $MeanConc_{C11} * DF$
 $Conc_{C12}$ in tank = $MeanConc_{C12} * DF$
 $Conc_{C13}$ in tank = $MeanConc_{C13} * DF$
 $Conc_{C23}$ in tank = $MeanConc_{C23} * DF$

SAMPLE INVENTORY REPORT

Method 25.3 Sampling Train

Project No.: c9840
Client: Mesa Water

Lab No.: A 126
Sampling Date: 17-Sep-15

Laboratory ID	Client ID	Component ID
Run #1 A		
A 126 - 021 A	Res2-Eng3-Norm-A	Tank # A 129
A 126 - 022 A	Res2-Eng3-Norm-A	Impinger 28
Run #1 B		
A 126 - 021 B	Res2-Eng3-Norm-B	Tank # 298
A 126 - 022 B	Res2-Eng3-Norm-B	Impinger 26

6th AUG

P_i if



CHAIN OF CUSTODY RECORDS

[illegible]

Aimed at
ENVIRONMENTAL

Standard Receipt
Sample LOG in Checklist

Project No: 9840

Method: sn 25.3

Lab ID: A126

Sampling Date: 9/16, 9/17

Location: Mesa Int:

Date & Time Rc'd: 9/17/15 7:45
9/18/15 10:11

Location: LAB Int: DW

Arrived By: (circle) FedEx UPS Drop Off (Int) DW Other

Condition of Package(s): (comment) -K ✓

Package Type: Box Cooler Other: ✓

Number of Sample Container(s): 44

Correct Containers (per Method): Y N ✓

Preservation: (circle) ICE DryICE ICEPacks None ✓

Sample Conditions:

Sample Temp (C): 5.3, 5.0

Ambient Temp (C): 22 ✓

Sample Temp (C):

Filter Condition:

PH:

Components Sealed: Y N ✓

Sample Recovery Completed On: (date & time)

Recovered In: (circle) Field Lab Other ✓

Silica Gel Condition:

Tedlar Bags -

Condensation: Y N

Comments:

Container(s) Requested: Glass Plastic

Additional Comments:

**CHROMATOGRAM
TEST SAMPLES**

Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 16:43:59, a 126 - 021 a.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 021 A

Injection Date: 9/21/2015 4:43 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	55.8989	1.893	-0.037	220747	BV	2.9	
2	Methane	239.3746	2.272	-0.028	935575	VP	3.7	
3	Carbon Dioxi	31114.4434	3.387	-0.082	121627960	PB	11.3	C
4	Ethane	2.0277	7.389	-0.100	7897	TS	0.0	
5	NMOC	4.2953	12.340	0.016	14255	BB	40.5	
Totals:		31416.0399		-0.231	122806434			

Status Codes:
 C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 8 Rejected Peaks: 3 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -74 microVolts LSB: 1 microVolts

Noise (used): 10 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
Run File : \\almega01\\files\\server\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 16:43:59, a 126 - 021 a.run
Method File : c:\\docume~1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 021 A

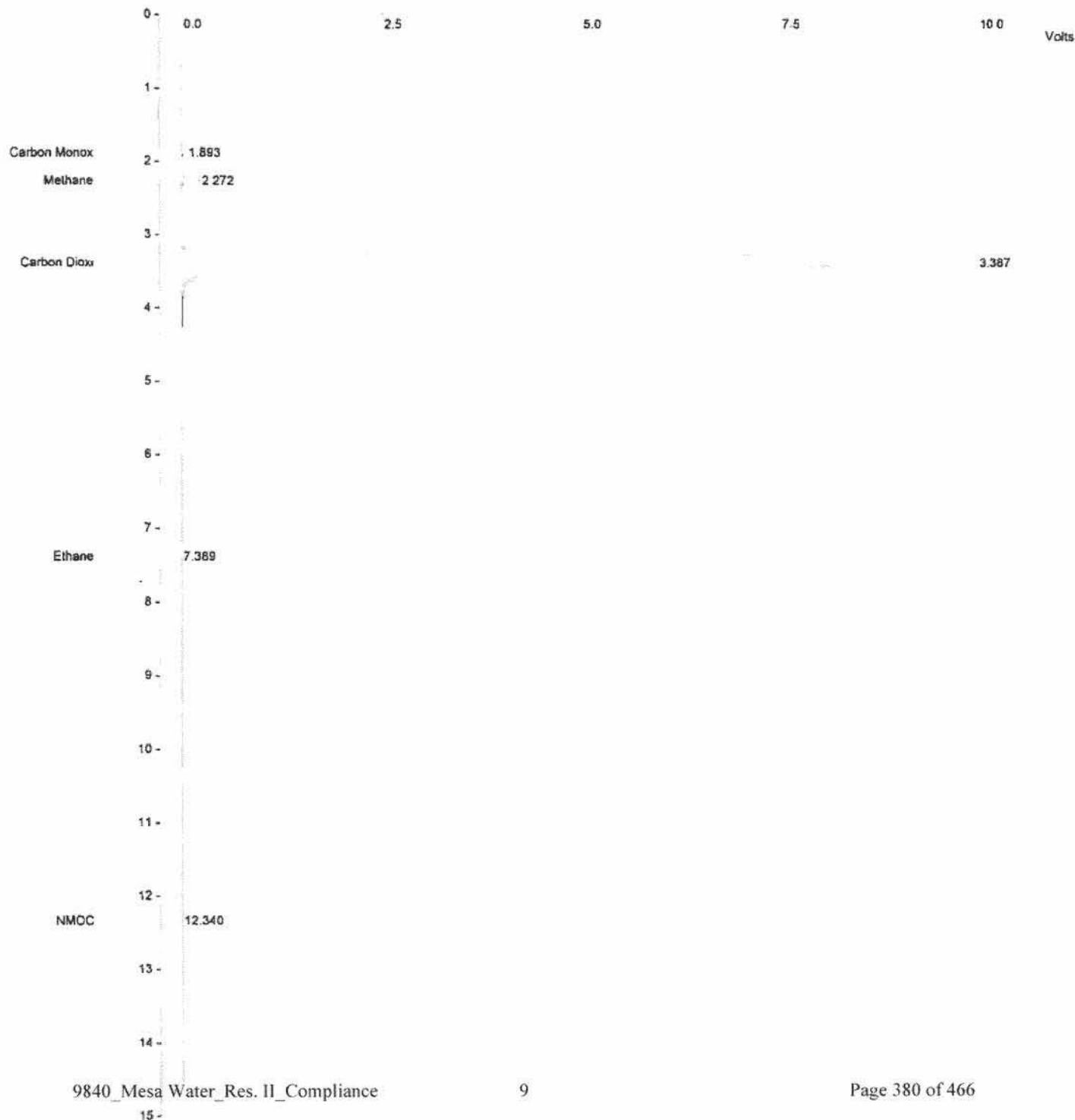


ction Date: 9/21/2015 4:43 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 17:09:47, a 126 - 021 a dup.run
 Method File : c:\\docume~1\\douglass\\locals-1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 021 A dup

Injection Date: 9/21/2015 5:09 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 - Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	55.7303	1.921	-0.009	220081	BV	2.9	
2	Methane	238.2529	2.300	0.000	931191	VB	3.7	
3	Carbon Dioxl	31088.0957	3.420	-0.049	121524968	BB	11.2	C
4	Ethane	2.0154	7.425	-0.064	7849	TS	0.0	
5	NMOC	4.1374	12.380	0.056	13731	BB	32.1	
Totals:		31388.2317		-0.066	122697820			

Status Codes:

C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -157 microVolts LSB: 1 microVolts

Noise (used): 16 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 17:09:47, a 126 - 021 a dup.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 021 A dup

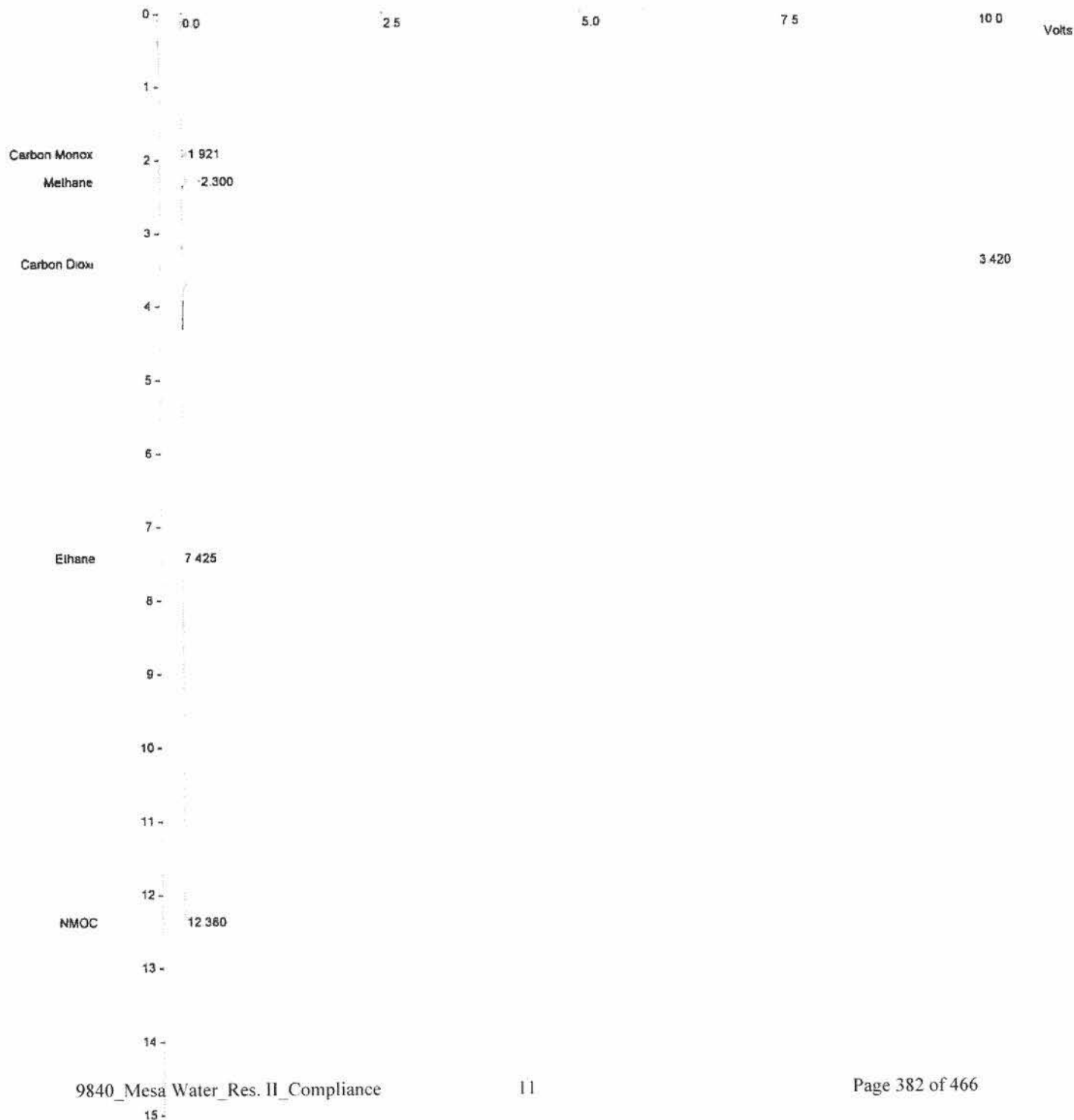


ction Date: 9/21/2015 5:09 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 28
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 17:38:12, a 126 - 021 b.run
 Method File : c:\docume~1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 021 B

Injection Date: 9/21/2015 5:38 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	54.9960	1.928	-0.002	217181	BV	2.8	
2	Methane	232.5866	2.308	0.008	909045	VP	3.8	
3	Carbon Dioxi	30761.2305	3.420	-0.049	120247232	PB	11.1	C
4	Ethane	1.8166	7.439	-0.050	7075	BB	18.7	
5	NMOC	5.4982	11.540	-0.784	18248	BB	78.8	
Totals:		31056.1279		-0.877	121398781			

Status Codes:

C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -380 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
Run File : \\almega01\fileserver\laboratory\gc chromatograms\2015\sept 15\9-21-2015, 17:38:12, a 126 - 021 b.run
Method File : c:\docume-1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : A 126 - 021 B

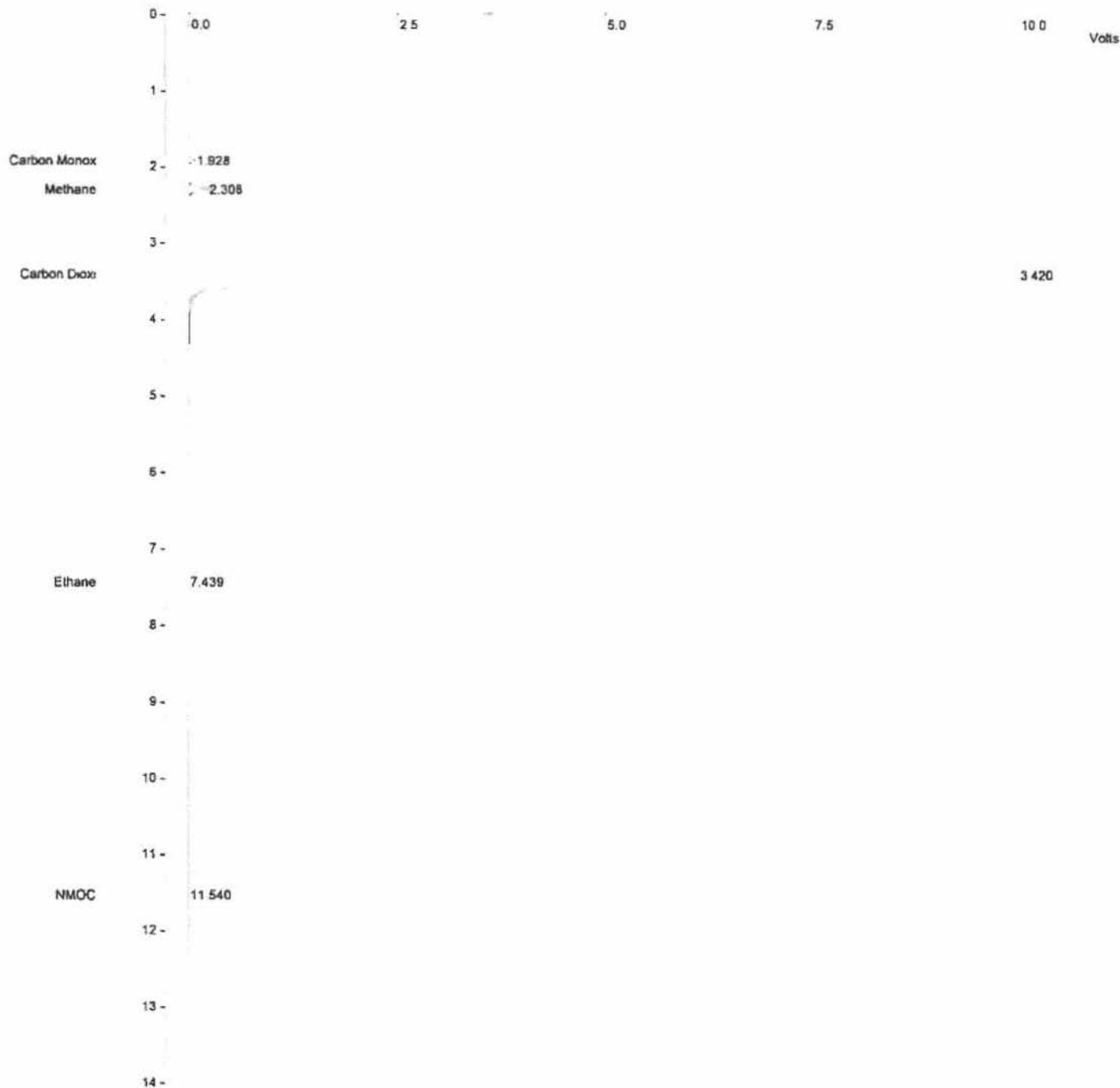


ction Date: 9/21/2015 5:38 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 18:06:33, a 126 - 021 b dup.run
 Method File : c:\docume~1\douglass\locals-1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 021 B dup

Injection Date: 9/21/2015 6:06 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	55.0125	1.925	-0.005	217246	BV	2.9	
2	Methane	232.6044	2.305	0.005	909115	VB	3.7	
3	Carbon Dioxi	30805.4336	3.420	-0.049	120420024	BB	11.1	C
4	Ethane	1.9649	7.439	-0.050	7653	BB	20.1	
5	NMOC	5.6846	11.633	-0.691	16866	BB	81.7	
Totals:		31100.7000		-0.790	121572904			

Status Codes:

C - Out of calibration range

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -402 microVolts LSB: 1 microVolts

Noise (used): 18 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Calib. out of range; No Recovery Action Specified

Original Notes:

c9840 Mesa

Appended Notes:

c9840 Mesa

Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\files\server\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 18:06:33, a 126 - 021 b dup.run
 Method File : c:\docume~1\douglass\locals~1\temp\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : A 126 - 021 B dup

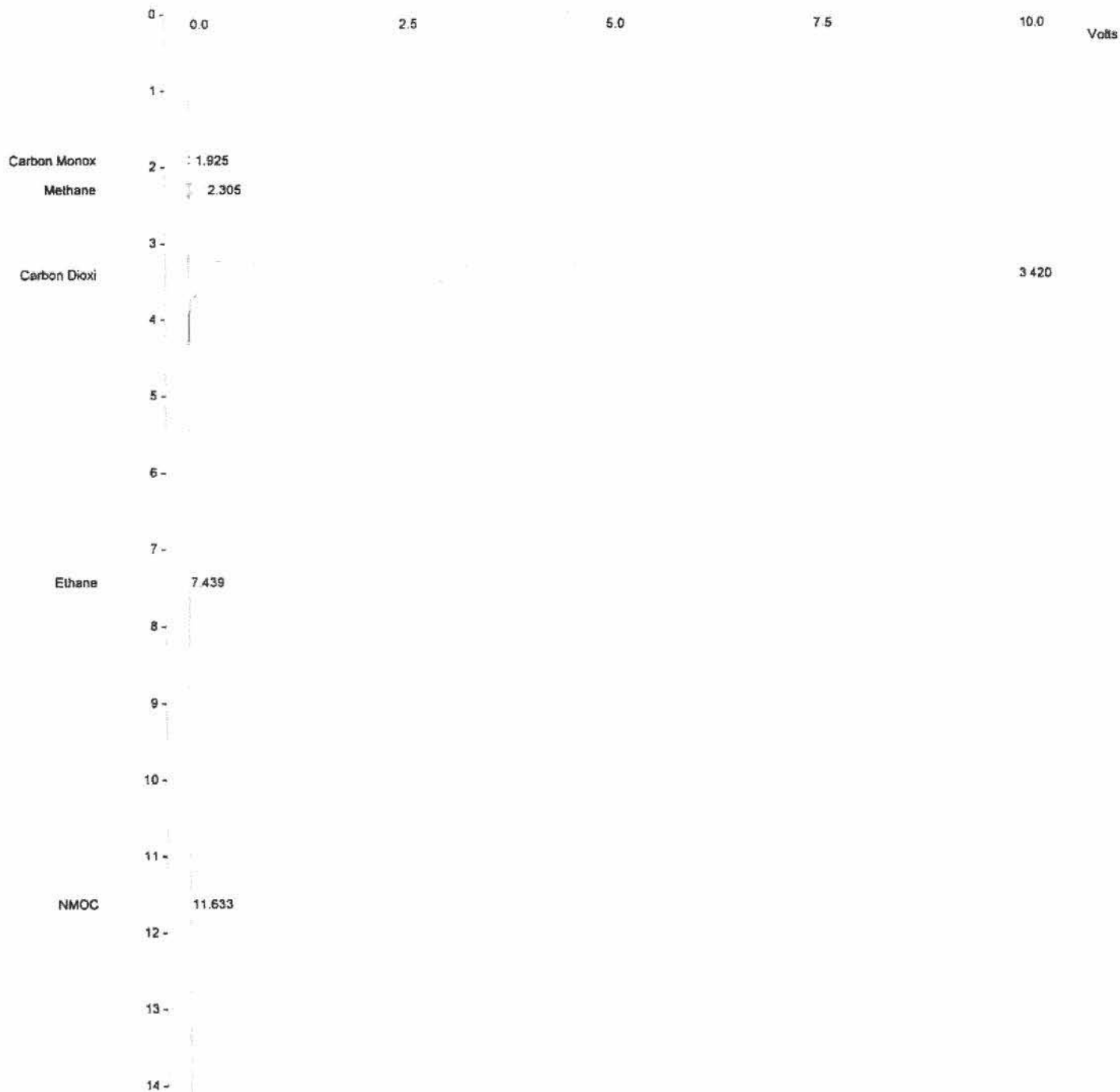


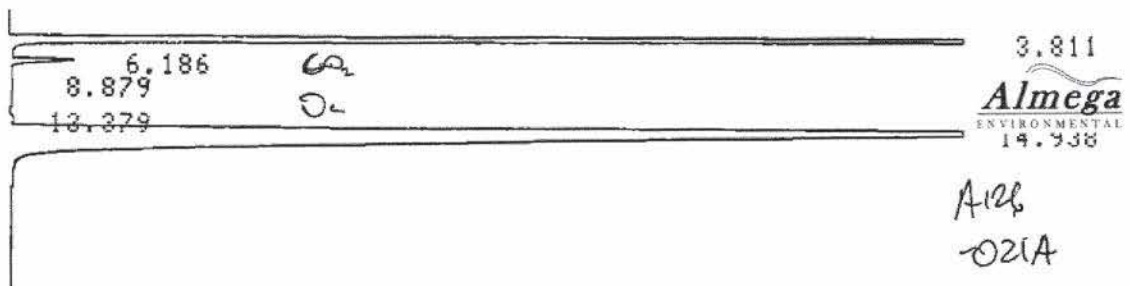
ction Date: 9/21/2015 6:06 PM Calculation Date: 9/23/2015 2:22 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 4728 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00





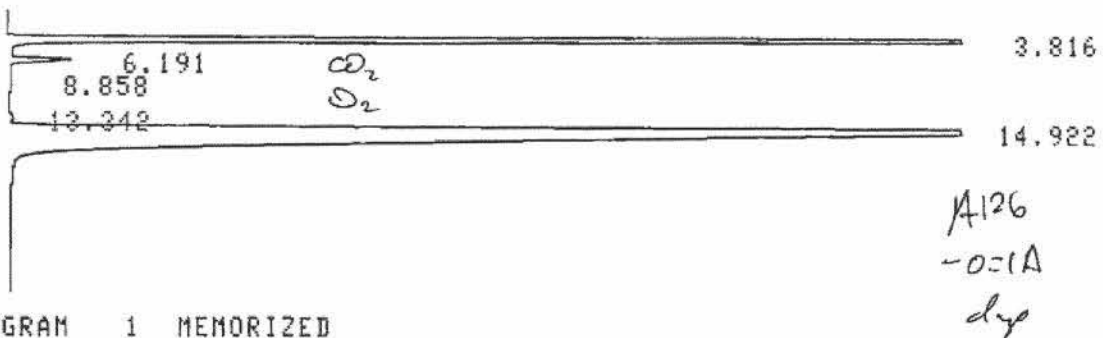
CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 113

FILE 0
METHOD 41

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	3.811	8149118			35.0879	
2	6.186	262050			1.1283	
3	8.879	37914			0.1632	
4	13.379	40758			0.1755	

5	14.938	14735017	V		63.445	
TOTAL		23224856			100	



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 114

FILE 0
METHOD 41

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	3.816	8145125			35.1985	
2	6.191	262047			1.1324	
3	8.858	39594			0.1711	
4	13.342	41927			0.1812	
5	14.922	14651852	V		63.3168	
TOTAL		23140544			100	

6.193	CO ₂	3.816
8.817	OL	
13.227		

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A126
-021B

CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 115

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.816	8162539			35.308	
2	6.193	255617			1.1057	
3	8.817	37777			0.1634	
4	13.337	24409			0.1056	
5	14.901	14637763	V		63.3173	
TOTAL		23118104			100	

6.193	CO ₂	3.818
8.846	OL	
13.329		
		14.909

CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 116

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.818	8172110			35.3118	
2	6.193	256442			1.1081	
3	8.846	38757			0.1675	
4	13.339	24098			0.1041	
5	14.909	14651283	V		63.3085	
TOTAL		23142688			100	

A126
-021B
Lys

QAQC

Title : SCAQMD Methods 25.x
 Run File : \\almeaga01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015_09:24:56_lab air.run
 Method File : c:\docume-1\douglass\locals-1\temp\9-18-2015_19:00:56_2ppm mix-2.tmp
 Sample ID : lab air

Injection Date: 9/21/2015 9:24 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	16.5482	1.899	-0.031	65349	BV	5.8	
2	Methane	4.5966	2.292	-0.008	17966	VV	4.3	
3	Carbon Diox1	488.4914	3.447	-0.022	1909538	VB	8.0	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		509.6362		-0.061	1992853			

Status Codes:
 M Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -202 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Print Date: Wed Sep 23 13:30:39 2015 Page 1 of 1
 title : SCAQMD Methods 25.x
 un File : \\Almega01\files\server\laboratory\qc chromatograms\2015\sept_15\9-21-2015, 09:51:53, n2 blank 777.tun
 method File : c:\documents-1\douglas\locals-1\temp\9-18-2015, 19:00:56, 2ppm max-2.tmp
 sample ID : n2 blank 777

Injection Date: 9/21/2015 9:51 AM Calculation Date: 9/23/2015 1:30 PM

Detector : Dougless
 Detector Type: 0800 (10 Volts)
 Bus Address : 88
 Sample Rate : 1.25 Hz
 Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00299-3598-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak Name	Ret. Time (min)	Result (ppmC)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1 Carbon Monox	1.916	0.2772	-0.014	1095	BB	3.8	M
2 Methane	2.300						
3 Carbon Dioxi	3.463	0.5755	-0.006	2250	BB	9.0	M
4 Ethane	7.489						M
5 NMOC	12.324						M
Totals:		0.8527	-0.020	3345			

Status Codes:
 4 - Missing peak

Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -128 microVolts LSB: 1 microVolts

Noise (used): 28 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

1.4 : SCAQMD Methods 25.x
File : \\almege01\files\server\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 09:51:53, n2 blank 777.run
Data File : c:\docume~1\douglass\locals~1\temp\9-18-2015, 19:00:56, 2ppm mix-2.tmp
Profile ID : n2 blank 777

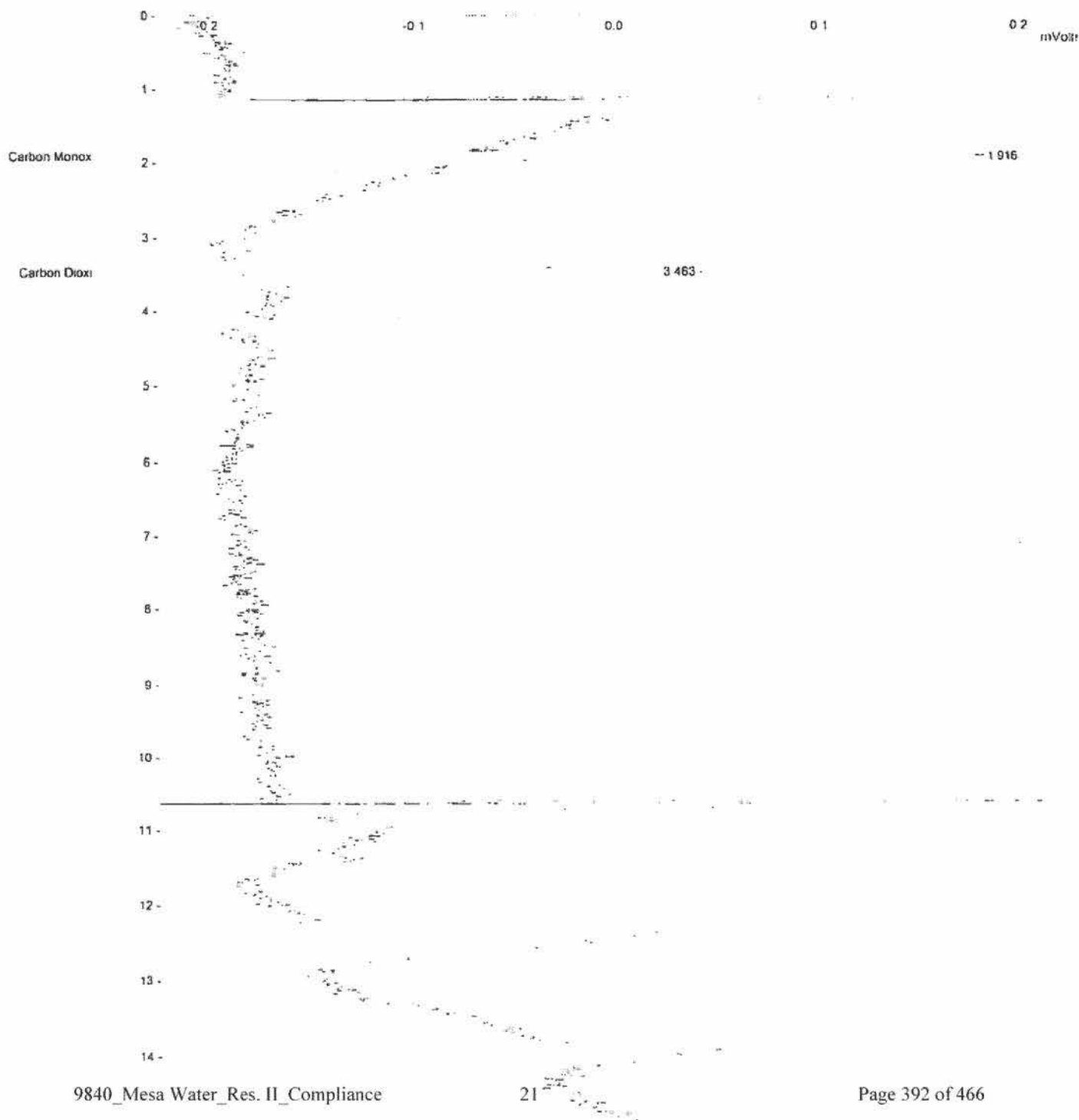


Injection Date: 9/21/2015 9:51 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0500 (10 Volts)
Injection Station: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 1 = Foreflush 10 Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Flow Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 88
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 10:45:13, 2ppm mix.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : 2ppm mix

Injection Date: 9/21/2015 10:45 AM Calculation Date: 9/23/2015 1:32 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	2.3245	1.888	-0.042	9180	BV	3.0	
2	Methane	2.0484	2.264	-0.036	8006	VB	3.7	
3	Carbon Dioxi	2.5960	3.420	-0.049	10148	BB	8.2	
4	Ethane	1.9174	7.429	-0.060	7468	BB	21.0	
5	NMOC	2.4082	12.593	0.269	7992	BB	10.3	
Totals:		11.2945		0.082	42794			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -320 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

.....

File : SCAQMD Methods 25.x
Run File : \\almea01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 10:45:13, 2ppm mix.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 2ppm mix

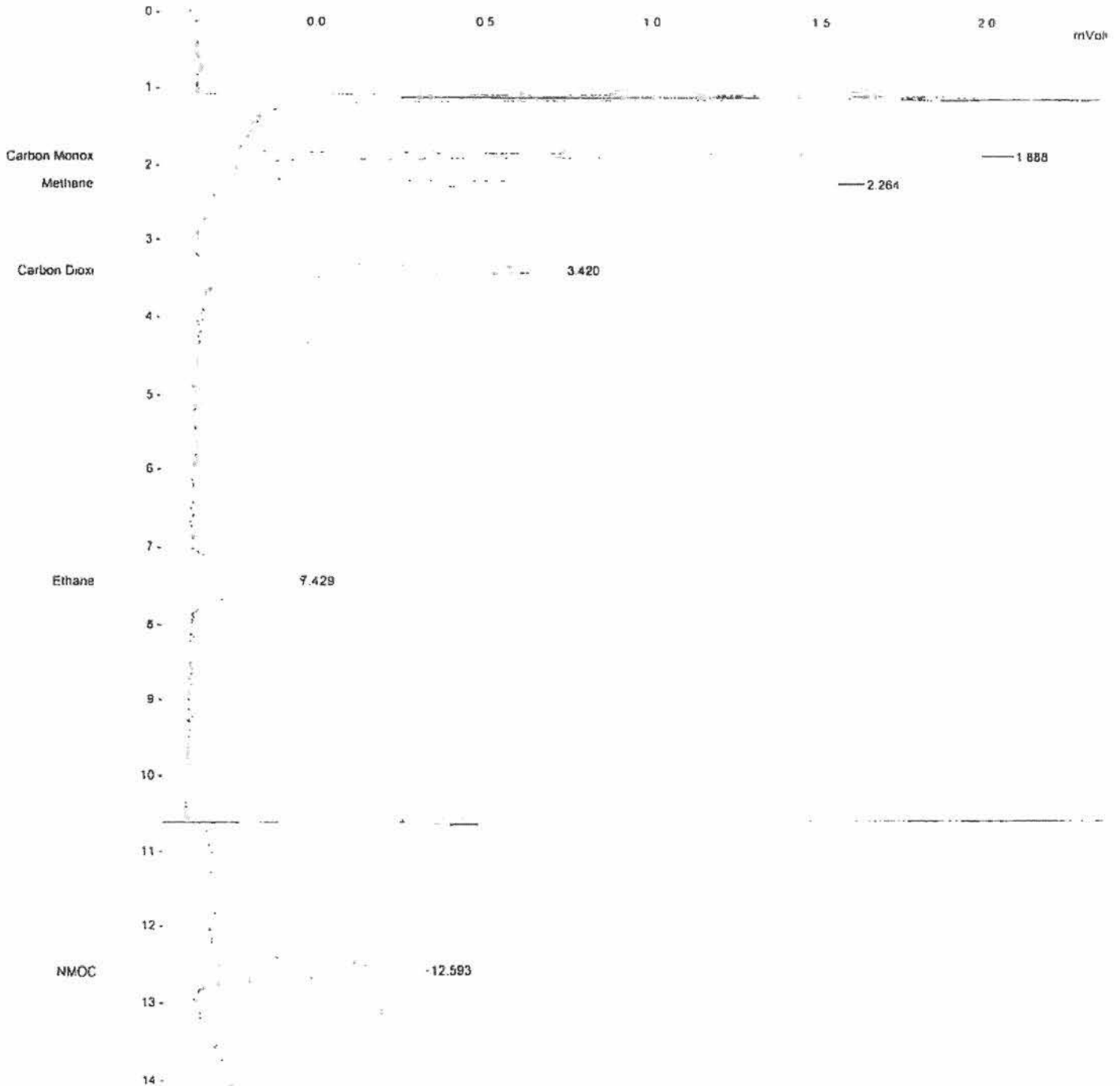


Acquisition Date: 9/21/2015 10:45 AM Calculation Date: 9/23/2015 1:32 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 17%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Print Date: wed Sep 23 13:33:20 2015

Page 1 of 1

File : SCACMD Methods 25.x
Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015_11:13:35_2ppm mix.run
Method File : c:\docume-1\douglass\locals-1\temp\9-18-2015_19:00:56_2ppm mix-2.tmp
Sample ID : 2ppm mix

Injection Date: 9/21/2015 11:13 AM Calculation Date: 9/23/2015 1:33 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00299-3588-D5B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	2.0453	1.909	-0.021	8077	BV	3.1	
2	Methane	1.9629	2.285	-0.015	7672	VB	3.6	
3	Carbon Diox.	2.5451	3.433	-0.036	9949	BB	8.2	
4	Ethane	1.9991	7.407	-0.082	7786	BB	21.6	
5	NMOC	2.4886	12.620	0.296	8259	BB	11.1	
Totals:		11.0410		0.142	41743			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -351 microVolts LSB: 1 microVolts

Noise (used): 35 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

File : SCAQMD Methods 25.x
In File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 11:13:35, 2ppm mix.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 2ppm mix

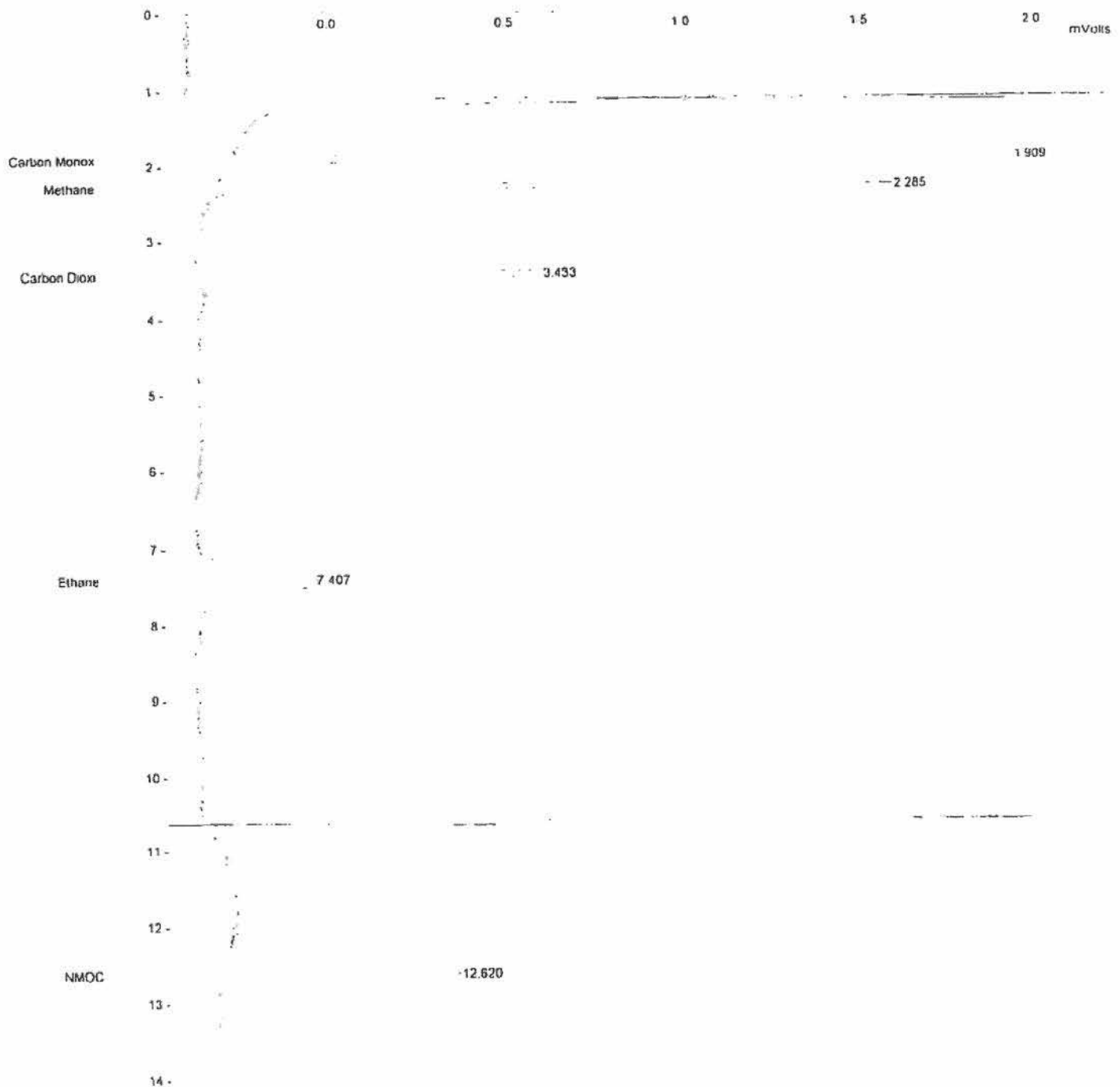


Acquisition Date: 9/21/2015 11:13 AM Calculation Date: 9/23/2015 1:33 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Start Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 174
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 11:41:47, n2 blank s016.run
 Method File : c:\docume~1\couglass\locals-1\temp\9-18-2015, 19:00:56, 2ppm mix-2.tmp
 Sample ID : n2 blank s016

Injection Date: 9/21/2015 11:41 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Installation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox		1.930					M
2	Methane		2.300					M
3	Carbon Dioxi	0.3829	3.465	-0.004	1497	88	9.3	M
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		0.3829		-0.004	1497			

Status Codes:

1 - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 2 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -204 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

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File : SCAQMD Methods 25.x
File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\sept_15\9-21-2015, 11:41:47, n2 blank s016.run
Data File : c:\docume-1\douglass\locals-1\temp\9-18-2015, 19:00:36, 2ppm mix-2.tmp
File ID : n2 blank s016

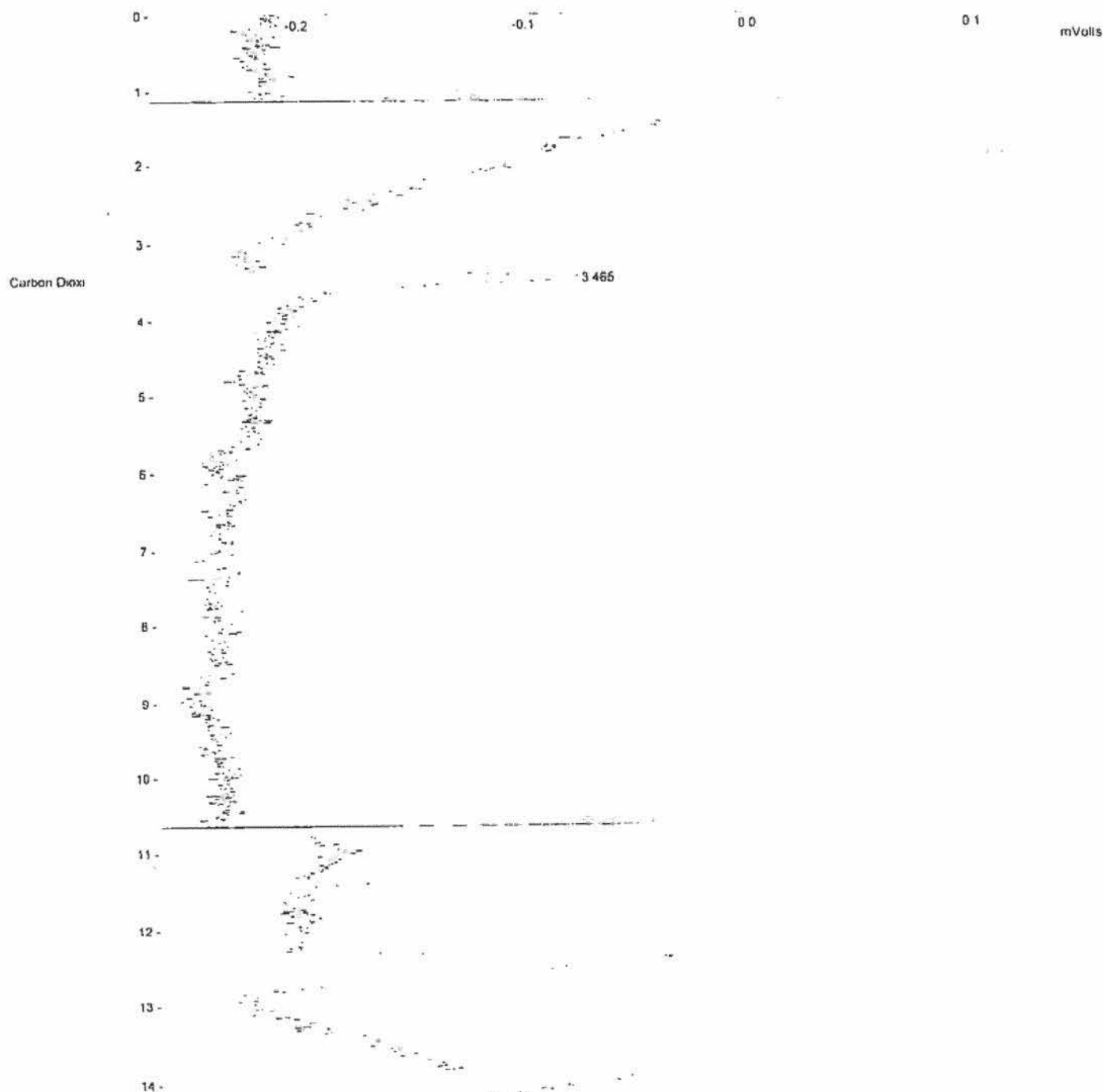


Run Date: 9/21/2015 11:41 AM Calculation Date: 9/23/2015 1:30 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Station: Bus Address : 88
Instrument : Varian Star II Sample Rate : 1.25 Hz
Channel : 2 Foreflush 10 Run Time : 15.013 min

* Star Chromatography Workstation Version 6.00 ** 00299-3588-06B-21E1 **

Carrier Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 10%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 19:31:52, 20ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-9-18-2015, 19:00:56, 2ppm mix-2.tmp
Sample ID : 20ppm mix

Injection Date: 9/21/2015 7:31 PM Calculation Date: 9/23/2015 1:31 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

*Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	19.4900	1.877	-0.053	76967	BV	2.9	
2	Methane	21.2206	2.256	-0.044	82939	VB	3.8	
3	Carbon Dioxi	27.4180	3.407	-0.062	107178	BB	7.9	
4	Ethane	19.8128	7.392	-0.097	77166	BB	22.0	
5	NMOC	32.9203	11.913	-0.411	109256	BB	18.0	
Totals:		120.8617		-0.667	453506			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -397 microVolts LSB: 1 microVolts

Noise (used): 35 microVolts - monitored before this run

Stream: 2 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

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Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\sept_15\\9-21-2015, 19:31:52, 20ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~9-18-2015, 19:00:56, 20ppm mix-2.tmp
Sample ID : 20ppm mix

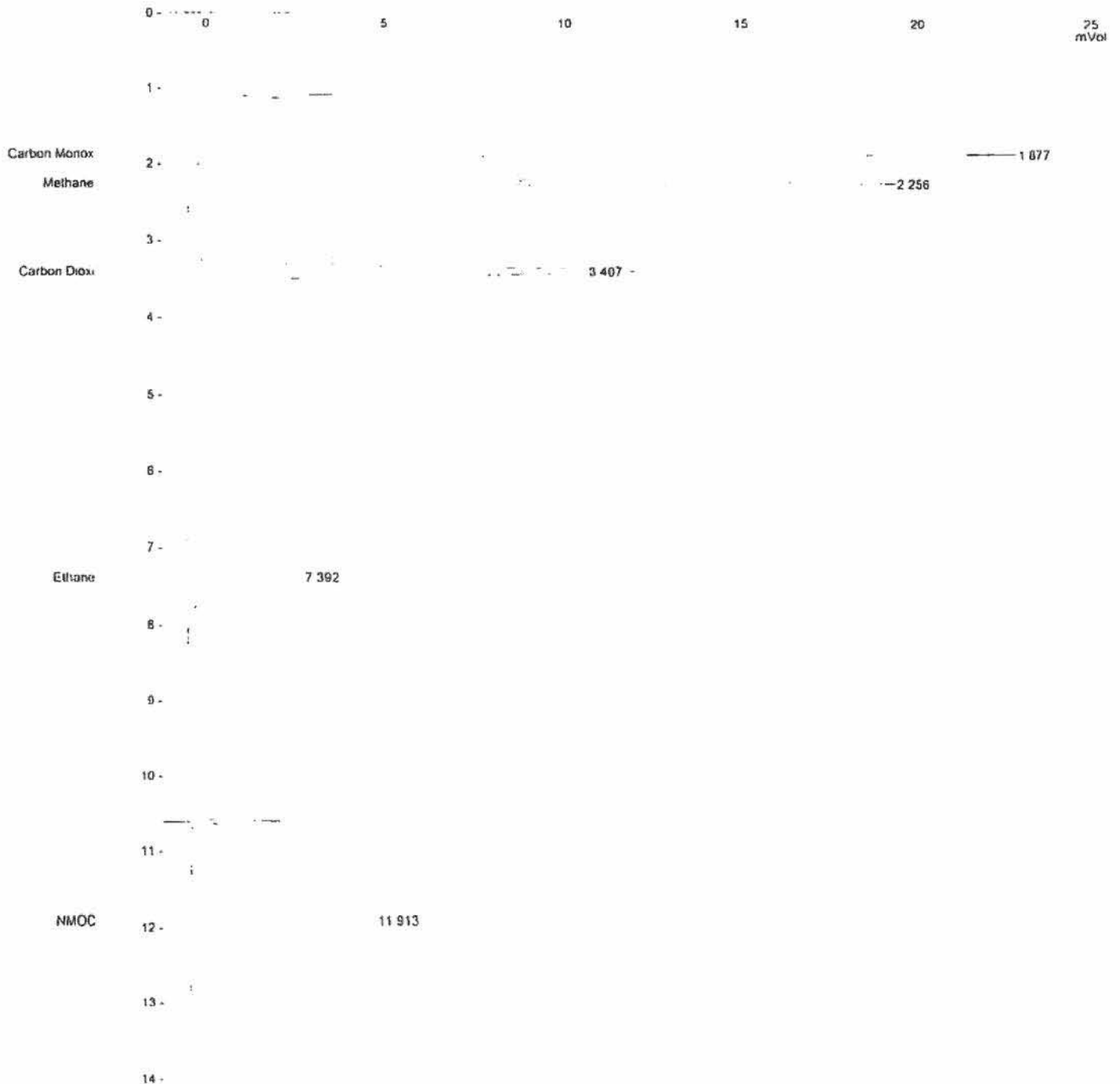


ection Date: 9/21/2015 7:31 PM Calculation Date: 9/23/2015 1:31 PM

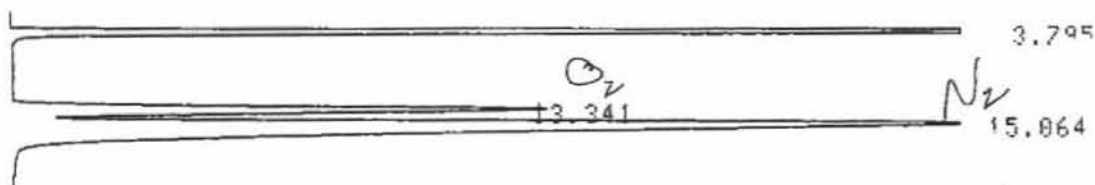
Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 11 Zero Offset = 4%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



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CHROMATOGRAM 1 MEMORIZED

Air

C-R5A CHROMATOPAC

CHANNEL NO 1

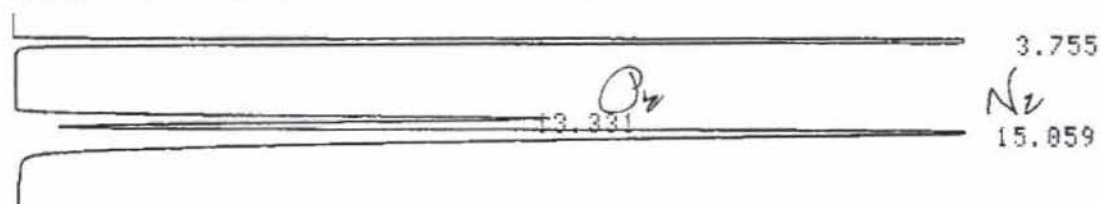
FILE 0

SAMPLE NO 0

METHOD 41

REPORT NO 97

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.795	8858323			35.5228	
2	13.341	4085688			16.3841	
3	15.064	11992964	V		48.0931	
TOTAL		24936974			100	



CHROMATOGRAM 1 MEMORIZED

Air

C-R5A CHROMATOPAC

CHANNEL NO 1

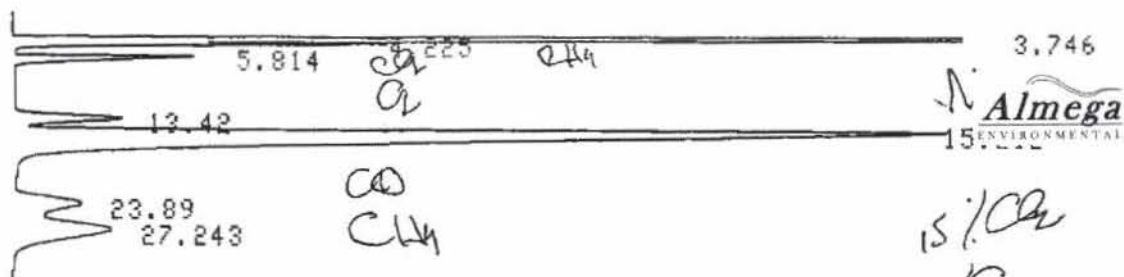
FILE 0

SAMPLE NO 0

METHOD 41

REPORT NO 98

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.755	8842196			35.352	
2	13.331	4102028			16.4003	
3	15.059	12067643	V		48.2477	
TOTAL		25011866			100	



CHROMATOGRAM 1 MEMORIZED

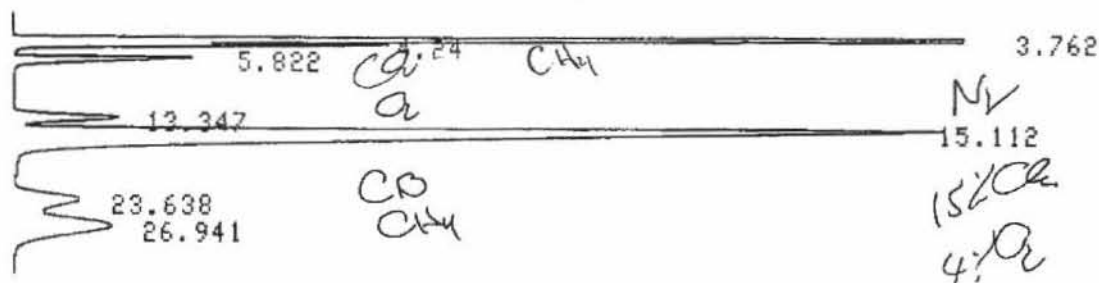
C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 99

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.746	6918860			29.1478	
2	4.225	1072630	V		4.5188	
3	5.814	883521			3.7221	

4	13.42	812476			3.4228	
5	15.212	11070015	V		46.6358	
6	23.89	1049180			4.42	
7	27.243	1930460	V		8.1327	

TOTAL 23737146 100



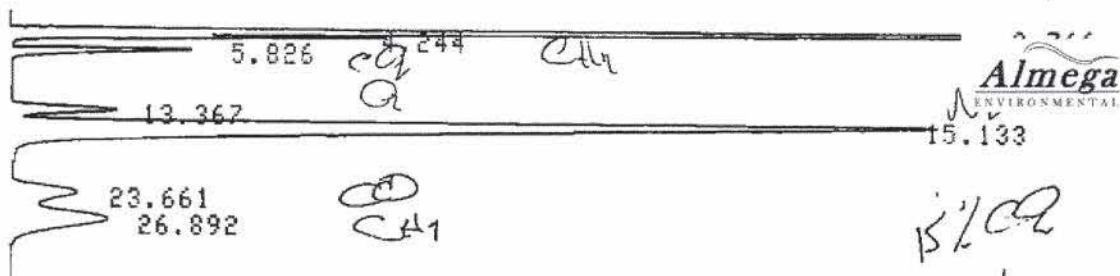
CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 100

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.762	6898818			29.3669	
2	4.24	1083008	V		4.6101	
3	5.822	878355	V		3.739	
4	13.347	801021			3.4098	
5	15.112	10895075	V		46.3782	
6	23.638	1035047			4.406	
7	26.941	1900504	V		8.0901	

TOTAL 23491824 100



CHROMATOGRAM 1 MEMORIZED

C-R5A CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

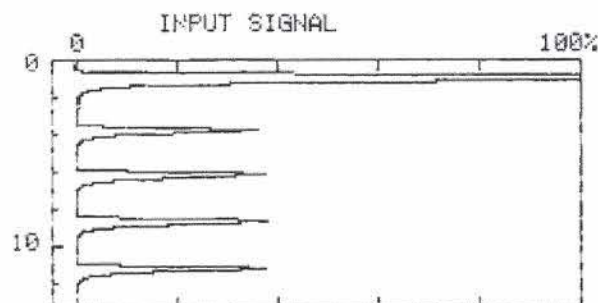
REPORT NO 117

FILE 0
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.766	6983710			29.7095	
2	4.244	1068743	V		4.5466	
3	5.826	885676			3.7670	
4	13.367	803716			3.4191	
5	15.133	10856331	V		46.1841	
6	23.661	1030705			4.3847	
7	26.892	1877742	V		7.9881	
TOTAL		23506618			100	

037

TOC ANALYSIS
on the TRAPS



TIME [min]

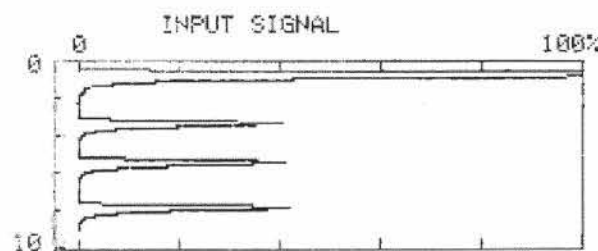
SAMPLE# 14 TC

[x 1, 27µl, C# 14, #WASH 2, SP 0min]

#	AREA	PPM	C#	µl	RG
1	59640	30.34	H		
2	14252	32.93	16		
3	15076	34.85			
4	15057	34.81			
+ 5	14528	33.57			

MN	14987	34.41
SD	311	0.725
CV	2.08	%
COR CONC DIL	34.41	[x 1.0]
COR CONC INJ	34.41	[x 1.0]

DATE 09(SEP)-18-2015 15:59



TIME [min]

SAMPLE# 14 IC

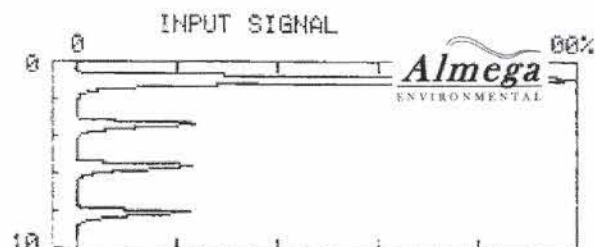
[x 1, 33µl, C# 13, #WASH 2, SP 0min]

#	AREA	PPM	C#	µl	RG
1	60837	24.25	H		
2	15385	26.81	15		
3	15619	27.21			
4	15519	27.04			

MN	15507	27.02
SD	117	0.205
CV	0.75	%
COR CONC DIL	27.02	[x 1.0]
COR CONC INJ	27.02	[x 1.0]

SAMPLE# 14 TOC(TC-IC) 7.390 PPM

DATE 09(SEP)-18-2015 16:11



TIME [min]

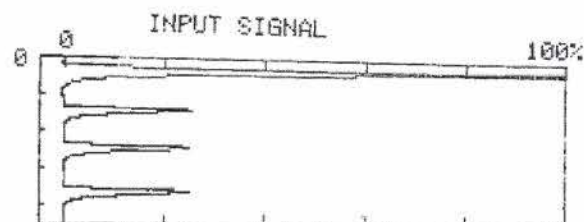
SAMPLE# 15 TC

[x 1, 27µl, C# 14, #WASH 2, SP 0min]

#	AREA	PPM	C#	µl	RG
1	44306	17.57	H		
2	9633	16.75	16		
3	9609	16.71			
4	9497	16.51			

MN	10206	23.49
SD	192	0.448
CV	1.88	%
COR CONC DIL	23.49	[x 1.0]
COR CONC INJ	23.49	[x 1.0]

DATE 09(SEP)-18-2015 16:23



TIME [min]

SAMPLE# 15 IC

[x 1, 33µl, C# 13, #WASH 2, SP 0min]

#	AREA	PPM	C#	µl	RG
1	44306	17.57	H		
2	9633	16.75	15		
3	9609	16.71			
4	9497	16.51			

MN	9579	16.65
SD	72	0.127
CV	0.75	%
COR CONC DIL	16.65	[x 1.0]
COR CONC INJ	16.65	[x 1.0]

SAMPLE# 15 TOC(TC-IC) 6.840 PPM

DATE 09(SEP)-18-2015 16:43

SCAQMD Method 25.3 TOC Analysis on the Trap

Calibration Curve No.:

TC

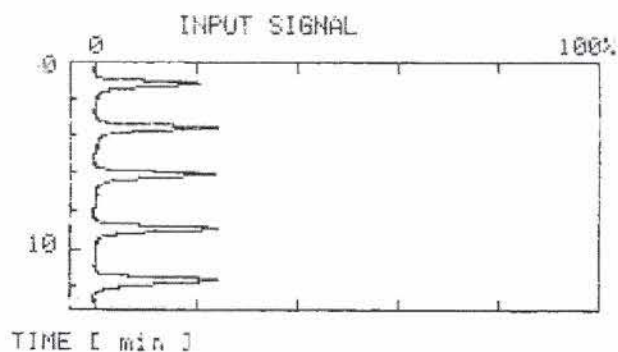
IC

Page: #

48

No	Sample ID	Date	Sample Volume, ml		Dilution Factor	Concentration, ppmC		
			Initial	Final		TC	IC	TOC
1	Blank	7/18	—	—	1	0.078	0.03	0.100
2	TKStd		—	—	1	4.765	0.07	4.835
3	TKStd		—	—	1	7.670	7.588	0.082
4	LCS		—	—	1	6.106	0.04	6.146
5	Blank		—	—	1	0.069	0.01	0.079
41 6	A122-012A		2	4	2	7.127	6.075	1.052
42 7	-012B		2	4	2	11.14	8.514	2.626
46 8	-022A		2	4	2	9.006	8.220	0.786
47 9	-022B		2	4	2	11.45	8.041	3.409
51 10	-032A		2	4	2	7.175	5.896	1.279
52 11	-032B		2	4	2	7.593	6.223	1.370
33 12	A126-012A		2	4	2	23.44	19.14	4.300
32 13	-012B		2	4	2	30.73	25.10	5.630
28 14	-022A		2	4	2	34.41	27.02	7.390
26 15	-022B		2	4	2	23.49	16.65	6.840
16	LCS		—	—	1	6.512	4.05	6.107
17								
18								
19								
20								
21								

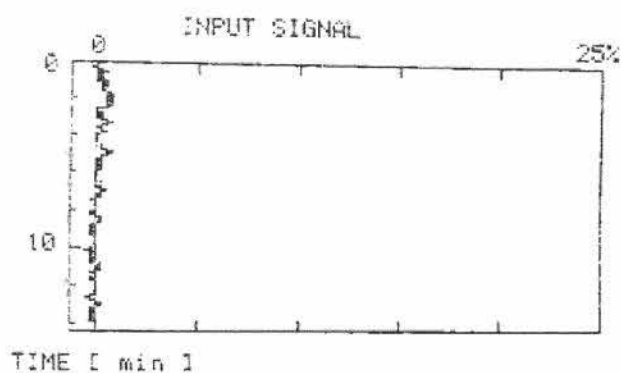
Comments Vial #26 - Broken Glass at bottom.



SAMPLE# 2 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1- 8514 4.121
2- 9541 4.646
3 9686 4.720
+ 4 9799 4.778
+ 5 9837 4.797

MN 9774 4.765
SD 78 0.040
COR 0000 DIL 4.765 [x 1.0]
COR CONC INJ 4.765 [x 1.0]

DATE 09(SEP)-10-2015 08:37

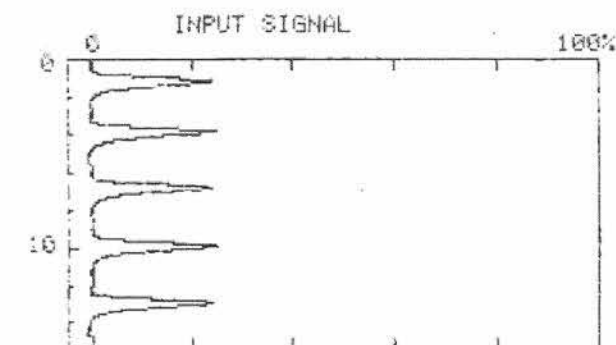


SAMPLE# 2 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1 109 -0.08
2- 149 -0.06
3- 186 -0.05
+ 4- 84 -0.09
+ 5 137 -0.07
+ 6- 8 -0.12
+ 7 110 -0.07

MN 120 -0.07
SD 14 0.005
CV 12.0 %
COR CONC DIL -0.07 [x 1.0]
COR CONC INJ -0.07 [x 1.0]

SAMPLE# 2 TOC(TC-IC) 4.835 PPM

DATE 09(SEP)-10-2015 08:58

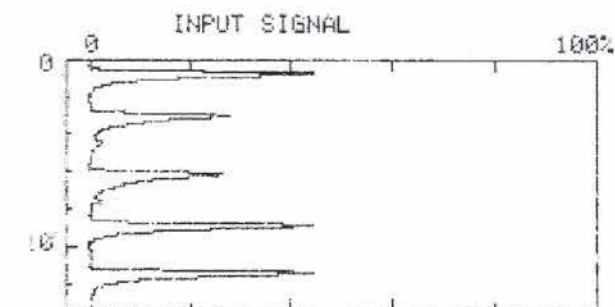


TIME [min]

SAMPLE# 3 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1-14189 7.022
2 15661 7.774
3-14749 7.308
+ 4 15523 7.704
+ 5 15185 7.531

MN 15456 7.670
SD 244 0.125
CV 1.50 %
COR CONC DIL 7.670 [x 1.0]
COR CONC INJ 7.670 [x 1.0]

DATE 09(SEP)-18-2015 09:44



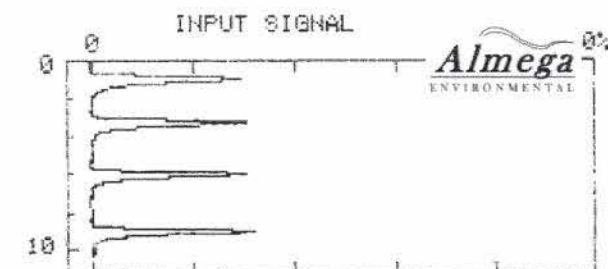
TIME [min]

SAMPLE# 3 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1 20143 7.833
2-15120 5.811
3-14711 5.647
+ 4 19317 7.500
+ 5 19144 7.430

MN 19534 7.588
SD 533 0.214
CV 2.73 %
COR CONC DIL 7.588 [x 1.0]
COR CONC INJ 7.588 [x 1.0]

SAMPLE# 3 TOC(TC-IC) 0.082 PPM

DATE 09(SEP)-18-2015 10:07

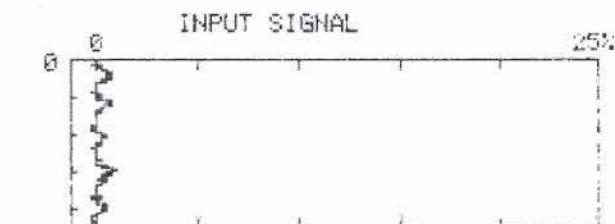


TIME [min]

SAMPLE# 4 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1-12822 6.323
2 12100 5.954
3 12375 6.095
+ 4 12719 6.270

MN 12398 6.106
SD 310 0.158
CV 2.50 %
COR CONC DIL 6.106 [x 1.0]
COR CONC INJ 6.106 [x 1.0]

DATE 09(SEP)-18-2015 10:22



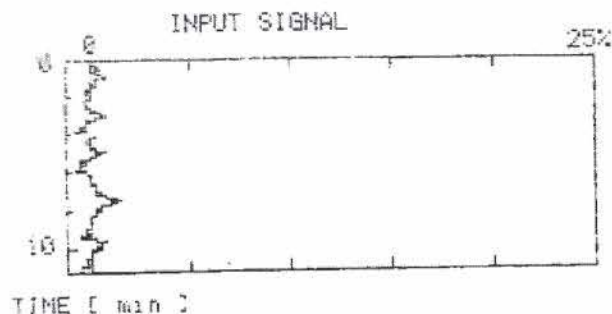
TIME [min]

SAMPLE# 4 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1- 115 -0.07
2 212 -0.04
3 213 -0.04
+ 4- 253 -0.02
+ 5 189 -0.05

MN 204 -0.04
SD 13 0.005
CV 6.63 %
COR CONC DIL -0.04 [x 1.0]
COR CONC INJ -0.04 [x 1.0]

SAMPLE# 4 TOC(TC-IC) 6.146 PPM

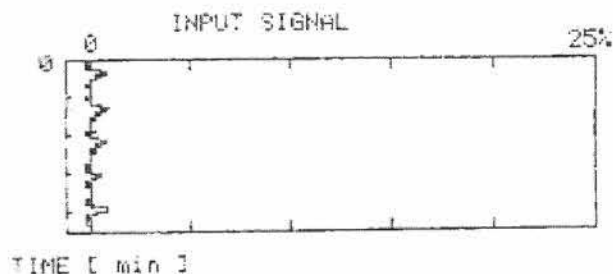
DATE 09(SEP)-18-2015 10:39



SAMPLE# 5 TC
 [x 1, 27x1, C# 14, #WASH 2, SP 0min]
 # AREA PPM C# A1 RG
 1 584 0.064
 2- 393 -0.03
 3- 128 -0.16
 + 4 641 0.093
 + 5 556 0.049

 MN 593 0.069
 SD 43 0.022
 CV 7.29 %
 COR CONC DIL 0.069 [x 1.0]
 COR CONC INJ 0.069 [x 1.0]

DATE 09(SEP)-18-2015 11:44



SAMPLE# 5 IC
 [x 1, 33x1, C# 13, #WASH 2, SP 0min]
 # AREA PPM C# A1 RG
 1 291 -0.01
 2 252 -0.02
 3- 293 -0.04
 + 4- 206 -0.04
 + 5 282 -0.01

 MN 275 -0.01
 SD 20 0.007
 CV 7.42 %
 COR CONC DIL -0.01 [x 1.0]
 COR CONC INJ -0.01 [x 1.0]

SAMPLE# 5 TOC(TC-IC) 0.079 PPM

DATE 09(SEP)-18-2015 12:00

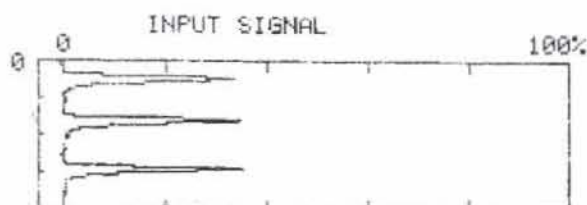
TOC-5000 DATA REPORT

DATE 09(SEP)-18-201

Almega
 ENVIRONMENTAL

SPL#	TC, PPM	RMK	IC, PPM	RMK	TOC, PPM
1	0.183	14****	-0.10	13****	0.283
2	4.765	14****	-0.07	13****	4.835
3	7.670	14****	7.588	13****	0.082
4	6.106	14****	-0.04	13****	6.146
5	0.069	14****	-0.01	13****	0.079
6	7.127	14****	6.075	13****	1.052
7	11.14	14****	8.514	13****	2.626
8	9.106	14****	8.220	13****	0.886
9	11.45	14****	8.041	13****	3.409
10	7.175	14****	5.896	13****	1.279
11	7.593	14****	6.223	13****	1.370
12	23.44	16***	19.14	15***	4.300
13	30.73	16***	25.10	15***	5.630
14	34.41	16***	27.02	15***	7.390
15	23.49	16***	16.65	15***	6.840
16	6.512	14****	0.405	13****	6.107

ANALYST :
 SAMPLE :

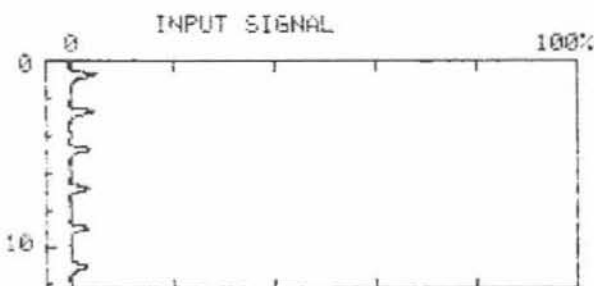


TIME [min]

SAMPLE# 16 TC
[x 1, 27µl, C# 14, #WASH 2, SP 0min]
AREA PPM C# µl RG
1 12910 6.368
2 13381 6.609
3 13283 6.559

MN 13191 6.512
SD 248 0.127
CV 1.88 %
COR CONC DIL 6.512 [x 1.0]
COR CONC INJ 6.512 [x 1.0]

DATE 09(SEP)-18-2015 17:12



TIME [min]

SAMPLE# 16 IC
[x 1, 33µl, C# 13, #WASH 2, SP 0min]
AREA PPM C# µl RG
1- 1785 0.557
2- 1866 0.588
3 1391 0.407
+ 4 1364 0.396
+ 5- 1189 0.330
+ 6 1405 0.412

MN 1386 0.405
SD 20 0.008
CV 1.5 %
COR CONC DIL 0.405 [x 1.0]
COR CONC INJ 0.405 [x 1.0]

SAMPLE# 16 TOC(TC-IC) 6.107 PPM

DATE 09(SEP)-18-2015 17:33

TANK PREPARATION

TANK PREPARATIONS

Client: Mesa Water
 Project No.: c9840
 Unit Tested: Reservoir #2 - Engine #3
 Sampling Date: 17-Sep-15
 Date pressurized: 18-Sep-15

Lab No.: A 126

Tank ID	Sample ID	Pre-test pressure mm Hg		Post-test pressure mm Hg	Final Pressure	Comments
		1	2			
A 129	A 126 - 021 A	-758	-758	-398	176	Run #1 A
298	A 126 - 021 B	-758	-758	-410	170	Run #1 B

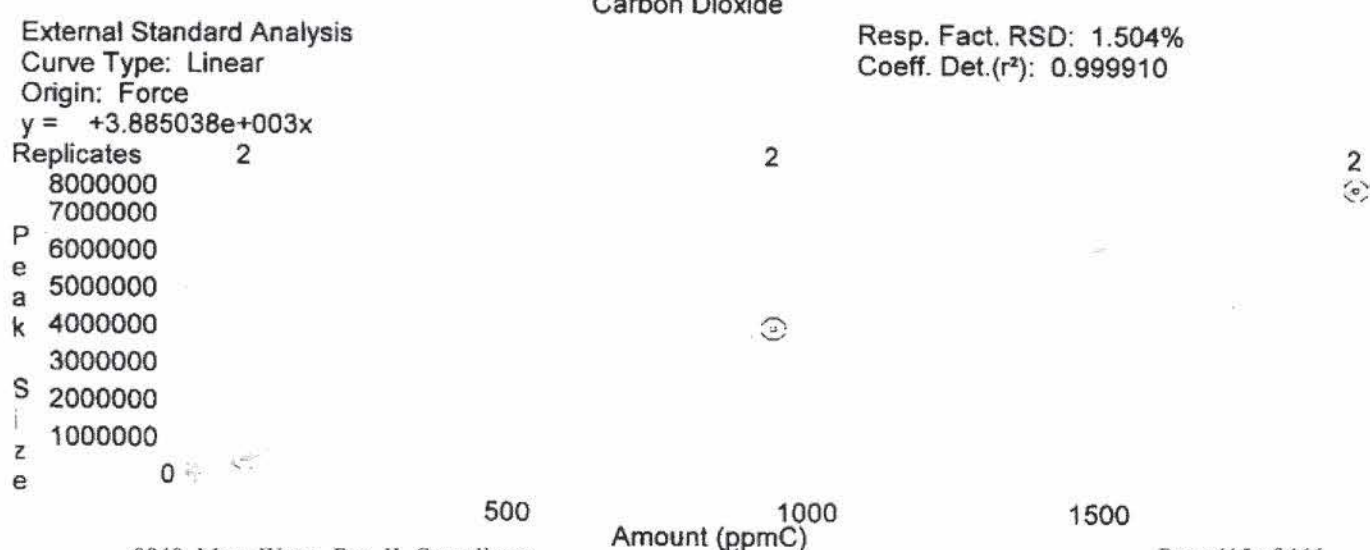
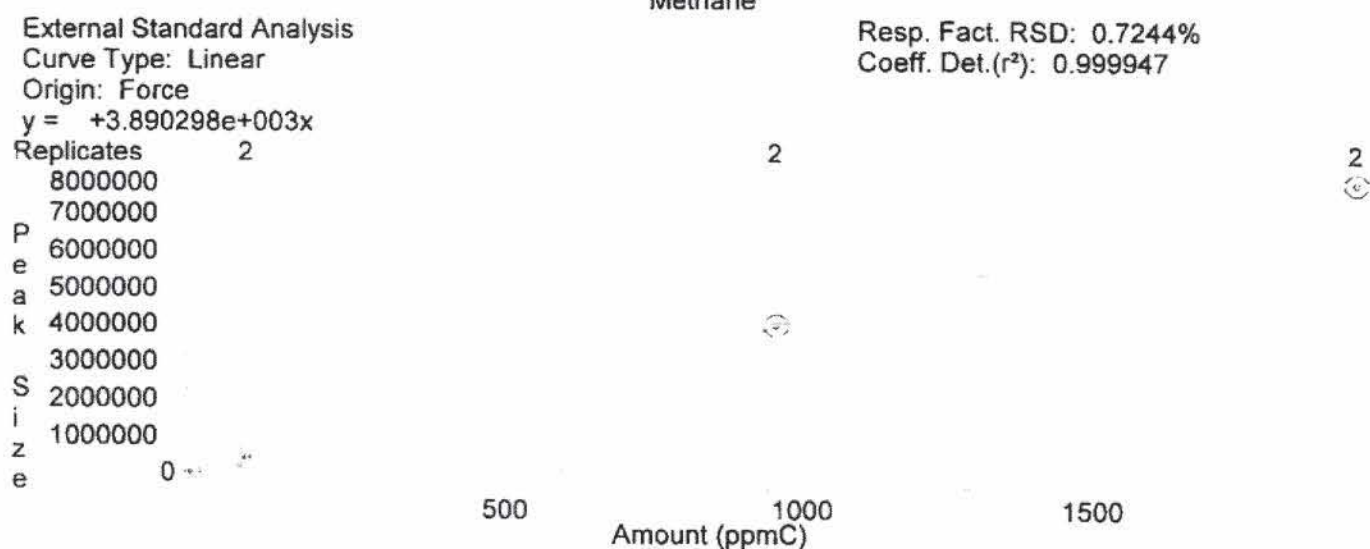
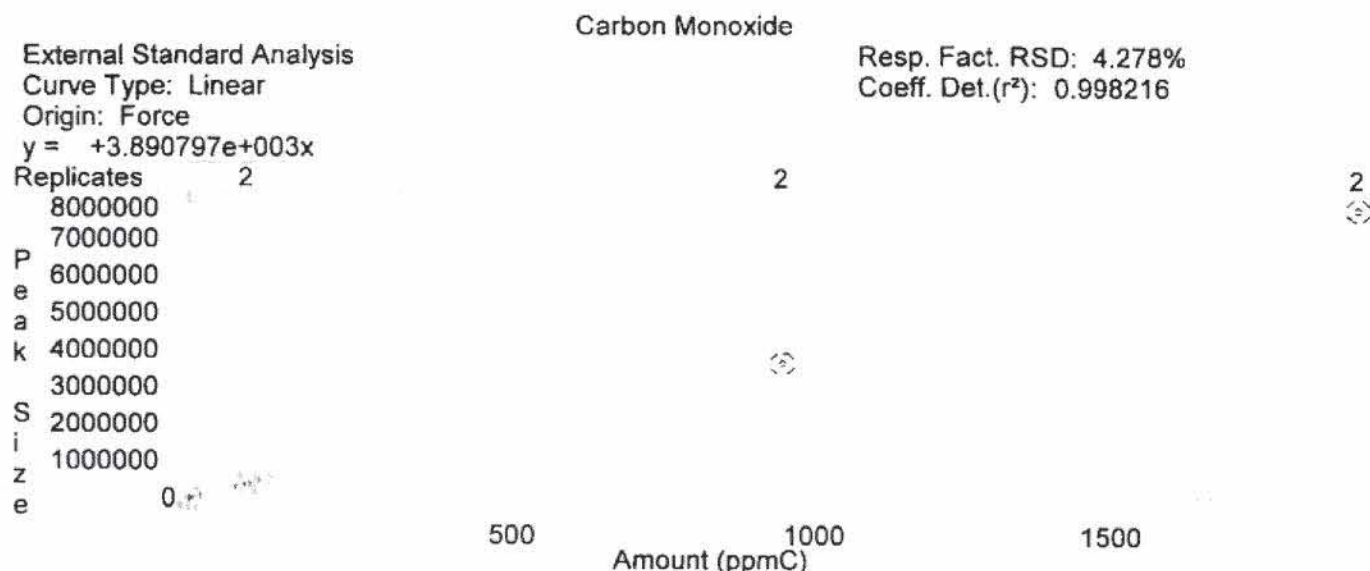
* - Post -test Pressure is less then 200 mm Hg.

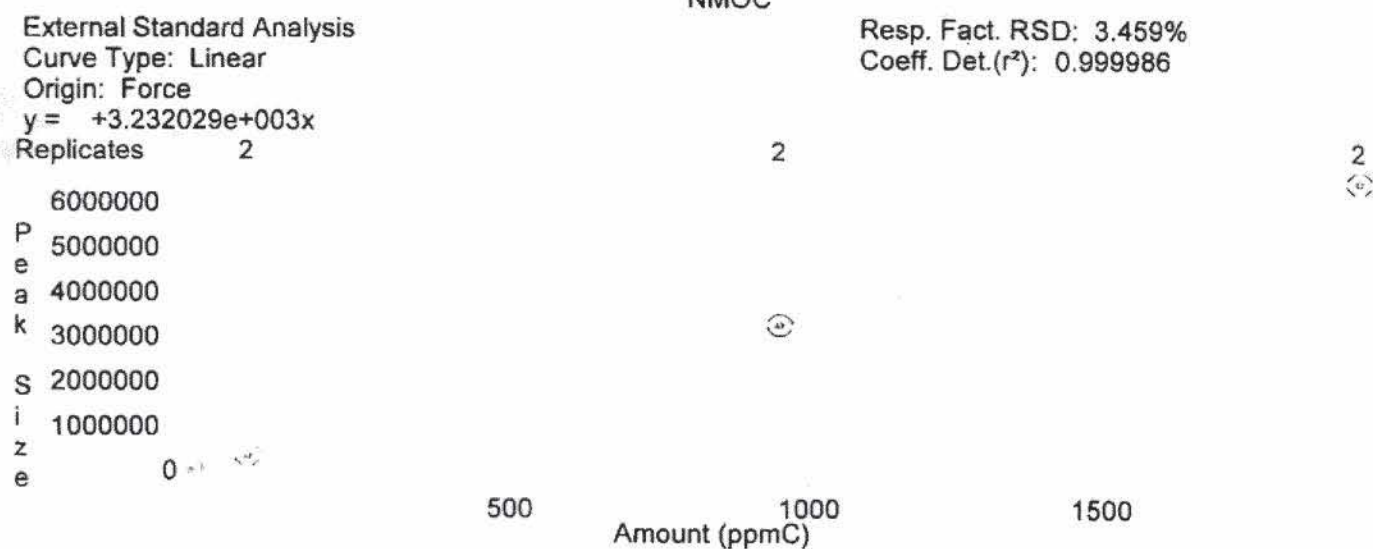
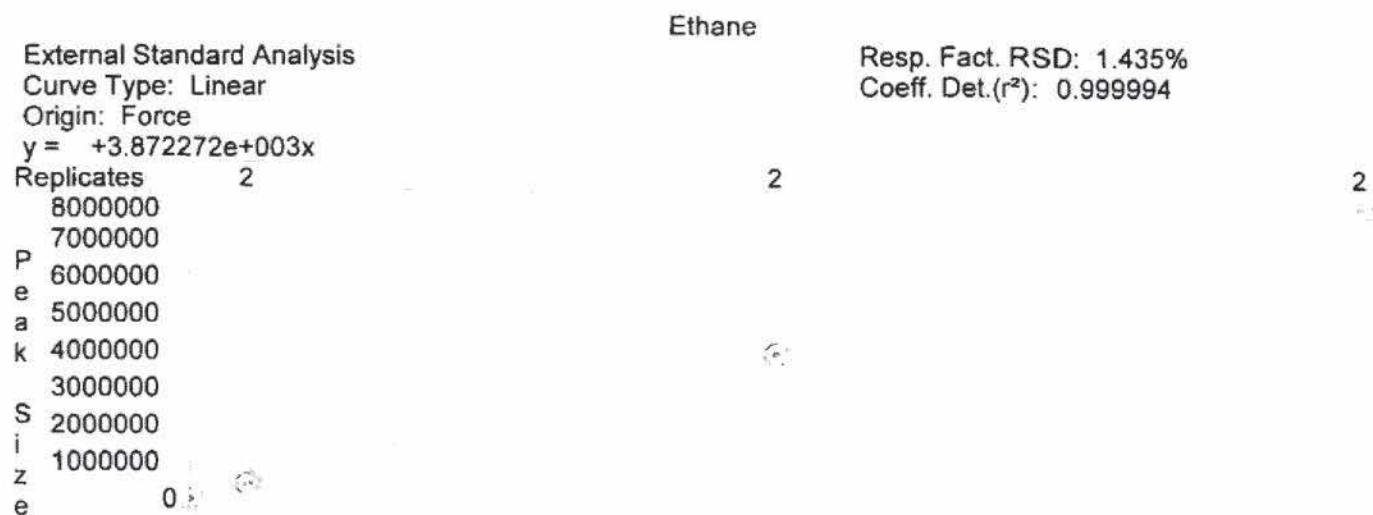
CALIBRATIONS

	100 ppm mix					1000 ppm mix					2000 ppm mix					Ave	RSD
	conc	area 1	area 2	RF 1	RF 2	conc	area 1	area 2	RF 1	RF 2	conc	area 1	area 2	RF 1	RF 2		
Carbon Monoxide	101.08	370255	370534	2.73E-04	2.73E-04	1000.4	3675579	3677664	2.72E-04	2.72E-04	2006.8	7837647	7847982	2.56E-04	2.56E-04	2.67E-04	0.3
Methane	101.92	404558	404178	2.52E-04	2.52E-04	1001.8	3996870	3999636	2.51E-04	2.50E-04	2010	7841024	7848899	2.56E-04	2.56E-04	2.53E-04	-4.9
Carbon Dioxide	104.3	398920	398859	2.61E-04	2.61E-04	1002	3952298	3958485	2.54E-04	2.53E-04	1999	7759139	7771729	2.58E-04	2.57E-04	2.57E-04	3.3
Ethane	97.06	401612	402485	2.42E-04	2.41E-04	1004	3918356	3915213	2.56E-04	2.56E-04	2015	7841898	7841835	2.57E-04	2.57E-04	2.52E-04	5.5
TGNMO	101.9	344008	342942	2.96E-04	2.97E-04	1002	3288823	3284294	3.05E-04	3.05E-04	2002	6488336	6473601	3.09E-04	3.09E-04	3.03E-04	14.0
Average	387275	387116	2.63E-04	2.63E-04	Average	3766385	3767058.4	2.67E-04	2.67E-04	Average	7553609	7556809	2.67E-04	2.67E-04			
RSD%		Average	2.63E-04			Average		2.67E-04			Average		2.67E-04				
			1.2					-0.5					0.4				
Average			<u>2.66E-04</u>														

RSD, %

43	RSD _{CO} =	4.278	r _{CO} =	0.99911
	RSD _{CH4} =	0.724	r _{CH4} =	0.99997
	RSD _{CO2} =	1.504	r _{CO2} =	0.99995
	RSD _{C2H6} =	1.435	r _{C2H6} =	1.00000
	RSD _{NMOC} =	3.459	r _{NMOC} =	0.99999





Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 10:31:00, lab air.run
 Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-6-8-2015, 09:42:15, lab air-2.tmp
 Sample ID : lab air

Injection Date: 6/11/2015 10:31 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	100.4453	1.889	-0.041	396662	BB	3.8	
2	Methane	1.5123	2.283	0.012	5911	TS	0.0	
3	Carbon Dioxi	496.0579	3.429	-0.040	1939116	BB	7.9	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		598.0155		-0.069	2341689			

Status Codes:
 M 46 Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -246 microVolts LSB: 1 microVolts

Noise (used): 51 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\june 15\\6-11-2015, 10:31:00, lab air.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-8-2015, 09:42:15, lab air-2.tmp
 Sample ID : lab air

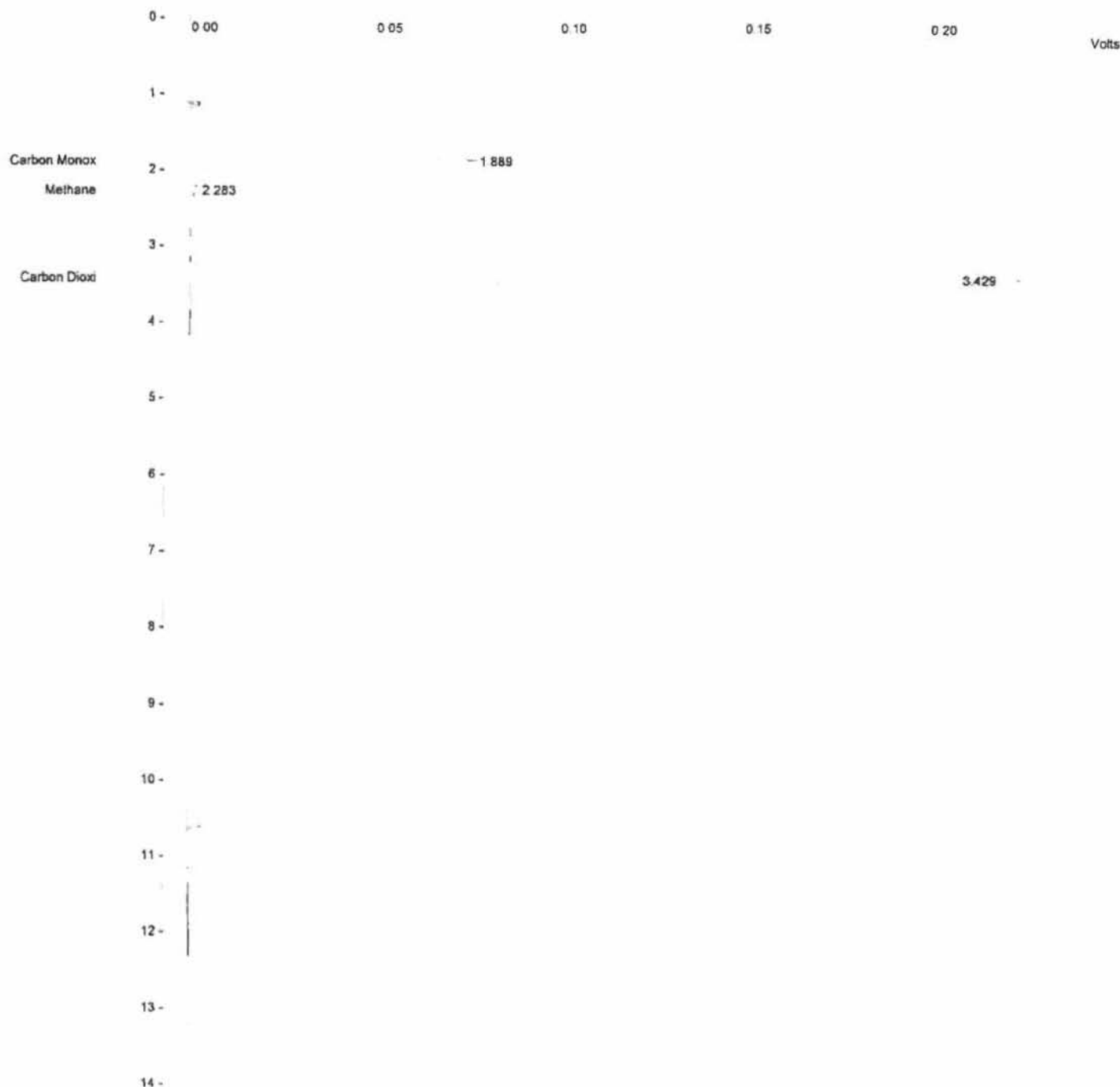


ection Date: 6/11/2015 10:31 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 98
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 106 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015_10:59:03_n2 blank w0100.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-8-2015_09:42:15_lab air-2.tmp
Sample ID : n2 blank w0100

Injection Date: 6/11/2015 10:59 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3586-D6B-21E1 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	0.5921	1.904	-0.026	2338	BB	3.8	
2	Methane		2.271					M
3	Carbon Dioxi	0.9205	3.435	-0.034	3598	BB	8.3	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		1.5126		-0.060	5936			

Status Codes:
M - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 3 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -259 microVolts LSB: 1 microVolts

Noise (used): 33 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 10:59:03, n2 blank w0100.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : n2 blank w0100

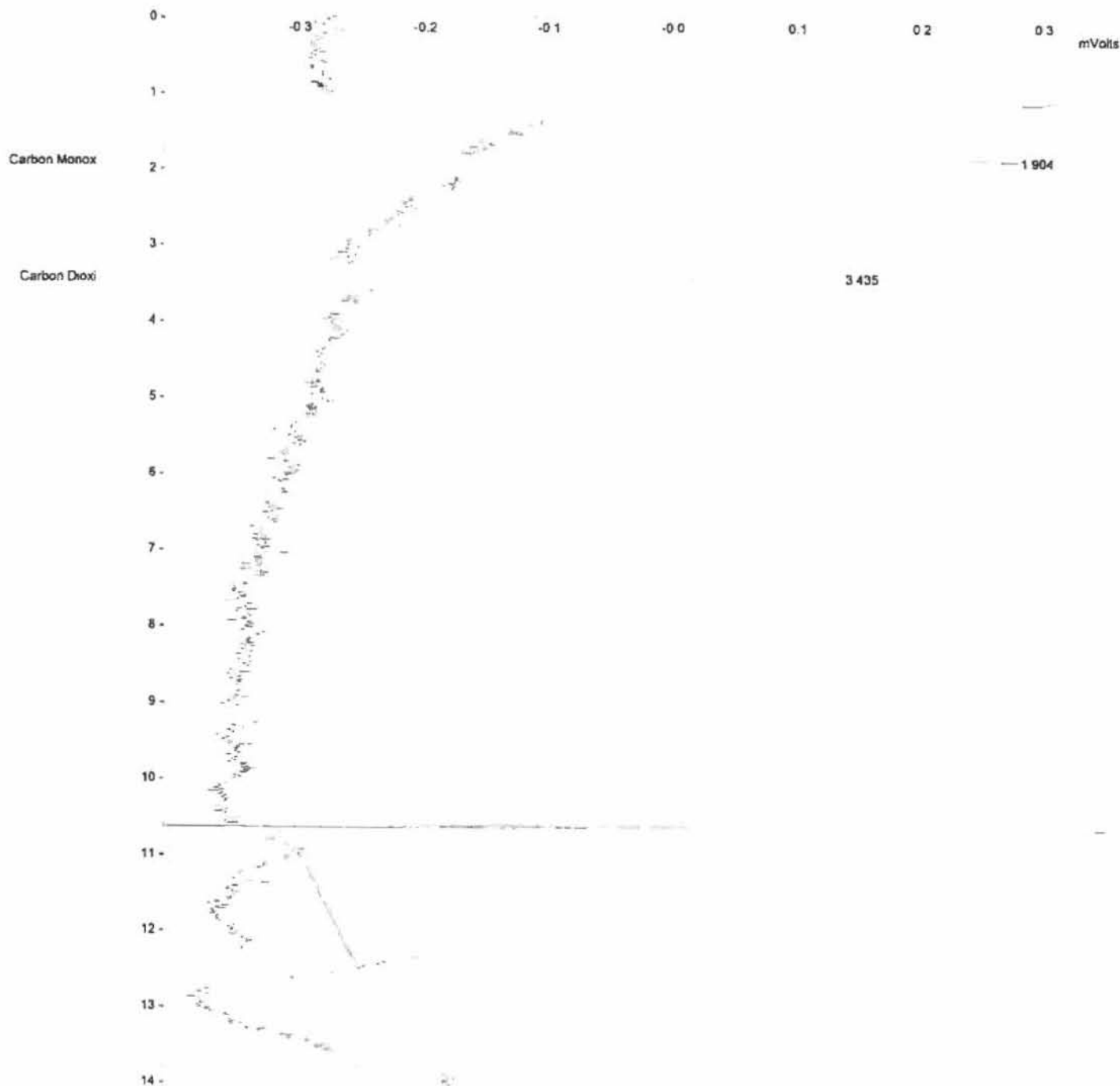


ction Date: 6/11/2015 10:59 AM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 16%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 11:48:06, 100ppm mix.run
 Method File : c:\docume-1\douglass\locals-1\temp\6-12-2015, 11:30:17, n2 blank a111-2.tmp
 Sample ID : 100ppm mix

Injection Date: 6/11/2015 11:48 AM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3586-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 3

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.923	-0.007	370255	BV	3.4	
2	Methane	2.296	-0.004	404558	VP	3.8	
3	Carbon Dioxi	3.436	-0.033	398920	PB	8.0	
4	Ethane	7.400	-0.089	401612	BB	21.8	
5	NMOC	12.335	0.011	344008	BB	17.0	
Totals:			-0.122	1919353			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -153 microVolts LSB: 1 microVolts

Noise (used): 22 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\june 15\\6-11-2015, 11:48:06, 100ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 100ppm mix

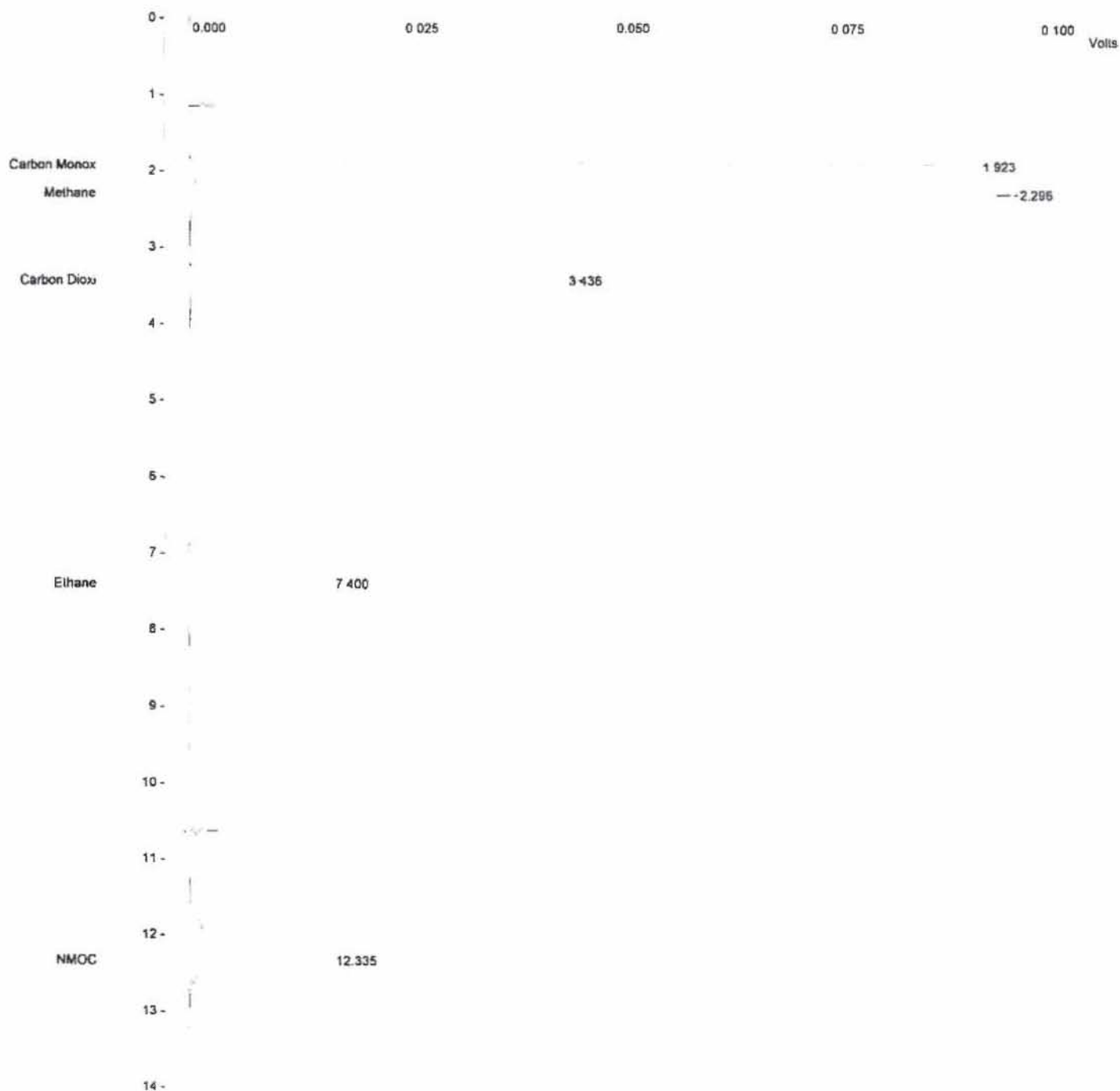


action Date: 6/11/2015 11:48 AM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 46 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 12:14:47, 100ppm mix.run
 Method File : c:\docume~1\douglass\locals~1\temp~-6-12-2015, 11:30:17, n2 blank all1-2.tmp
 Sample ID : 100ppm mix

Injection Date: 6/11/2015 12:14 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 - Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 3

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.913	-0.009	370534	BV	3.3	
2	Methane	2.288	-0.008	404178	VB	3.8	
3	Carbon Dioxi	3.431	-0.005	398859	BB	8.0	
4	Ethane	7.404	0.004	402485	BB	21.8	
5	NMOC	12.333	-0.001	342942	BB	17.4	
Totals:			-0.019	1918998			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -296 microVolts LSB: 1 microVolts

Noise (used): 36 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\alpha01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 12:14:47, 100ppm mix.run
 Method File : c:\\docume-1\\douglass\\locals~1\\temp\\-6-12-2015, 11:30:17, n2 blank all1-2.tmp
 Sample ID : 100ppm mix

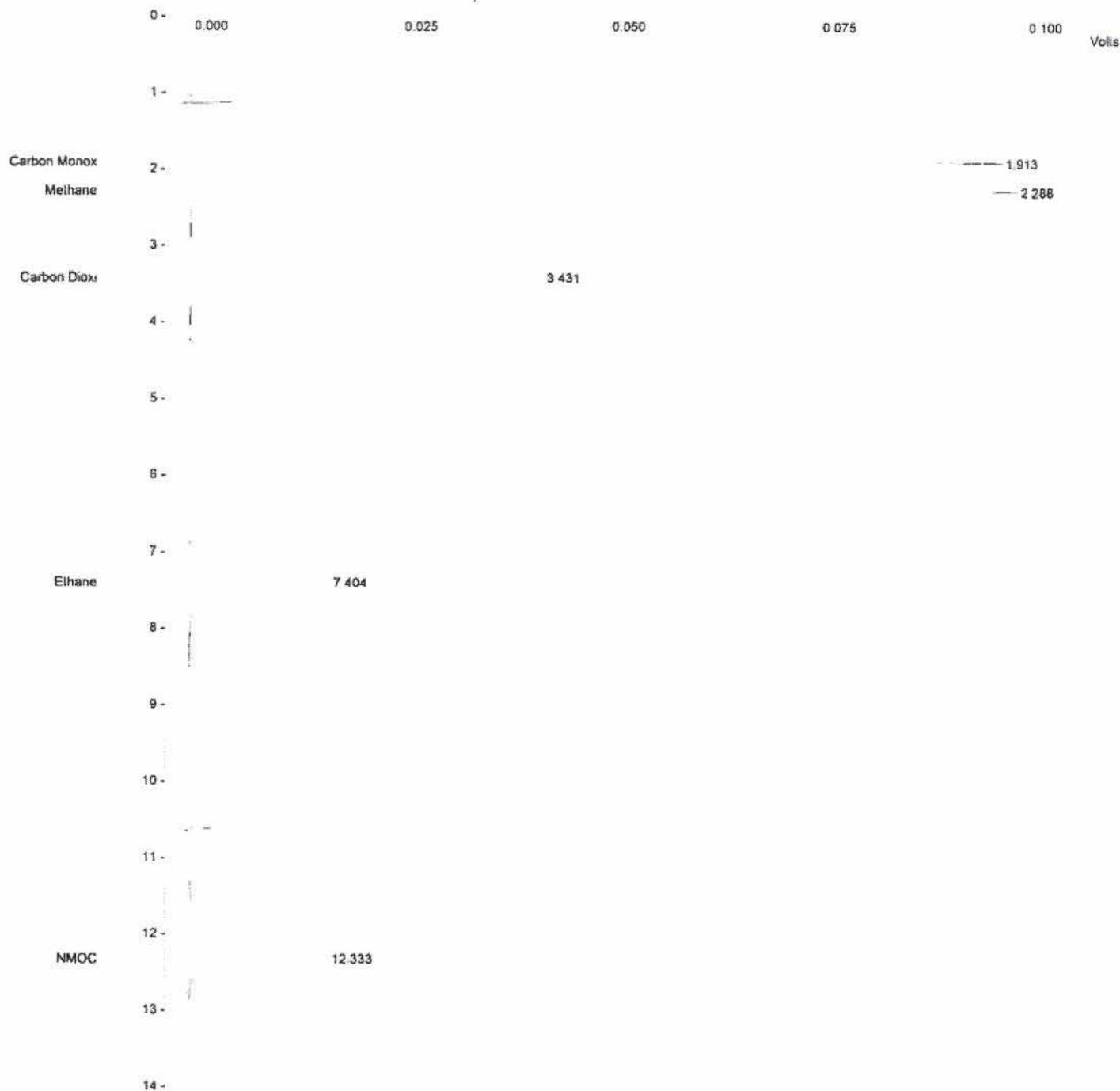


ection Date: 6/11/2015 12:14 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D68-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 47 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
Run File : \\almeqa01\files\server\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:10:59, 1000ppm mix.run
Method File : c:\docume-1\douglass\locals-1\temp\6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 1000ppm mix

Injection Date: 6/11/2015 1:10 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
Peak Measurement: Peak Area
Calculation Type: External Standard
Level : 2

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.933	0.020	3675579	BV	3.0	
2	Methane	2.309	0.021	3996870	VV	3.8	
3	Carbon Dioxi	3.448	0.018	3952298	VB	7.9	
4		5.632	0.000	21690	BB	15.2	
5	Ethane	7.413	0.009	3918356	BB	21.9	
6	NMOC	12.349	0.016	3288823	BB	17.1	
Totals:			0.084	18853616			

Total Unidentified Counts : 21690 counts

Detected Peaks: 6 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -231 microVolts LSB: 1 microVolts

Noise (used): 41 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\almega01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:10:59, 1000ppm mix.run
 Method File : c:\docume~1\douglass\locals~1\temp\~6-12-2015, 11:30:17, n2 blank all1-2.tmp
 Sample ID : 1000ppm mix

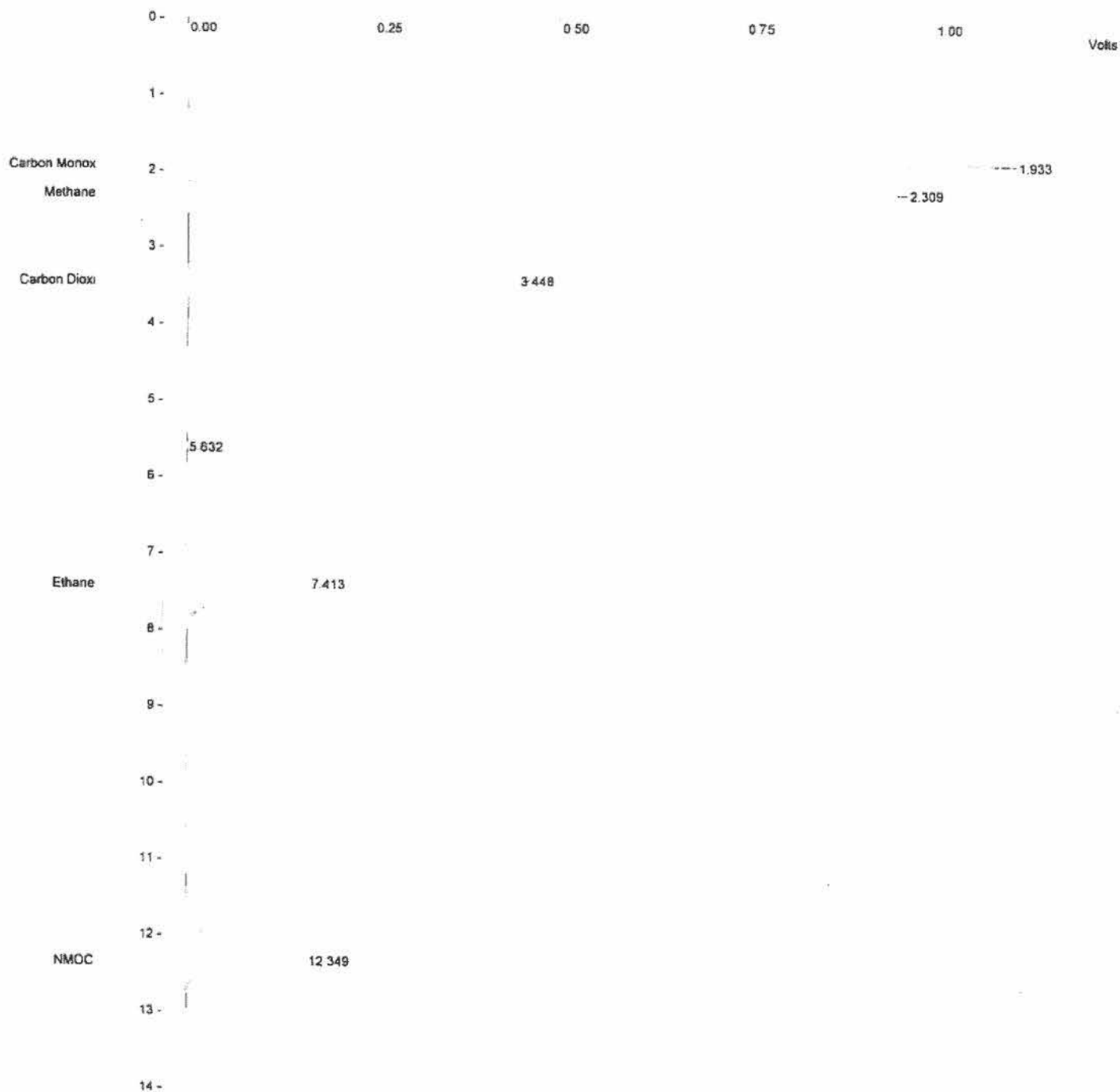


action Date: 6/11/2015 1:10 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 526 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 13:39:09, 1000ppm mix.run
 Method File : c:\docume-1\douglass\locals-1\temp\6-12-2015, 11:30:17, n2 blank a111-2.tmp
 Sample ID : 1000ppm mix

Injection Date: 6/11/2015 1:39 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 2

Peak No.	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.905	-0.028	3677664	BV	2.9	
2	Methane	2.281	-0.028	3999636	VV	3.8	
3	Carbon Dioxi	3.420	-0.028	3958485	VB	7.9	
4		5.603	0.000	22169	BB	15.4	
5	Ethane	7.384	-0.029	3915213	BB	21.8	
6	NMOC	12.323	-0.026	3284294	BB	17.2	
Totals:			-0.139	18857461			

Total Unidentified Counts : 22169 counts

Detected Peaks: 6 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -351 microVolts LSB: 1 microVolts

Noise (used): 24 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\files\\server\\laboratory\\gc chromatograms\\2015\\june 15\\6-11-2015, 13:39:09, 1000ppm mix.run
Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-6-12-2015, 11:30:17, n2 blank alil-2.tmp
Sample ID : 1000ppm mix

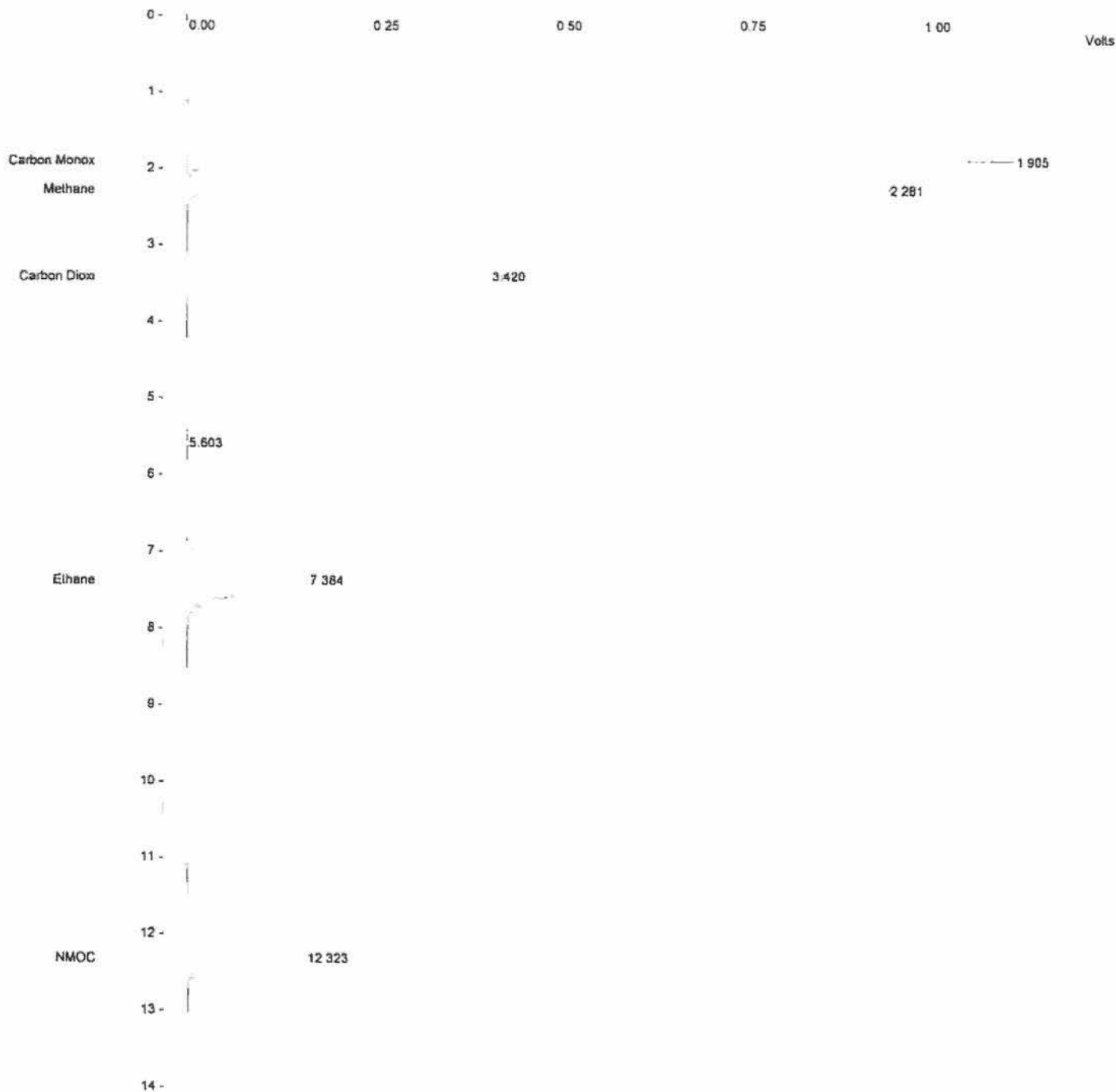


ection Date: 6/11/2015 1:39 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3589-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 533 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 14:30:32, 2000ppm mix.run
 Method File : c:\\docume-1\\douglass\\locals-1\\temp\\-6-12-2015, 11:30:17, n2 blank all-2.tmp
 Sample ID : 2000ppm mix

Injection Date: 6/11/2015 2:30 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 1

Peak	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.905	0.000	7837647	BV	2.9	
2	Methane	2.283	0.002	7841024	VV	3.8	
3	Carbon Dioxi	3.420	0.000	7759139	VB	7.9	
4	Ethane	7.383	-0.001	7841898	BB	21.8	
5	NMOC	12.325	0.003	6488336	BB	17.1	
Totals:			0.004	37768044			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -274 microVolts LSB: 1 microVolts

Noise (used): 43 microVolts - monitored before this run

Stream: 1 Injection Number: 2 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
 Run File : \\almega01\\fileserver\\laboratory\\gc chromatograms\\2015\\june 15\\6-11-2015, 14:30:32, 2000ppm mix.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-12-2015, 11:30:17, n2 blank all1-2.tmp
 Sample ID : 2000ppm mix

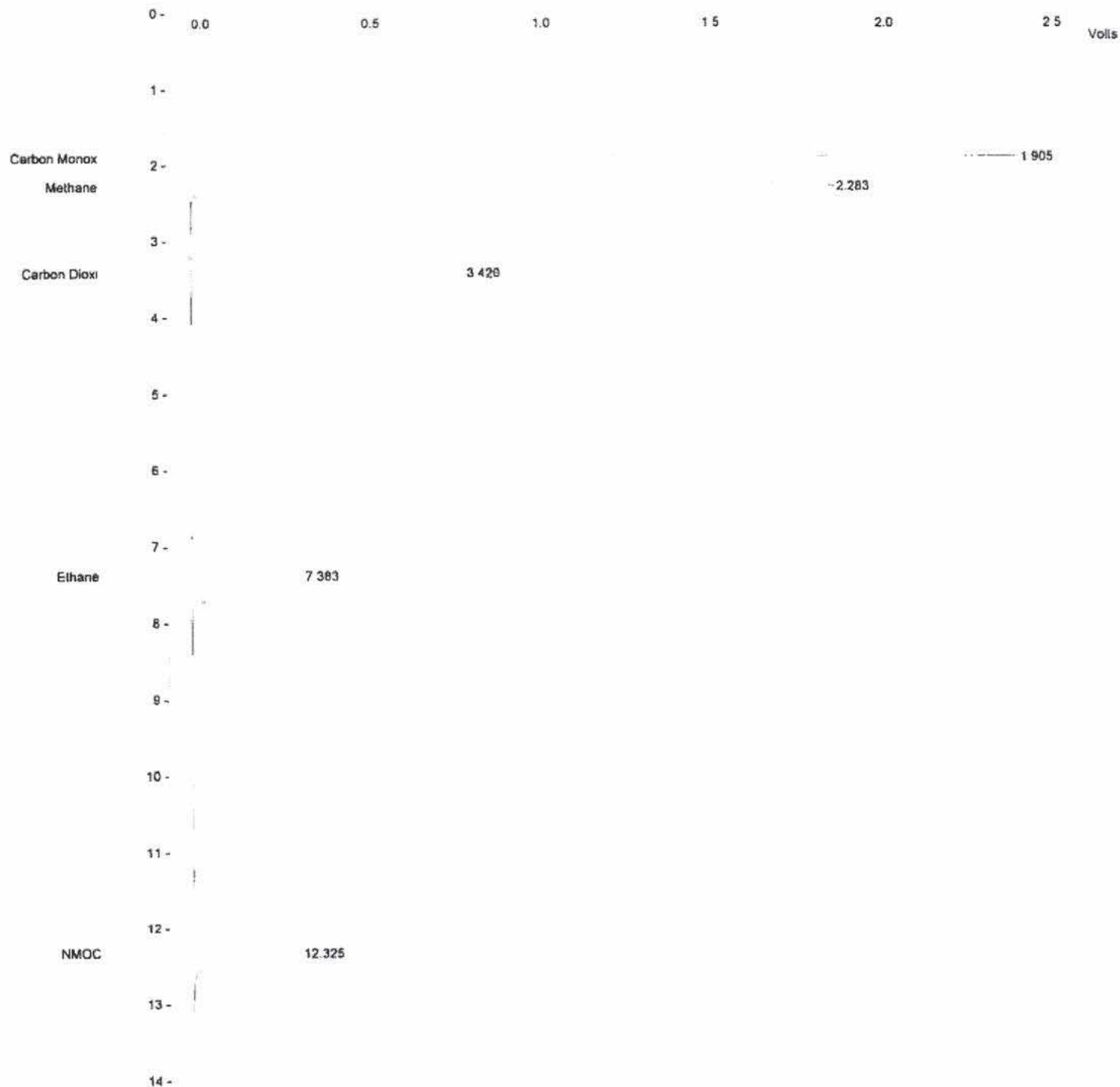


Action Date: 6/11/2015 2:30 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0500 (10 Volts;
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1150 Zero Offset = 2%
 Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\fileserver\laboratory\gc chromatograms\2015\june_15\6-11-2015, 14:58:40, 2000ppm mix.run
 Method File : c:\docume~1\douglass\locals~1\temp\~6-12-2015, 11:30:17, n2 blank a111-2.tmp
 Sample ID : 2000ppm mix

Injection Date: 6/11/2015 2:58 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Calibration
 Peak Measurement: Peak Area
 Calculation Type: External Standard
 Level : 1

Peak #	Peak Name	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	1.928	0.023	7847982	BV	2.9	
2	Methane	2.305	0.023	7848899	VV	3.8	
3	Carbon Dioxi	3.443	0.023	7771729	VB	7.9	
4	Ethane	7.403	0.021	7841835	BB	21.9	
5	NMOC	12.351	0.026	6473601	BB	17.2	
Totals:			0.116	37784046			

Total Unidentified Counts : 0 counts

Detected Peaks: 5 Rejected Peaks: 0 Identified Peaks: 5

Multiplier: N/A Divisor: N/A Unidentified Peak Factor: 0

Baseline Offset: -293 microVolts LSB: 1 microVolts

Noise (used): 29 microVolts - monitored before this run

Stream: 1 Injection Number: 3 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\alpha01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 14:58:40, 2000ppm mix.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\~6-12-2015, 11:30:17, n2 blank all1-2.tmp
Sample ID : 2000ppm mix

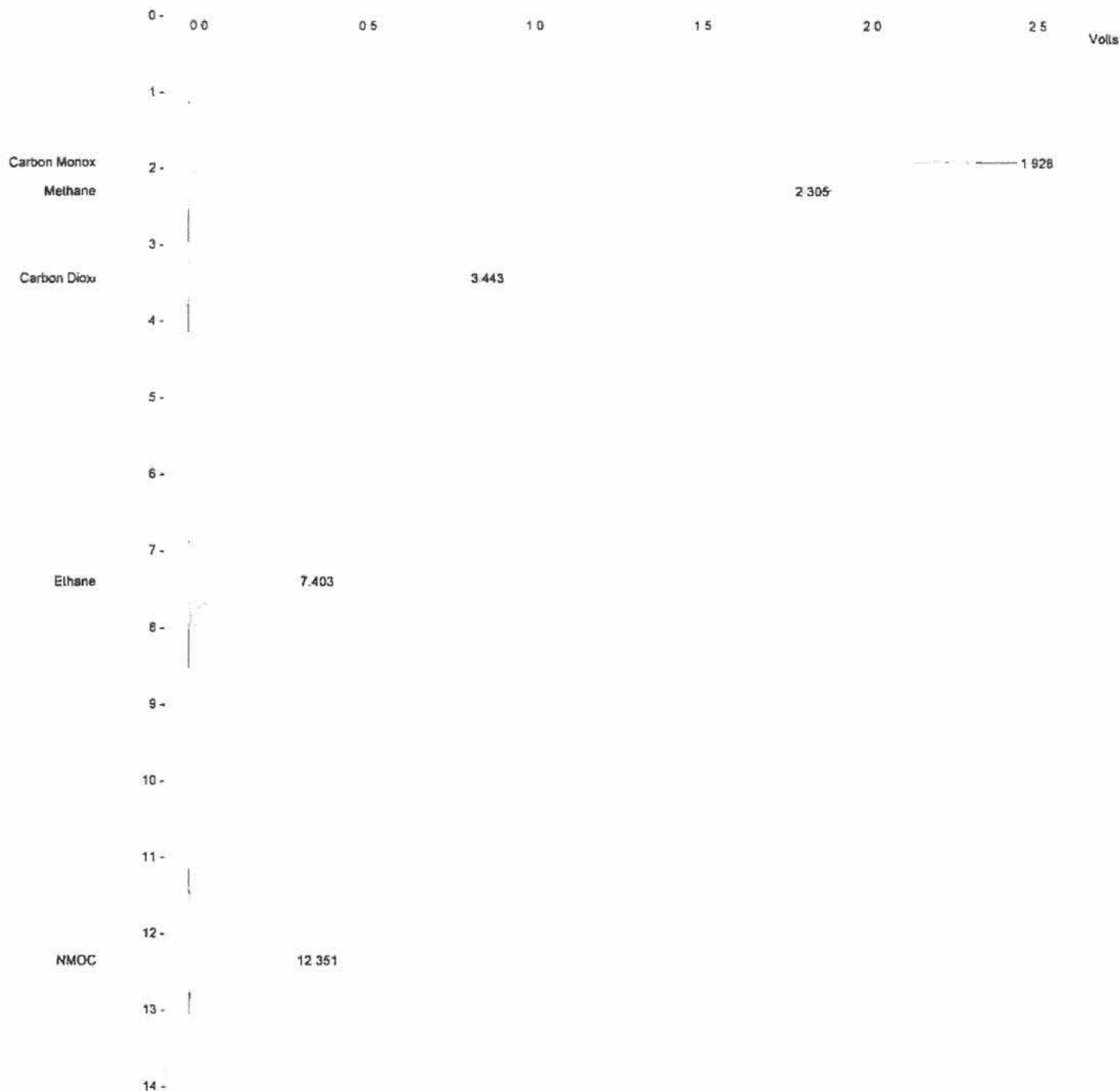


tion Date: 6/11/2015 2:58 PM Calculation Date: 6/12/2015 10:56 AM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1170 Zero Offset = 2%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Title : SCAQMD Methods 25.x
 Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 15:28:48, n2 blank s011.run
 Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-8-2015, 09:42:15, lab air-2.tmp
 Sample ID : n2 blank s011

Injection Date: 6/11/2015 3:28 PM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
 Workstation: Bus Address : 88
 Instrument : Varian Star #1 Sample Rate : 1.25 Hz
 Channel : 2 = Foreflush 10 Run Time : 15.013 min

**Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Run Mode : Analysis
 Peak Measurement: Peak Area
 Calculation Type: External Standard

Peak No.	Peak Name	Result (ppmC)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Carbon Monox	0.9257	1.904	-0.026	3656	BV	3.1	
2	Methane	0.6937	2.279	0.008	2711	VB	3.4	
3	Carbon Diox1	0.6908	3.417	-0.052	2700	BB	8.1	
4	Ethane		7.489					M
5	NMOC		12.324					M
Totals:		2.3102		-0.070	9067			

Status Codes:
 M - Missing peak

Total Unidentified Counts : 0 counts

Detected Peaks: 4 Rejected Peaks: 1 Identified Peaks: 5

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -161 microVolts LSB: 1 microVolts

Noise (used): 26 microVolts - monitored before this run

Stream: 1 Injection Number: 1 Sampling Time: 0.00 min

Original Notes:

Appended Notes:

Title : SCAQMD Methods 25.x
Run File : \\almeqa01\\fileserver\\laboratory\\gc chromatograms\\2015\\june_15\\6-11-2015, 15:28:48, n2 blank s011.run
Method File : c:\\docume~1\\douglass\\locals~1\\temp\\-6-8-2015, 09:42:15, lab air-2.tmp
Sample ID : n2 blank s011

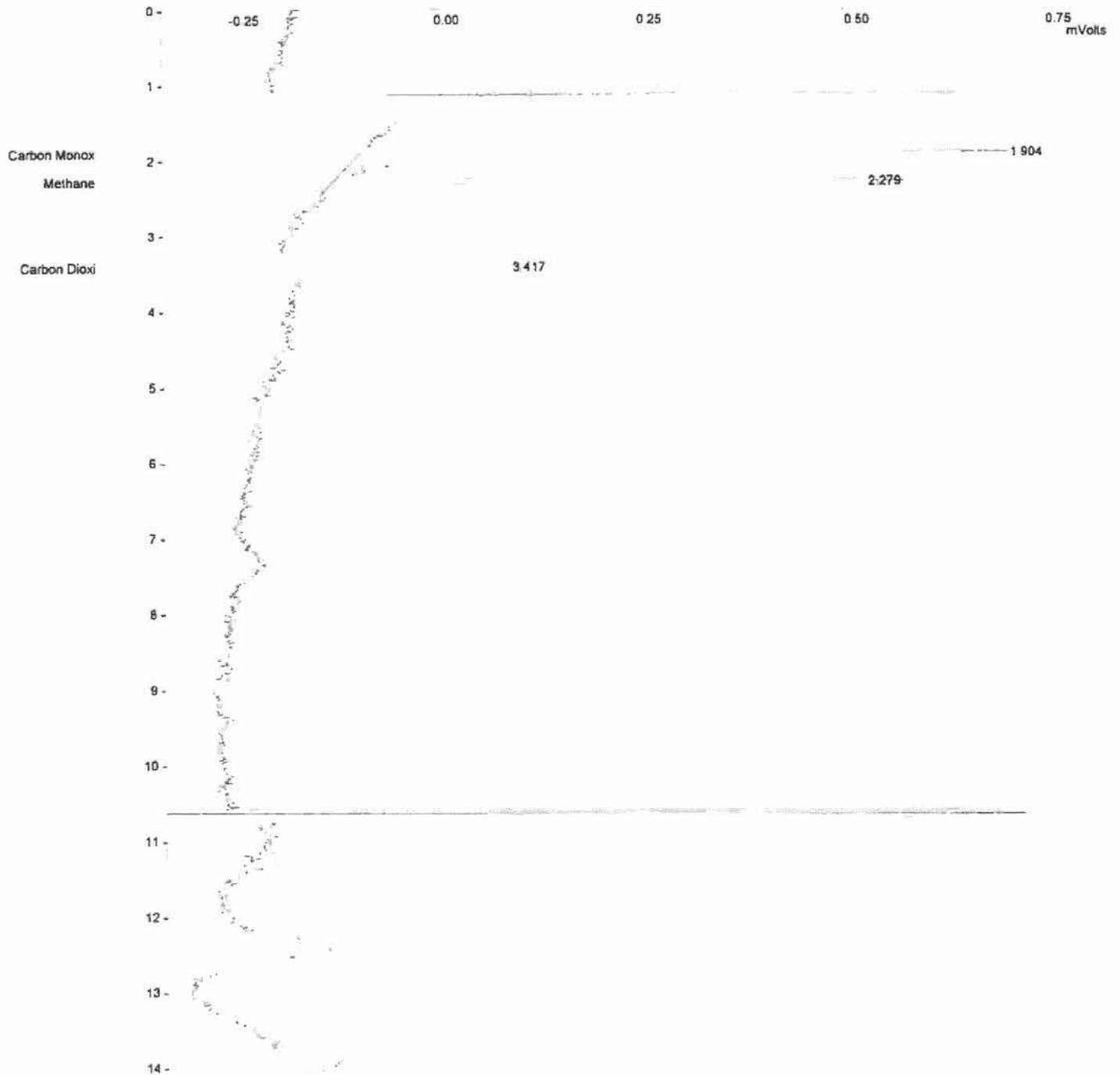


Action Date: 6/11/2015 3:28 PM Calculation Date: 6/11/2015 3:11 PM

Operator : Douglass Detector Type: 0800 (10 Volts)
Workstation: Bus Address : 88
Instrument : Varian Star #1 Sample Rate : 1.25 Hz
Channel : 2 = Foreflush 10 Run Time : 15.013 min

** Star Chromatography Workstation Version 6.00 ** 00299-3588-D6B-21E1 **

Chart Speed = 1.32 cm/min Attenuation = 1 Zero Offset = 13%
Start Time = 0.000 min End Time = 15.013 min Min / Tick = 1.00



Attachment 2
Source Test Protocol

**Mesa Water District
1965 Placentia Avenue
Costa Mesa, CA 92627-3420**

**Mesa Water District, Well No. 5
SCAQMD Facility ID: 94967**

**Mesa Water District, Reservoir I
SCAQMD Facility ID: 95067**

**Mesa Water District, Reservoir II
SCAQMD Facility ID: 98380**

December 2014

Prepared by:

Yorke
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Office Locations:
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Ventura, Fresno, Oakland, Bakersfield

Tel: (949) 248-8490
Fax: (949) 248-8499

**Rule 1110.2 Source Test Protocol for
Internal Combustion Engines**

Rule 1110.2 Source Test Protocol for Internal Combustion Engines

Prepared for:

**Mesa Water District
1965 Placentia Avenue
Costa Mesa, CA 92627-3420**

**Mesa Water District, Well No. 5
SCAQMD Facility ID: 94967**

**Mesa Water District, Reservoir I
SCAQMD Facility ID: 95067**

**Mesa Water District, Reservoir II
SCAQMD Facility ID: 98380**

December 2014

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Permits to Operate – Facility ID: 94967, 95067, and 98380

APPENDIX B – EXHAUST SAMPLE PORT LOCATIONS

APPENDIX C – CONTINUOUS GAS MONITORING REQUIREMENTS

Attachment A – General Continuous Gas Monitoring Requirements

Attachment B – Sample Conditioning Requirements

Attachment C – NO₂ to NO Conversion Test Procedure

APPENDIX D – ALT-104 APPROVAL OF ALTERNATIVE TO METHOD 10 FOR ENGINES

List of Acronyms and Abbreviations

AFRC	Air-to-Fuel Ratio Controller
BAF	Bias Adjustment Factor
BHP	Brake Horsepower
Btu	British Thermal Unit
°C	Degrees Celsius
CARB	California Air Resources Board
CE	Conversion Efficiency
CEM	Continuous Emissions Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CPP	Certified Permitting Professional
dscfm	Dry Standard Cubic Feet per Minute
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
F _d	F-Factor Dry
FID	Flame Ionization Detector
GC	Gas Chromatography
GCV	Gross Caloric Value
Hg	Mercury
HHV	Higher Heating Value
ICE	Internal Combustion Engine
I&M	Inspection and Monitoring
LAP	Laboratory Approval Program
lb/hr	Pounds per Hour
MMBtu	1 Million British Thermal Units
mV	Millivolt
N ₂	Nitrogen
NDIR	Non-Dispersive Infrared
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH ₃	Ammonia
NIST	National Institute of Standards and Technology
NO	Nitrogen Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
O ₂	Oxygen
O ₃	Ozone

ppm	Parts per Million
ppmv	Parts per Million by Volume
QAQC	Quality Control/Quality Assurance
RICE	Reciprocating Internal Combustion Engine
RPM	Revolutions per Minute
SCAQMD	South Coast Air Quality Management District
scf	Standard Cubic Feet
scfm	Standard Cubic Feet per Minute
SO ₂	Sulfur Dioxide
ST/ID	Source Test/Identification
TCA	Total Carbon Analyzer
TCD	Thermal Conductivity Detector
TNMOC	Total Non-Methane Organic Carbon
UHP	Ultra-High Purity
VOC	Volatile Organic Compound

Rule 1110.2 Source Test Protocol for Natural Gas-Fired Internal Combustion Engines

1.0 INTRODUCTION

South Coast Air Quality Management District (SCAQMD) Rule 1110.2 (Rule) requires a source test of non-emergency internal combustion engines (ICEs) every 2 years or 8,760 hours, whichever comes first. The source test frequency may be reduced to once every 3 years if the engine has operated less than 2,000 hours since the last source test. In addition, the Rule requires that a source test protocol be submitted for approval 60 days [Rule 1110.2(f)(1)(C)(iv)] prior to conducting an ICE source test.

Mesa Water District (Mesa Water) agrees to fulfill the source test protocol requirements by following the SCAQMD standard protocol, "Source Test Protocol for the Measurement of Nitrogen Oxides, Volatile Organic Compounds, Carbon Monoxide, and Oxygen from Stationary Engines Subject to South Coast Air Quality Management District Rule 1110.2," dated November 21, 2008.

Mesa Water operates three facilities that have ICEs that must be source tested: Well No. 5 at 3596 Cadillac Avenue, Costa Mesa, CA 92627; Reservoir I at 1971 Placentia Avenue, Costa Mesa, CA 92627; and Reservoir II at 2340 Orange Avenue, Costa Mesa, CA 92627.

Mesa Water is revising its facility-specific existing protocol approved by Marcel Saulis in August 2009 to accommodate the requirements stated in the memo issued by Mohsen Nazemi¹. Mesa Water will use this protocol for the future source test at all three operating facilities.

1.1 Purpose

The purpose of the source test program is to measure the following parameters at the ICE exhaust stack as stated in permit conditions and Rule 1110.2:

- Total non-methane organic carbon (TNMOC);
- Oxides of nitrogen (NO_x);
- Carbon monoxide (CO);
- Carbon dioxide (CO₂);
- Oxygen (O₂);
- Nitrogen (N₂); and
- Power output, brake horsepower (BHP), and other Inspection and Monitoring (I&M) Plan parameters.

Results of the measurements are used to determine the compliance status of the equipment with permit and Rule standards as shown in Table 1-1.

¹ South Coast Air Quality Management District, Office of Engineering & Compliance, Memorandum Dated November 3, 2009 – Interim Guidance for Rule 1110.2 Implementation.

Results for carbon monoxide emissions from the biannual source test performed on the Well No. 5 engine will be used to demonstrate compliance for Code of Federal Regulations (CFR) Title 40 Part 63, Subpart ZZZZ for Reciprocating Internal Combustion Engine (RICE) National Emission Standards for Hazardous Air Pollutants (NESHAP). Mesa Water will demonstrate compliance per the provisions provided in 40 CFR Part 63.6645. Mesa Water contacted the Environmental Protection Agency (EPA) and obtained authorization to use carbon monoxide data from the recent source test to demonstrate compliance. A copy of the EPA approval is included in Appendix D².

Table 1-1: Emission Limits

Location	Equipment ID	Emission Limit (Corrected to 15% O ₂)			Reference
		NO _x	CO	VOCs	
Well No. 5	Pump No. 1	11	250	30	Permit Condition No. 9
Reservoir I	Pump No. 1	11	250	30	Permit Condition No. 7
Reservoir I	Pump No. 2	11	250	30	Permit Condition No. 7
Reservoir I	Pump No. 3	11	250	30	Permit Condition No. 7
Reservoir II	Pump No. 1	11	76	30	Permit Condition No. 7
Reservoir II	Pump No. 2	11	76	30	Permit Condition No. 7
Reservoir II	Pump No. 3	11	76	30	Permit Condition No. 7
Reservoir II	Pump No. 4	11	76	30	Permit Condition No. 7

1.2 Source Test Protocol Preparer

This protocol was prepared by Bipul K. Saraf and reviewed by Greg Wolffe of Yorke Engineering, LLC. Technical questions regarding this protocol can be directed to either of these individuals. Table 1-2 provides the contact information for Mr. Saraf and Mr. Wolffe.

Table 1-2: Protocol Preparers

Name:	Bipul K. Saraf	Greg Wolffe, CPP
Title:	Senior Engineer	Principal Scientist
Phone:	(949) 248-8490	(949) 248-8490
Fax:	(949) 248-8499	(949) 248-8499
Cell:	(949) 444-8063 Preferred	(714) 315-9049 Preferred
E-Mail Address:	BSaraf@YorkeEngr.com	GWolffe@YorkeEngr.com

1.3 Source Testing Organization

Source testing of the ICEs per this source test protocol will be performed by a source test organization that has been certified by the SCAQMD under their Laboratory Approval Program (LAP) or the California Air Resources Board (CARB) under their Independent Contractor Program. In addition, the designated testing organization will be screened to ensure it is an "independent testing laboratory" under the SCAQMD's Rule 304(k)(4) (no conflict of interest). Mesa Water may choose to use any other source test company approved by the SCAQMD and/or CARB. The complete list of LAP approved sources testers can be accessed from the following website: <http://www.aqmd.gov/docs/default-source/laboratory-procedures/lap-contact-info.pdf?sfvrsn=4>. The list of CARB Independent Contractors is found at: <http://www.arb.ca.gov/ba/icp/currenteo.pdf>.

² ALT-104 Approval of Alternative to Method 10 for Engines.

2.0 FACILITY AND SOURCE INFORMATION

Mesa Water©, a special district, was formed on January 1, 1960, as a result of the merger of four water agencies. Mesa Water's primary purpose is to manage and deliver water and water-related services to customers within its service area. Mesa Water© distributes a combination of imported water and local groundwater to approximately 23,500 retail accounts (population of over 108,000) in an 18-square-mile area, which includes the city of Costa Mesa, parts of Newport Beach, and unincorporated areas of Orange County, including the John Wayne Airport.

The three facilities that are addressed by this protocol are listed in Table 2-1.

Table 2-1: Facility Information

Name of Facility:	Mesa Water District Well No. 5	Mesa Water District Reservoir I	Mesa Water District Reservoir II
Address:	3596 Cadillac Avenue Costa Mesa, CA 92627	1971 Placentia Avenue Costa Mesa, CA 92627	2340 Orange Avenue Costa Mesa, CA 92627
SCAQMD Facility ID:	94967	95067	98380
Type of Equipment	Water Pumping Engine	Pump No. 1 Pump No. 2 Pump No. 3	Pump No. 1 Pump No. 2 Pump No. 3 Pump No. 4

2.1 Facility Contacts

Facility contact information is provided in Table 2-2.

Table 2-2: Contact Information

Name:	Tracy Manning	Roger Demers
Responsibility:	Assistant Operations Manager	Senior System Operator
Address:	1965 Placentia Avenue Costa Mesa CA 92627	1965 Placentia Avenue Costa Mesa CA 92627
Phone:	(949) 207-5468	(949) 207-5470
Fax:	(949) 574-1033	(949) 574-1033
Cell:	(714) 272-3376	(714) 356-9688
E-Mail Address:	TracyM@MesaWater.org	RogerM@MesaWater.org

2.2 Source Description

Tables 2-3 through 2-5 list equipment descriptions. The engine operating at Well No. 5 pumps drinking water. All three engines at the Reservoir I facility and four engines at the Reservoir II facility pump drinking water to the service area residents.

Table 2-3: Equipment Description – Well No. 5

Equipment ID	Make	Model	Rating (BHP)	Fuel
Pump No. 1	Waukesha	L5790GU	625	Natural Gas

Table 2-4: Equipment Description – Reservoir I

Equipment ID	Make	Model	Rating (BHP)	Fuel
Pump No. 1	Waukesha	F1197G	137	Natural Gas
Pump No. 2	Waukesha	F1197G	137	Natural Gas
Pump No. 3	Waukesha	F1197G	137	Natural Gas

Table 2-5: Equipment Description – Reservoir II

Equipment ID	Make	Model	Rating (BHP)	Fuel
Pump No. 1	Waukesha	2895G	369	Natural Gas
Pump No. 2	Waukesha	2895G	369	Natural Gas
Pump No. 3	Waukesha	2895G	369	Natural Gas
Pump No. 4	Waukesha	2895G	369	Natural Gas

2.3 Source Test Date

This source test protocol is being submitted at least 60 days before any scheduled Rule 1110.2 source test date³. Once approved, this source test protocol and subsequent protocol approval (ST/ID) will be referenced in all future SCAQMD notifications of scheduled source tests, which will be provided to the SCAQMD in writing at least 30 days prior to the test to allow the opportunity for an observer to be present at the test⁴.

2.4 Source Test Operating Conditions

The Well No. 5 water pump engine will be source tested at maximum load condition in accordance with Permit Condition No. 7, which limits the operation of the engine to a single load⁵. Single 60-minute tests for NO_x, CO, and volatile organic compounds (VOCs) will be carried at 900 revolutions per minute (RPM) (greater than 80% of the rated load).

Reservoir I and Reservoir II water pump engines will be tested at the normal, maximum, and minimum load conditions that can be practically achieved at the time of the test⁶.

Operating parameters such as RPM, temperature, and fuel consumption will be monitored and recorded for inclusion in the final report. All the parameters identified in the facility I&M Plan, such as BHP, % load, RPM, O₂ mV, catalyst temperatures (inlet/outlet), engine run hours, air-to-fuel ratio controller (AFRC) alarms, and AFRC set point and actual values will be recorded during the source test.

2.5 Sample Locations

Stack configuration data for each sampling location are provided in Tables 2-6 through 2-8 below.

Table 2-6: Stack Configuration – Well No. 5

Equipment ID	Upstream	Downstream	Stack Diameter	No. of Sampling Ports
Pump No. 1	8"	24"	8.00"	2

³ Rule 1110.2(f)(1)(C)(iv).

⁴ Rule 1110.2(f)(1)(C)(v).

⁵ Application No. 499283 (Permit No. G3918).

⁶ Rule 1110.2(f)(1)(c)(ii).

Table 2-7: Stack Configuration – Reservoir I

Equipment ID	Upstream	Downstream	Stack Diameter	No. of Sampling Ports
Pump No. 1	3"	13"	5.25"	2
Pump No. 2	3"	13"	5.25"	2
Pump No. 3	3"	13"	5.25"	2

Table 2-8: Stack Configuration – Reservoir II

Equipment ID	Upstream	Downstream	Stack Diameter	No. of Sampling Ports
Pump No. 1	6"	22"	8"	2
Pump No. 2	6"	22"	8"	2
Pump No. 2	6"	22"	8"	2
Pump No. 4	6"	22"	8"	2

3.0 TEST PROGRAM

3.1 Test Objectives

The purpose of this source test program is to satisfy the source test requirement per SCAQMD Rule 1110.2(f)(1)(C). The specific objectives include:

1. Submit a test protocol to the SCAQMD for review and approval;
2. Conduct engine testing at maximum achievable, normal, and minimum load conditions for Reservoir I and II water pumps and fixed maximum load for the Well No. 5 water pump⁷;
3. Record pump engine operating conditions during testing; and
4. Prepare and submit a final source test report.

Specific emission limits listed in the Permits to Operate are summarized in Table 1-1 of Section 1.0.

Table 3-1 presents the test matrix for the exhaust. Each matrix shows the test location, pollutants to be measured, number and length of the test runs, and the proposed test methods. The published EPA and SCAQMD reference methods provide more detailed description than the information noted in Table 3-1. The purpose of this protocol is to provide an overview of the test methods and testing conditions. At any time, if there is a discrepancy between the published reference methods and the methods noted in Table 3-1, the reference methods shall take precedence.

Table 3-1: ICE Source Test Matrix – Exhaust

Sampling Location	Number of Runs/Unit	Sample/Type Pollutant	Sampling Method	Load and Run Time (min) ⁸	Analytical Method
Reservoir I and Reservoir II	1	NO _x , CO, O ₂ , CO ₂ , N ₂	SCAQMD Method 100.1	Maximum and Minimum – 15, Normal – 30	CEMS
	1	CH ₄ , TNMOC	SCAQMD Method 25.3	Normal – 30	TCA/FID
	1	Flow Rate	EPA Method 19	60	Calculation
Well No. 5	1	NO _x , CO, O ₂ , CO ₂ , N ₂	SCAQMD Method 100.1	60	CEMS
	1	CH ₄ , TNMOC	SCAQMD Method 25.3	Normal – 30-45	TCA/FID
	1	Flow Rate	EPA Method 19	60	Calculation

⁷ Rule 1110.2(f)(1)(c)(ii).

⁸ Per Rule 1110.2 [(f)(1)(C)(i)], the test will be carried out at the multiple load condition practically achievable at the time of the test.

4.0 SAMPLING ANALYTICAL METHODS

Mesa Water will conduct source testing for TNMOC, O₂, CO₂, NO_x, and CO for at least 30 minutes during normal operation of an actual duty cycle. In addition, source testing for NO_x and CO emissions will be measured for at least 15 minutes at the engine's actual peak load, or the maximum load that can be practically achieved during the test, and at actual minimum load, excluding idle, or the minimum load that can be practically achieved during the test.

For Well No. 5, a single 60-minute test will be conducted at the exhaust of the engine at 900 RPM for TNMOC, O₂, CO₂, NO_x, and CO.

The sampling and analytical methods that will be used during the source test are listed in Table 3-1. These TNMOC samples will also be analyzed for CO, CO₂, and O₂ following SCAQMD Method 10.1. A comparison between CO, CO₂, and O₂ sampled by SCAQMD Methods 100.1 and 10.1 will be made and included in the test critique.

4.1 Engine Servicing

Mesa Water will conduct the source test at least 40 operating hours, or at least 1 week, after any engine servicing or tuning. In addition, if an emission exceedance is found during any of the three phases (i.e., load levels) of the source test, the failing test shall be completed and properly documented in the source test report. Mesa Water, or their operations contractor, will correct the exceedance and allow the source test to resume⁹.

4.1.1 SCAQMD Method 100.1

Sampling for gaseous pollutants will follow SCAQMD Method 100.1. A leak check of the entire sampling system will be performed prior to the test. The leak test will be accomplished by plugging the tip of the Continuous Emissions Monitoring (CEM) sampling probe and observing the gauge on the vacuum side. The CEMS will be connected and the sampling pump will be started. The probe tip will be blocked and the flow on the rotameter mounted on the manifold will be checked. When the flow indicating bulb located on the rotameter drops to the bottom, the sample pump will be turned off. At this time, the vacuum gauge will be observed for 5 minutes. No resultant vacuum loss with the pump turned off ensures that the sampling system is free of all leaks. The tester will mark the pre- and post-test leak checks on the strip chart.

All quality assurance/quality control (QAQC) procedures described in Method 100.1 will be followed. All analyzers, including NO_x, CO₂, and O₂, will be calibrated using EPA Protocol 1 gas traceable to 1% National Institute of Standards and Technology (NIST) standards. Each of the analyzers will be calibrated directly and indirectly. The direct calibration will include the introduction of calibration gases directly to the analyzers at three levels: zero [Ultra-High Purity (UHP)-grade N₂], mid-grade calibration blend balanced N₂ at 40-60% of the range, and high-grade calibration blend balanced N₂ at 80-100% of the range. The acceptable analyzer response is within 2% of the range. Direct calibration needs to be performed before and after the test. Pre- and post-test analyzer linearity shall be below 1%.

⁹ Rule 1110.2(f)(1)(C)(ii).

Indirect calibration (system bias) is accomplished by introducing the calibration gas at the probe tip and recording the response. The acceptable response is below 5% of the range. System bias needs to be performed before and after each test. System bias calibration drift between pre- and post-test shall be below 3%.

During the test, if the measured concentration drops below 20% of the selected analyzer range, the tester will inject a low-level calibration gas close to the actual concentration observed during the test to verify the analyzer accuracy at the lower level.

4.1.1.1 Calculations

Emission Drift Corrections

The following equations will be used for O₂, CO₂, CO, and NO_x emission drift corrections:

$$C_{gas} = (C - C_o) \times \left(\frac{C_{ma}}{C_m - C_o} \right)$$

Where:

- C_{gas} = Effluent gas concentration, ppmv dry
- C = Emissions concentration recorded during the test, dry, ppmv or %
- C_{ma} = Concentration of the span gas used in the drift correction, ppmv or %
- C_m = Average response of initial and final system bias response upscale
- C_o = Average response of initial and final system bias response zero

Correction to 15% O₂

The actual CO and NO_x concentration will be converted to 15% O₂, as shown below:

$$C_{corr}, ppm @ 15\% = \left(\frac{(20.9 - 15)}{(20.9 - O_2 Meas)} \right) \times C_{Meas}$$

Where:

- C_{corr} = Concentration corrected to 15% O₂
- $O_2 Meas$ = % O₂ measured during the test (drift corrected)
- C_{Meas} = ppmv measured during the test (drift corrected)

Mass Emission Rate

The NO_x/CO mass emission rate can be calculated using the equation shown below. See the section on EPA Method 19 for the calculation of flow rate.

$$E = P \times flow \times K \times Mol.Wt$$

Where:

- E = CO or NO_x emissions rate (lb/hr)
- $flow$ = Average stack flow rate, dscfm

- K = Constant = 1.583×10^{-7} for 60°F
 $Mol. Wt.$ = Molecular weight for CO = 28 and NO_x = 46.01
 P = Average CO or NO_x concentration in stack, dry ppmv

4.1.2 SCAQMD Method 25.3

SCAQMD Method 25.3 will be used to collect low-concentration TNMOC in a 6-liter evacuated summa canister and ice water trap. The ice water trap will collect TNMOC condensable to 32°F.

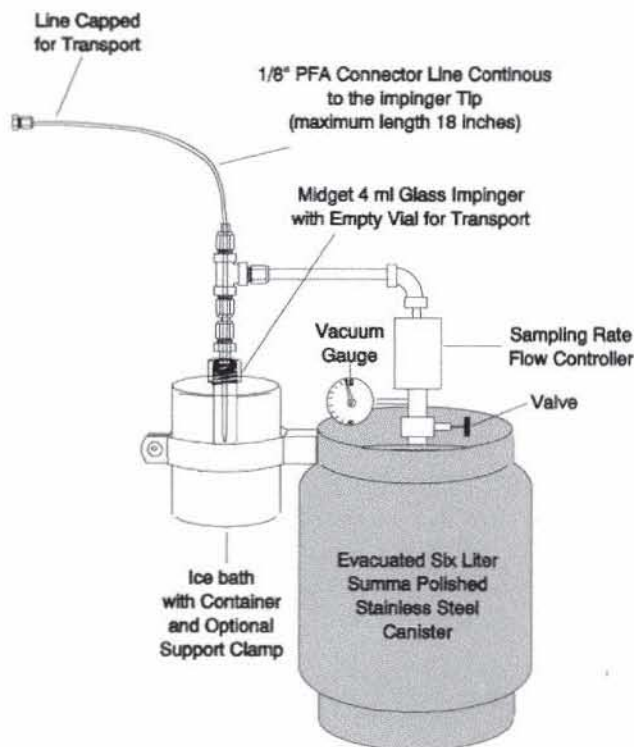
The sampling will be performed in duplicate using two evacuated canisters and two ice water traps simultaneously (Samples A and B). A ¼-inch stainless steel probe will be connected to Teflon tubing and to the ice water chilled trap. The sampling system will be regulated by a stainless steel critical flow controller with vacuum/pressure gauge, and the sample will be drawn by an evacuated canister. The sampling will begin with the canister at 30 inches Hg vacuum and complete when the vacuum will drop to 6 inches Hg in approximately 30 minutes.

A leak test on the sampling system will be performed before and after the test. After the sampling system is assembled, the tank regulator will be opened and the tip of the probe will be sealed. The vacuum gauge attached on the canister will be observed for the drop in the vacuum. If no vacuum loss occurs, the sampling system is considered free of leaks. A similar leak check procedure will be applied after collecting the sample.

The probe will be introduced to the center of the stack and the port will be sealed. Proof of leak checks, reference point monitoring, vacuum drop, flow rate, and temperature will be recorded on the data sheet. After 30 minutes (or when the vacuum drops below 8 inches of Hg), the flow regulator will be turned off and the probe will be allowed to cool to atmospheric conditions. Once the probe cools down, a post-test leak check will be performed as discussed above. The condensate vial will be recovered, sealed, and stored in an ice chest. The summa canister will be disconnected from the probe and secured by plugging the flow controller. A chain of custody will be prepared and the sample will be shipped to the laboratory for analysis.

The sample will be analyzed in two parts: condensable (ice water trap) and non-condensable (canister). Both fractions will be analyzed separately and reported as VOCs in ppmv as methane (CH₄). Overall, the TNMOC concentration will be multiplied by 1.086 [bias adjustment factor (BAF)] to present the total TNMOC results.

Figure 4-1: SCAQMD Method 25.3 Sampling Apparatus



4.1.2.1 Calculations

Laboratory analysis will provide the concentration in ppm for both condensable and non-condensable TNMOC. For each tank and trap, the average of the concentrations of both fractions (condensable and non-condensable) is averaged for the determination of TNMOC.

The following equations will be used to show the TNMOC results.

$$C_{corr}, ppm @ 15\% = \left(\frac{(20.9 - 15)}{(20.9 - O_2 Meas)} \right) \times C_{Meas}$$

Where:

C_{corr}^{10} = Concentration corrected to 15% O_2

$O_2 Meas$ = % O_2 measured during the test (drift corrected)

C_{Meas} = ppmv measured during the test (drift corrected)

TNMOC = ppmv TNMOC measured during the test (EPA BAF corrected); TNMOC results will be provided by the laboratory

¹⁰ The TNMOC concentration will be provided by AtmAA Laboratory in ppmv, dry.

Mass Emission Rate

The TNMOC mass emission rate will be calculated using the equation shown below (Ref: SCAQMD Method 25.3).

$$E = P \times flow \times K \times Mol.Wt$$

Where:

E = TNMOC emissions rate (lb/hr)

$flow$ = Average stack flow rate, dscfm

K = Constant = 1.583×10^{-7} for 60°F

$Mol.Wt.$ = Molecular weight for TNMOC = 16.04

P = Average TNMOC concentration in stack (EPA BAF corrected), dry ppmv

4.1.3 SCAQMD Method 10.1 – Carbon Monoxide and Carbon Dioxide by Gas Chromatography/Non-Dispersive Infrared Detector (GC/NDIR), Oxygen by Gas Chromatography/Thermal Conductivity Detector (GC/TCD)

The SCAQMD Rule 1110.2 Standard Protocol requires that the Method 25.3 canister samples be analyzed for O₂, CO₂, and CO by District Method 10.1. The test report shall include a comparison of these results with those obtained using Method 100.1.

The non-condensable gaseous fraction collected in a summa canister by Method 25.3 can be further analyzed for CO, CO₂, and O₂. CO and CO₂ are fractioned on a chromatographic column where CO elution is followed by CO₂. Low-level CO is converted into CO₂ and measured by non-dispersive infrared (NDIR) technology. Low-level CO (0-50 ppm) is converted into CO₂ and then CO₂ is reduced to methane and measured by flame ionization detector (FID). Oxygen is measured by a gas chromatograph using a thermal conductivity detector (GC/TCD).

4.2 Method 19 Flow Calculations

Mesa Water may elect to calculate the volumetric flow rate, dry standard volume flow rate (DSCFM) by F-Factor calculation using the fuel flow rate (scfm) and natural gas gross calorific value. Oxygen based F-Factor (F_d) is used in the calculation using the equation shown below.

$$Flow (dscfm) = SCFM \times F - Factor \times \frac{GCV}{10^6} \times \frac{(20.9)}{(20.9 - StackO_2)}$$

Where:

$DSCFM$ = Dry standard cubic feet per minute

$SCFM$ = Fuel flow, standard cubic feet per minute

$F-Factor$ = 8710 DSCF/MMBtu (oxygen based)

GCV = Gross calorific value = 1050 Btu/scf based upon higher heating value (HHV)

$Stack O_2$ = Stack oxygen

5.0 QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

5.1 Sampling Protocol

Sampling will be organized in a manner that facilitates sample management, analytical performance management, and data management. Personnel will be assigned specific tasks to ensure implementation of the QAQC program.

The sample analyst will perform the analyses and initial data review. Each analyst must check and initial their work, making certain that it is complete, determining that instrumentation has been properly calibrated, and ensuring that the analysis has been performed within the QAQC limits.

The data submitted by the analyst will be evaluated by first assessing the validity of the analytical method chosen for the analysis. After data verification, the report will be prepared following the guidelines specified in each method, the calculations checked, the data assembled and signed, and the report completed.

5.2 Equipment Maintenance

All major pieces of equipment have maintenance logs to document maintenance activities. Table 5-1 lists routine maintenance activities that are performed on source testing equipment.

Table 5-1: Test Equipment Maintenance Schedule

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pump	1. Absence of leaks	Every 500 hours of operation or 6 months, whichever is less	1. Visual inspection
	2. Ability to draw within reported specifications		
Flow Meter	1. Free mechanical movement	Every 500 hours of operation or 5 months, whichever is less	1. Visual inspection
	2. Absence of malfunction		2. Clean
			3. Calibrate
Sampling Instrument	1. Absence of malfunction 2. Proper response to zero, span gas	As recommended by manufacturer	As recommended by manufacturer
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters
			2. Change gas dryer
			3. Leak check
			4. Check for system contamination
Sampling Line	Sampling degradation after each test less than 1% of test series		Flush with solvent. Blow air through line until dry.

5.3 Equipment Calibration

The S-type pitot tubes are calibrated initially upon purchase and then semiannually. Visual inspections/measurements are taken prior to each use to ensure accidental damage has not occurred. This check is documented on the calibration forms. Measurement is performed using a micrometer and compass.

Each temperature sensor is marked and identified. This is done by marking each thermocouple end-connector with a number. This sensor is calibrated as a unit with the control box potentiometer

and associated lead wire as an identified unit. Calibrations are performed initially and annually at multiple three points over the range of expected temperatures for that particular thermocouple. A non-multiple three-point check is performed bimonthly thereafter. As an alternative to the three baths, an oyster calibrator thermometer is used as a temperature reference source.

The field barometer is adjusted initially and semiannually to within 0.1 inches of Hg of the atmospheric pressure as reported by John Wayne Airport. There is no correction between John Wayne Airport and the test location. The field dry gas test meter is calibrated against a reference dry gas test meter before its initial use and semiannually thereafter.

The dry gas meter orifice is calibrated before its initial use and then annually. This calibration is performed during the calibration of the dry gas test meter. The unit is checked in the field after every series of tests using a field gas meter check procedure.

Analytical balances are internally calibrated prior to use following the manufacturer's instructions. The balances are further checked using Class S-1 analytical weights prior to daily usage. Field top loading balances are also internally calibrated prior to use and checked with a field analytical weight prior to usage.

5.4 Data Validation

The data presented in final reports are reviewed three times. First, the analyst reviews and certifies that the raw data comply with technical controls, documentation requirements, and standard group procedures. Second, the Principal Chemist reviews and certifies that data packages comply with specifications for sample holding conditions, chain of custody, data documentation, and the final report is free of transcription errors. Third, a quality assurance review is performed by other senior personnel. This review thoroughly examines the entire completed data report. The report is signed off and sent out. All raw laboratory data and final reports are stored for 5 years.

6.0 REPORTING AND DATA REDUCTION

6.1 Test Report Format

The source testing report format consists of the following:

- Cover Page;
- Table of Contents;
- Executive Summary;
- Introduction;
- Equipment and Process Description;
- Sampling and Analytical Procedures;
- Test Results and Critique;
- QAQC Plan; and
- Appendix Data (CEM Results, Source Test Results, Preliminary Data and Calculation Sheets, Laboratory Data, and QAQC Data).

The Test Results and Critique section will include applicable rules, permit conditions, and the comparison source test data computed to satisfy permit requirements. This section will also include a summary of the test events and a detailed account of any problems encountered during the testing. A brief equipment and process description will be included in the final report, indicating equipment operating parameters during the testing. A simple schematic of the process will show all sampling locations, including upstream and downstream disturbances.

All sampling and analytical procedures will be described, specifically detailing all aspects of sampling and analysis. Diagrams of test equipment will be shown.

The appendix to the final report will include complete raw field data, including production data indicative of the testing interval, lab analysis, and test results. All calculations will be shown. The appendix will also contain current calibration data for all applicable equipment and calibration gases used for the testing.

6.2 Data Reduction

Audited spreadsheets will be used to calculate all source test results. The final report will include exhaust concentration and emission rates of TNMOC, NO_x, CO, and all other required test parameters. Emission rates of these compounds will be reported in units of concentration, ppm @ 15% O₂, grams per BHP-hour, and in pounds per hour as applicable. The engine load, RPM, and fuel consumption will also be included in the final report.

7.0 SOURCE TESTING TEAM AND SCHEDULE

7.1 Source Testing Organization

A qualified Project Coordinator and a Field Technician will be selected to carry out the source testing according to the approved source testing protocol.

7.2 Test Preparations

7.2.1 Services Provided by Facility

The facility will provide a source of 120-volt, 15-amp power to the sampling equipment and to the mobile laboratory. The equipment used will require four separate circuits. A designated parking area shall be provided for the parking of the source testing company's mobile laboratory and continuous emissions monitoring vehicle. This designated area will ideally be located within 100 feet of the exhaust sampling location.

7.2.2 Access to Sampling Sites

The facility will provide safe access to the sampling locations. This may require the use of a man-lift or scaffolding to be provided by Mesa Water.

7.2.3 Sample Recovery Area

VOC samples are expected to be recovered in the mobile emissions monitoring van.

7.3 Test Personnel Responsibilities and Detailed Schedule

Source testing personnel are required to arrive at the facility on the test day to obtain any necessary safety training, view the sampling locations, set up the sampling equipment, conduct preliminary measurements, and warm up the CEMS instrumentation. Testing will commence and is expected to be completed on the same day. An additional day will be reserved in case of operational delays, mechanical issues, or issues with the tester's equipment reliability arise.

8.0 REFERENCES

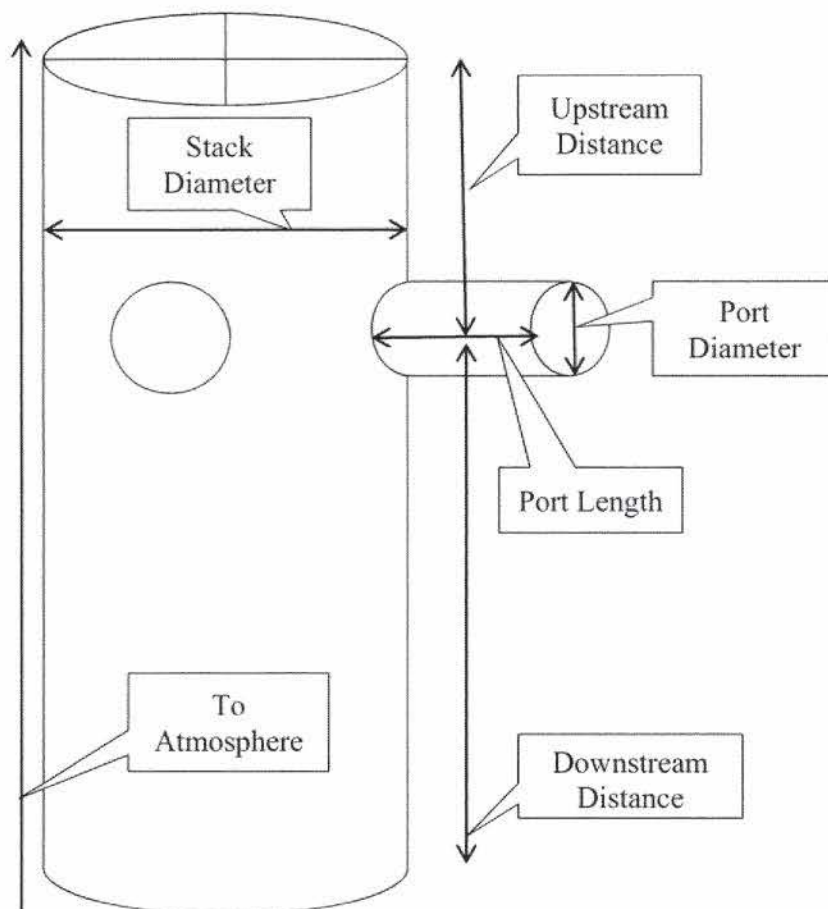
1. SCAQMD Rule 1110.2, amended September 7, 2012.
2. Source Test Protocol for the Measurement of Nitrogen Oxides, Volatile Organic Compounds, Carbon Monoxide, and Oxygen from Stationary Engines Subject to South Coast Air Quality Management District Rule 1110.2, dated November 21, 2008.
3. SCAQMD Method 100.1, dated March 1989.
4. SCAQMD Method 25.3, dated March 2000.
5. EPA Method 19, dated February 2000.
6. ALT-104 Approval of Alternative to Method 10 for Engines, dated October 2013.

APPENDIX A – SCAQMD PERMITS TO OPERATE

Permits to Operate – Facility ID: 94967, 95067, and 98380

Location	Facility ID	Equipment ID	App. No.	Permit No.
Well No. 5	94967	Pump No. 1	499283	G-3918
Reservoir I	95067	Pump No. 1	499284	R-G3979
		Pump No. 2	499285	R-G3980
		Pump No. 3	499286	R-G3981
Reservoir II	98380	Pump No. 1	499279	G-4002
		Pump No. 2	499280	G-4003
		Pump No. 3	499281	G-4004
		Pump No. 4	499282	G-4005

APPENDIX B – EXHAUST SAMPLE PORT LOCATIONS¹¹



¹¹ See Section 2.5, Tables 2-5, 2-6, and 2-7 for sample port configuration.

APPENDIX C – CONTINUOUS GAS MONITORING REQUIREMENTS

Attachment A – General Continuous Gas Monitoring Requirements

Attachment B – Sample Conditioning Requirements

Attachment C – NO₂ to NO Conversion Test Procedure

ATTACHMENT A – GENERAL CONTINUOUS GAS MONITORING REQUIREMENTS

CARB requires continuous gas monitoring equipment employing sample extraction and conditioning and electronic detection to be conducted strictly according to the EPA gaseous monitoring method, with the emphasis upon representativeness, documentation, and quality assurance. This includes, in part:

1. Gas analyzers must meet minimum acceptable standards for method of detection, sensitivity, noise, precision, linearity, and interference. Also, the gas sample extraction and conditioning equipment (probe, filter, pump, conditioner, connective plumbing, etc.) and data acquisition and logging equipment shall meet minimum acceptable specifications, as described in the QAQC portion of the gaseous sampling method.
2. It is recommended that the entire sampling system for continuous gas monitoring instruments should be leak checked before and after each test run by evacuating the system to a minimum of 20 inches of Hg vacuum and plugging for a period of 5 minutes. The resultant loss of vacuum cannot exceed 1 inch of Hg during this period.
3. Calibration of all analyzers must be accomplished at zero, mid-span (40-60% of full-scale range), and high-span (80-95% of full-scale range). The lowest practicable range should be selected for monitoring, so that the measured emission values are within 20-95% of the range. If a significant amount of the data are outside of this range, the data may be rejected, depending upon the application.
4. The calibration gases must be certified according to EPA Protocol Number 1 or certified to an analytical accuracy of $\pm 1\%$ and be NIST traceable (except cal gases used for system bias check), following EPA-600/R93/224, "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards," TABLE 2-2. Superblend or multi-component blend gas recertifications are based upon the individual component(s) with the shortest recertification date.
5. Field calibrations employing gas dilution systems (mass flow or critical orifice) must be performed in accordance with EPA Method 205, "Gas Dilution Verification Protocol." A five-point check is required.
6. A calibration error check and zero/span drift check must be performed before and after each test run. Calibration error must be less than $\pm 2\%$ of the range of measurement for zero, mid, and high-range calibration gases. Zero/span drift must be less than $\pm 3\%$ of the range of measurement.
7. A system bias check must be performed before and after each test run by alternately introducing cal gases to the entire sampling system, then to the gas analyzer(s), for comparison. The difference cannot exceed $\pm 5\%$ of the analyzer range.
8. Semi-annual analyzer certifications consisting of linearity plot, calibration curve, response time, and interference response must be furnished with the other calibrations to satisfy quality assurance documentation requirements.
9. NO_x measurement must be performed in the NO_x mode of the analyzer. An NO_2 to NO converter is required if NO_2 constitutes 5% or more of the total NO_x in the sample stream

- or the rule or permit condition requires "NO_x" monitoring. The NO₂ to NO converter must be at least 90% efficient (use the NO₂ to NO converter efficiency procedure). The converter should be high-temperature (650°C) stainless steel, if no NH₃ is present. If NH₃ is present in the sample stream, then a low-temperature (350°C) molybdenum catalyst must be used in the converter. This check must be done at the beginning of the test.
10. The connective tubing from the probe to the sample conditioner must be heated above the dew point and the dew point reported. The sample conditioner must be able to maintain a dew point temperature of 37°F or less.
 11. Data recorder resolution must be at least 0.5% of the range of measurement. A data point for each contaminant/diluent monitored must be recorded at least once/minute. Analog chart recorders must have a minimum 10-inch chart width, with 100 minor divisions.
 12. All facets of testing must be continuously recorded. This includes the three-point calibration, system bias, calibration error, and zero/span drift checks, which must precede and conclude each test run.
 13. All chart traces, or digital printouts, must be included in the final report and must be clearly identified as to:
 - location/source
 - operator initials
 - date/running times
 - actual test interval
 - contaminant/diluent
 - range changes
 - range of measurement
 - calibrations
 - cal gas concentration/cyl. no.
 - range of calibration
 14. When more than one gas trace is shown on a chart, the individual traces must be distinguishable by color coding or some other means (original charts may be submitted and returned following evaluation). If a gas measurement range has been "offset" from zero or zero has been "transposed" to the right side of the recorder chart, it must be clearly identified. This offset should not be more than five small divisions of the chart. This data must be corrected using the ratio of the offset.
 15. Gaseous measurements must be conducted a minimum of 60 continuous minutes at each load or specified condition, after the readings have stabilized.
 16. Sampling locations not meeting the minimum site selection standards for EPA Method 1 must be tested for absence of stratification. (A gaseous constituent concentration profile differing more than 10% between any two monitoring points within the same cross-sectional plane of a stack or duct indicates stratification.) If stratification is present and alternate approved site selection or modification is not possible, then special monitoring will be required.

ATTACHMENT B – SAMPLE CONDITIONING REQUIREMENTS

For gaseous sampling method tests, proper sample conditioning is essential for representative sampling. Sample conditioning includes removal of particulate matter and moisture present in the sample gas stream. The design of the sample conditioning system must be such that during the process of particulate and moisture removal, the pollutants of interest are not also removed from the gas stream. Method 100 requires that the tester select a system that will have a minimum “scrubbing” effect. In particular, NO₂ and SO₂ are more susceptible to scrubbing than, for example, NO or CO, because of their high solubility in water. Since 3A, 7E, and 10B are reference methods, it is required that a sample conditioning system cause only minimum loss of these pollutants.

The EPA recommends a gas sampling system that can be used universally¹² (i.e., under all testing conditions). The setup includes a heated ¼-inch stainless steel probe with a 50-80 micron size, sintered 316 stainless steel or ceramic filter at the tip, and a short (not more than 6 feet) heated Teflon line to the sample conditioning system. The temperature of the probe and the Teflon line should be maintained at about 250°F. The conditioning system consists of a pair of standard Greenburg-Smith impingers with the stems cut to about 1-inch length from the top, immersed in a bath containing water and dry ice pellets, and immediately followed by a thermo-electric cooler or permeation drier. The gas temperature at the outlet of the impinger shall be less than 60°F and the gas at the drier outlet shall be maintained at a dew point less than 37°F. If the drier cannot be directly connected to the impinger outlet, then a Teflon line heated to 10°F above the impinger outlet gas temperature can be used for connection. Another particulate filter (~5 microns) should be in the line right after the cooler/drier. All the temperatures should be measured and recorded, preferably on a strip chart recorder. If the moisture content of the exhaust gas is below 5% and the sample gas flow rate is less than 10 liters/minute, the impinger setup need not be used, as long as no moisture condensation occurs in the system and the conditioned sample is maintained at the required dew point.

PRECAUTIONS: Never allow the water in the impingers to accumulate more than ¼ of the impinger height. Don’t allow the water bath to become frozen around the impingers, or cracking of the glassware may result. Assure that the thermo-electric cooler/permeation drier has adequate design capacity. Follow a good maintenance schedule for the cooler/drier gas conditioning system.

Other systems may be used, upon Agency approval, emphasizing the requirements that water is removed immediately after separation from the gas stream and minimal water contact with the gas stream is assured.

¹² An example of a non-universally applicable water removal system is based on the refrigerated cooling coil principle. A refrigerated cooling coil system can scrub out a high percentage of water-soluble pollutants due to a comparatively long residence time and intimate contact between the sample gases and the water droplets collected on the inside of the coil. Consequently, it will show a high bias for the CEMS being tested if the sample gas contains a significant amount of NO₂ compared to NO_x or SO₂, and therefore it may not be suitable in all cases.

ATTACHMENT C – NO₂ TO NO CONVERSION TEST PROCEDURE

NO₂ TO NO CONVERSION TEST PROCEDURE

(Alternative to O₃ Titration Method – 40 CFR 50.1, Appendix F)

1. NO_x Analyzer Requirements

- a. Full span range 0-20 ppm or 0-25 ppm
- b. Equipped with NO and NO_x modes

2. Auditing Gas Requirements

- a. NO₂ in air (or N₂): Use NO₂ in air for a stainless steel converter.
- b. Concentration of NO₂: 15 to 18 ppm ± 0.5 ppm (*C₀*, ppm)
- c. Recertification: An audit gas should be recertified after 6 months.

3. Calibration Gas Requirements

- a. Concentration: NO (17 to 19 ppm) with less than 0.1 ppm NO₂ – high-span
NO (10 to 13 ppm) with less than 0.1 ppm NO₂ – mid-span
- b. Zero Gas: High purity N₂

4. Calibration of Analyzer

- a. Calibrate NO mode with the NO calibration gases.
- b. Calibrate NO_x mode with the same gases without any gain adjustment.
- b1. If the analyzer is equipped with two independent gain adjusting circuits, skip 4.b., then repeat 4.a. for the NO_x mode.

5. Conversion Efficiency (CE) Test

- a. Analyze the audit gas with NO mode. Read and standardize concentration. (*C₁*, ppm)
- b. Analyze the audit gas with NO_x mode. Read and standardize concentration. (*C₂*, ppm)

6. Calculation for Conversion Efficiency

$$\%CE = \frac{|C_2 - C_1|}{C_0} \times 100$$

7. Criteria for Acceptability of CE

- a. % CE must be larger than 90%.
- b. *C₁* must be less than 5% of total NO_x (NO + NO₂) in the NO₂ audit gas (Section 2b).

NOTE: NO₂ audit gas concentration of higher value than what is specified in *Section 2* may be required where NO₂ present in the exhaust gas being measured is greater than 30 ppm. Select the NO₂ gas within 10% of the expected NO₂ concentration in the exhaust.

**APPENDIX D – ALT-104 APPROVAL OF ALTERNATIVE TO METHOD 10
FOR ENGINES**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

Almega
ENVIRONMENTAL

SEP 23 2013

Ms. Natasha Meskal
Ecotek
17610 Beach Blvd.
Suite 47
Huntington Beach, CA 92647

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Dear Ms. Meskal:

This letter is in response to your August 3, 2013, request to use South Coast Air Quality Management District (SCAQMD) Method 100.1 as an alternative to EPA Method 10 in determining carbon monoxide (CO) emissions from an internal combustion engine at Well #5 in the Mesa Consolidated Water District. The engine is subject to Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, which requires that CO emissions be measured by Method 10. This engine is also subject to SCAQMD Rule 1110.2, which requires CO measurement using Method 100.1. You ask that we allow the use of Method 100.1 to measure CO under Subpart ZZZZ in place of Method 10 in order to preclude duplicate testing with very similar methods to satisfy both regulations. You also ask that Method 100.1 be approved on a broadly applicable basis for federally-regulated engines, since all engines under SCAQMD jurisdiction are already subject to or will become subject to Subpart ZZZZ in the near future.

Method 100.1 is very similar to Method 10 in format, equipment, and performance requirements. The minor differences in the two methods make Method 100.1 the more stringent of the two. For these reasons, we believe Method 100.1 is an acceptable alternative to Method 10. Therefore, we approve the use of SCAQMD Method 100.1 in place of Method 10 when measuring CO from federally-regulated engines. Since this alternative is applicable to other federally-regulated engines, we will be posting this letter on our website at <http://www.epa.gov/ttn/emc/approalt.html> for use by other interested parties.

If you have questions or would like to discuss the matter further, please call Foston Curtis at (919) 541-1063, or email him at curtis.foston@epa.gov.

Sincerely,

Ron R. Segall for CBO

Conniesue B. Oldham, Ph.D., Group Leader
Measurement Technology Group

cc: Foston Curtis (curtis.foston@epa.gov)
Steve Bancroft, Mesa Consolidated Water District (steveb@mesawater.org)
Roger Demers, Mesa Consolidated Water District (rdemers@mesawater.org)
Melanie King (king.melanie@epa.gov)

ORIGIN ID:TWHA (949) 574-1000
CARRIE FESIL
MESA WATER DISTRICT
1965 PLACENTIA AVENUE
COSTA MESA CA 92627
UNITED STATES US

SHIP DATE: 12NOV15
ACTWGT: 1.00 LB
CAD: 105304789/NET3670

BILL SENDER

TO **CHER SNYDER**

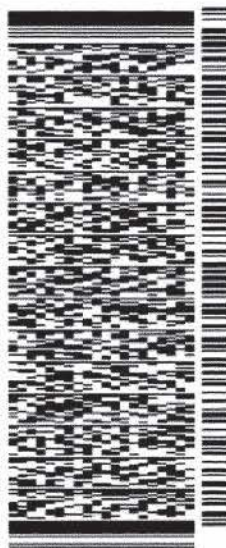
**SOUTH COAST AQMD
21865 E. COPLEY DRIVE**

DIAMOND BAR CA 91765

(909) 396-2000
INV / PO

REF

DEPT



J153015001001ur

FRI - 13 NOV 3:00P

STANDARD OVERNIGHT

DSR

91765

CA-US

LAX

TRK#
0201 **7749 6546 2127**

92 POCA



539.02/3F56/3100

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Engel, Elyse/SJC

From: Lisa Ramos <lramos1@aqmd.gov>
Sent: Thursday, February 11, 2016 12:12 PM
To: Dunavent, Andrew/SDO
Cc: OB PR Support NA Docs
Subject: Public Records Request #84582,
Attachments: ENG - Application Folder - 10/9/2012 - Fac ID: 166073 - Appl# 533636 - Permit# G20917 - Name: BETA OFFSHORE -.pdf; ENG - Application Folder - 10/9/2012 - Fac ID: 166073 - Appl# 533635 - Permit# G20915 - Name: BETA OFFSHORE -.pdf; ENG - Application Folder - 10/9/2012 - Fac ID: 166073 - Appl# 533634 - Permit# G20914 - Name: BETA OFFSHORE -.pdf; ENG - Application Folder - 10/9/2012 - Fac ID: 166073 - Appl# 533631 - Permit# G20910 - Name: BETA OFFSHORE -.pdf; - PR - PR Review Docs - 10/9/2012 - 84582 - - 533632 APPLICATION - - - ANDREW DUNAVENT.pdf; - PR - PR Review Docs - 10/9/2012 - 84582 - - 533630 APPLICATION - - - ANDREW DUNAVENT.pdf; - PR - PR Review Docs - 10/9/2012 - 84582 - - 533629 APPLICATION - - - ANDREW DUNAVENT.pdf

Andrew Dunavent

As per our conversation I have attached the documents that I have available to send you at this time. We are still waiting to see if any other documents get returned on our routing.

Lisa Ramos
South Coast A.Q.M.D
Public Records Unit
909.396.3211

ROUTING RECORD

DATE	FROM	TO	ACTION
MAR 14 2012	RBC	MV	c/c
10/2/12	HW	RBC	PG/PO
OCT 9 2012	RBC	P/S	620910

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

D89

Lead appl. 533629

w/ HW 533632

533635

533636

Reclaim /TV appl. 531454

w/ HW's 533630

533634

APPL # 533631
I.D. # 166073

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
~~OIL AND GAS PRODUCTION~~
105

Date: 03/08/12

BETA OFFSHORE
OIL AND GAS PRODUCTION (P4) 6 ENGL/DE IN 166073
AP 533631



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (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: <input checked="" type="radio"/> Fixed Location <input type="radio"/> Various Location (For equipment operated at various locations, provide address of initial site.)	
OCS Lease Parcels P300/P301 (Federal Waters)	
Street Address	
City Marina Robertson , CA	Zip
Contact Name HSE Manager	Title
Phone # (562) 628-1526	Fax # (562) 628-1536
E-Mail: mrobertson@betaoffshore.com	

Section C - Permit Mailing Address

5. Permit and Correspondence Information: <input type="checkbox"/> Check here if same as equipment location address	
111 West Ocean Boulevard, Suite 1240	
Address	
City Long Beach , CA	State Zip 90802-4645
Contact Name Marina Robertson	Title HSE Manager
Phone # (562) 628-1526	Fax # (562) 628-1536
E-Mail: mrobertson@betaoffshore.com	

Section D - Application Type

6. The Facility Is: <input type="radio"/> Not In RECLAIM or Title V <input type="radio"/> In RECLAIM <input type="radio"/> In Title V <input checked="" type="radio"/> In RECLAIM & Title V Programs	
7. Reason for Submitting Application (Select only ONE):	
7a. New Equipment or Process Application: <input type="radio"/> New Construction (Permit to Construct) <input type="radio"/> Equipment On-Site But Not Constructed or Operational <input type="radio"/> Equipment Operating Without A Permit * <input type="radio"/> Compliance Plan <input type="radio"/> Registration/Certification <input type="radio"/> Streamlined Standard Permit	7c. Equipment or Process with an Existing/Previous Application or Permit: <input type="radio"/> Administrative Change <input type="radio"/> Alteration/Modification <input type="radio"/> Alteration/Modification without Prior Approval * <input checked="" type="radio"/> Change of Condition (20) <input type="radio"/> Change of Condition without Prior Approval * <input type="radio"/> Change of Location <input type="radio"/> Change of Location without Prior Approval * <input type="radio"/> Equipment Operating with an Expired/Inactive Permit * <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Existing or Previous Permit/Application If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number: 517839 D89 G19816</div>
7b. Facility Permits: <input type="radio"/> Title V Application or Amendment (Also submit Form 500-A1) <input type="radio"/> RECLAIM Facility Permit Amendment	

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

8a. Estimated Start Date of Construction (mm/dd/yyyy):	8b. Estimated End Date of Construction (mm/dd/yyyy):	8c. Estimated Start Date of Operation (mm/dd/yyyy):
9. Description of Equipment or Reason for Compliance Plan (list applicable rule): Change of condition - D89(Eureka East) crane engine to limit fuel use in addition to operating hours for R1110.2 "low-use" exemption		10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process) 4
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) <input checked="" type="radio"/> No <input type="radio"/> Yes		12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? <input checked="" type="radio"/> No <input type="radio"/> Yes If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location? Oil and Gas Production	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? <input checked="" type="radio"/> No <input type="radio"/> Yes	16. Are there any schools (K-12) within 1000 feet of the facility property line? <input checked="" type="radio"/> No <input type="radio"/> 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: Executive VP and COO	19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) <input type="radio"/> No <input checked="" type="radio"/> Yes
20. Print Name: sliles@betaoffshore.com	21. Date: 12-29-11	22. Do you claim confidentiality of data? (If Yes, see instructions.) <input checked="" type="radio"/> No <input type="radio"/> Yes

23. Check List: <input checked="" type="checkbox"/> Authorized Signature/Date <input checked="" type="checkbox"/> Form 400-CEQA <input type="checkbox"/> Supplemental Form(s) (ie., Form 400-E-xx) <input checked="" type="checkbox"/> Fees Enclosed								
AQMD USE ONLY	APPLICATION TRACKING # 533631	CHECK # 5098	AMOUNT RECEIVED \$1,935.46	PAYMENT TRACKING #	VALIDATION 1/5/12 AC			
DATE 1/24/12	APP DATE	APP REJ	CLASS I	BASIC CONTROL	EQUIPMENT CATEGORY CODE 040901	TEAM W50	ENGINEER	REASON/ACTION TAKEN

533631 47 28378 100902

4/8

S.C.A.O.M.
ENGINEERING

S.C.A.O.M.
ENGINEERING

12 JAN -5 AM 31

12 MAR -8 P3:08

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

FEE DATA - SUMMARY SHEET

Application No : 533631

IRS/SS No:

Previous Application No: 517839

Previous Permit No: G19816

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type : BASIC

Fee Charged by: B-CAT

B-CAT NO. : 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No : 533629

Identical Permit Unit: ☒

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$526.09
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$526.09
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 09/28/2012

REVIEWED BY: _____

DATE: OCT 9, 2012

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



AQMD

FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11A, ELLEN CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1063-7008, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533636	D91		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 7: ICE: PEDESTAL CRANE - PLATFORM EUREKA					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-030-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1067-8503, EUREKA WEST CRANE, 195 BHP A/N: 533630	D88		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-010-A2, EUREKA EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533631	D89		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits

- (2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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

Application No: 533631
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 517839, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.01 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: 5.1 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:14:15 PM

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 : 533631

Equipment B-Cat : 040901

Estimated Completion Date : 09/28/12

Equipment C-Cat :

Equipment Type : Basic

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

Emissions

Emittants	R1 LB/HR	R2 LB/HR
CO	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.01

Applicable Rules

1110.2 07/09/2010 Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02 Date: 09/28/12 Supervisor's Name : _____ Review Date : ____ / ____ / ____

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

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EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

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Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 <u>533629</u>	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 <u>533636</u>	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 <u>533630</u>	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

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CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System-8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year~~ or the fuel usage to no more than 1×10^9 BTUs, in any one year.

Meeting either criteria shall ~~The purpose(s) of this condition is to~~ exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

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The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment. **or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.**

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1 x 10⁹ Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

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	M. Vibal	O

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136 10⁹ BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1 x 10⁹ BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NOx		PM ₁₀		VOC, R1		VOC, R2		SOx	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

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Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

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The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

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CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:

- 1) Change of Condition for Seven Internal Combustion Engines**
 - 2) Amend Title V (and RECLAIM) Facility Permit**
- Beta Offshore - Beta OCS Platforms Facility (ID 166073)**

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

*“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year **or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.**”*

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor’s office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine’s fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

See master file 533629

ROUTING RECORD			
DATE	FROM	TO	ACTION
MAR 14 2012	ABC	MV	c/c
10/2/12	WV	Rac	PC/PD
OCT 9 2012	ABC	AS	620914

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

w/ AN'S 533630
533629
I { 533631
533632
D93
I { 533635
533636

Reclaim / TV appl. 53:1454

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
~~OIL AND GAS PRODUCTION~~

ICE

APPL # 533634
I.D. # 168073

Date: 03/08/12

BETA OFFSHORE
~~ALL OIL AND GAS PRODUCTION OCS LEASE PARCELS~~

AP 533634



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (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 Address4. 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 Boulevard, Suite 1240

Address

Long Beach, CA 90802-4645

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 Type6. 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
☐ 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 *

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

516037

512367

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

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

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

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

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Change of condition - D93 (Elly West) crane engine to limit fuel
use in addition to operating hours for R1110.2 "low-use" exemption10. For identical equipment, how many additional
applications are being submitted with this application?
(Form 400-A required for each equipment / process)

4

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 ☐ Yes12. 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?

Oil and Gas Production

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

21111

15. Are there other facilities in the SCAQMD
jurisdiction operated by the same operator? ☒ No ☐ Yes16. 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:

18. Title of Responsible Official:

Executive VP and COO

19. I wish to review the permit prior to issuance.
(This may cause a delay in the
application process.) ☐ No ☒ Yes20. Print Name:
sliles@betaoffshore.com

21. Date: 12-29-11

22. Do you claim confidentiality of
data? (If Yes, see instructions.) ☒ No ☐ Yes23. 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
	533634	5898	\$ 4,935.46		1/5/12 AR
DATE	APP REJ	DATE	APP REJ	CLASS	BASIC CONTROL
12/29/11				040901	
EQUIPMENT CATEGORY CODE		TEAM	ENGINEER	REASON/ACTION TAKEN	
		0	nvu		

© South Coast Air Quality Management District, Form 400-A (2009.04)

533634

07

100902
92348

8/8 aw

S.C.A.Q.M.D.
ENGINEERING

S.C.A.Q.M.D.
ENGINEERING

12 JAN -5 A11:31

12 MAR -8 P3:09

SCAQ PERMIT PROCESSING SYSTEM (PPS)
FEE DATA - SUMMARY SHEET

Application No : 533634
Previous Application No: 516037

IRS/SS No:
Previous Permit No: G12367

Company Name : BETA OFFSHORE
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: 4/7/2012
Fee Charged by: B-CAT
Fee Schedule: B
Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (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:	\$1,052.18
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$1,052.18
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 10/01/2012

REVIEWED BY:

DATE: OCT 9 2012

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

AEIS DATA SHEET

Company Name : BETA OFFSHORE

Facility ID : 166073

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

Application Number : 533634

Equipment B-Cat : 040901

Estimated Completion Date : 10/01/12

Equipment C-Cat :

Equipment Type : Basic

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

Emissions

Emittants	R1 LB/HR	R2 LB/HR
CO	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.02

Applicable Rules

1110.2

07/09/2010

Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02

Date: 10/01/12

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: 533634
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 516037, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:54:50 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-020-A2, EUREKA CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533632	D90		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: PEDESTAL CRANE - PLATFORM ELLY					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01A, ELLY EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533635	D92		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY WEST CRANE, WITH OXIDATION CATALYST, CLEAN EMISSIONS PROD, MODEL 4-400, 195 BHP A/N: 533634	D93		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 10: TURBINES: PUMP MECHANICAL POWER - PLATFORM ELLY					

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
- (2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements
- ** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 1
	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 2
	App. No. 533629-32, -34, -35, -36	Date Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 <u>533629</u>	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 <u>533636</u>	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 <u>533630</u>	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 3
	App. No. 533629-32, -34, -35, -36	Date Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year~~ or the fuel usage to no more than 1×10^9 BTUs, in any one year.

Meeting either criteria shall ~~The purpose(s) of this condition is to~~ exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
	9	4
	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by:	Operation Team
	M. Vibal	O

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a ~~a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.~~ **or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.**

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1 x 10⁹ Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 5
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	Evaluated by: M. Vibal	Operation Team O

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136 10⁹ BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1 x 10⁹ BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NOx		PM ₁₀		VOC, R1		VOC, R2		SOx	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

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Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

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	M. Vibal	O

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

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CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.

D93 (533634)

NSR DATA SUMMARY SHEET

Application No: 485767 ✓
Application Type: Change of Conditions
Application Status: PROCESSING
Previous Apps, Dev, Permit #: 503608, 0 - , NONE

Company Name: PACIFIC ENERGY RESOURCES, LTD.
Company ID: 151178
Address: OCS LEASE PARCELS, P300/P301, HUNTINGTON BE
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 - ,
Estimated Completion Date: 10-15-2008
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 lbs/yr
District Exemption: None

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

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

Processed By: vlee1 5/27/2010 9:37:24 AM



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) Change of Condition for Seven Internal Combustion Engines
2) Amend Title V (and RECLAIM) Facility Permit
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19

Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

*“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year **or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.**”*

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

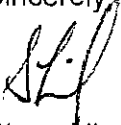
The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

ROUTING RECORD

DATE	FROM	TO	ACTION
MAR 14 2012	ROC	MU	C/c
10/2/12	MW	Rec	Per Po
OCT 9 2012	ROC	P/S	620915

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

Lead appl . 533629

identical to 533631

533632

533636

D92

Reclaim / TV 533454

w/ AN 533630

533634

APPL # 533635

I.D. # 166073

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
OIL AND GAS PRODUCTION

ICE

Date: 03/08/12

BETA OFFSHORE
OIL AND GAS PRODUCTION OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
OIL AND GAS PRODUCTION
AP 533635
I.D. # 166073



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (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 Address4. 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 Boulevard, Suite 1240

Address

Long Beach, CA 90802-4645

City _____, CA _____ 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 Type6. 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:

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

- ☐ 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

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

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

517842

G19893

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

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

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

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

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Change of condition - D92 (Elly East) crane engine to limit fuel use
in addition to operating hours for R1110.2 "low-use" exemption10. For identical equipment, how many additional
applications are being submitted with this application?
(Form 400-A required for each equipment / process) 411. 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 ☐ Yes12. Has a Notice of Violation (NOV) or a Notice to
Comply (NC) been issued for this equipment? ☒ No ☐ Yes
If Yes, provide NOV/NC#:**Section E - Facility Business Information**

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

Oil and Gas Production

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 ☐ Yes16. 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:

18. Title of Responsible Official:

Executive 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:

sliles@betaoffshore.com

21. Date:

12-29-11

22. Do you claim confidentiality of
data? (If Yes, see instructions.) ☒ No ☐ Yes23. Check List: ☒ Authorized Signature/Date☒ Form 400-CEQA☐ Supplemental Form(s) (ie., Form 400-E-xx)☒ Fees EnclosedAQMD
USE ONLYAPPLICATION TRACKING #
533635CHECK #
5898AMOUNT RECEIVED
\$6,935.46

PAYMENT TRACKING #

VALIDATION
1/5/12

DATE

APP
REJ

DATE

APP
REJ

CLASS

BASIC
CONTROLEQUIPMENT CATEGORY CODE
04090

TEAM

ENGINEER
HVV2

REASON/ACTION TAKEN

533635

a1

99357

100402

7/8

\$526.09 3/8 1/2

S.C.A.O.M.E.
ENGINEERING

12 JAN -5 A11:31

S.C.A.O.M.E.
ENGINEERING
12 MAR -8 P3:09

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

Application No : 533635

IRS/SS No:

Previous Application No: 517842

Previous Permit No: G19813

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type : BASIC

Fee Charged by: B-CAT

B-CAT NO. : 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No : 533629

Identical Permit Unit: ☒

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$526.09
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$526.09
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 09/28/2012

REVIEWED BY: _____

DATE: _____

* 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 : 533635

Equipment B-Cat : 040901

Estimated Completion Date : 09/28/12

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	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.01

Applicable Rules

1110.2

07/09/2010

Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02

Date: 09/28/12

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: 533635
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 517842, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.01 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: 5.1 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:38:22 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-020-A2, EUREKA CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533632	D90		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: PEDESTAL CRANE - PLATFORM ELLY					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01A, ELLY EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533635	D92		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY WEST CRANE, WITH OXIDATION CATALYST, CLEAN EMISSIONS PROD, MODEL 4-400, 195 BHP A/N: 533634	D93		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 10: TURBINES: PUMP MECHANICAL POWER - PLATFORM ELLY					

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
(2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements
- ** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 1
	App. No. 533629-32, -34, -35, -36	Date Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS				No. of Pages 9	Page No. 2
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				Evaluated by: M. Vibal	Operation Team O

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 533629	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 533636	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 533630	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 3
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	Evaluated by: M. Vibal	Operation Team O

CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year.~~ **or the fuel usage to no more than 1×10^9 BTUs, in any one year.**

Meeting either criteria shall ~~The purpose(s) of this condition is to~~ exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 4
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	Evaluated by: M. Vibal	Operation Team O

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment ~~or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.~~

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1×10^9 Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 5
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	Evaluated by: M. Vibal	Operation Team O

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
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	App. No.	Date
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	Evaluated by:	Operation Team
	M. Vibal	O

Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136 10⁹ BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1 x 10⁹ BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NO _x		PM ₁₀		VOC, R1		VOC, R2		SO _x	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 7
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	Evaluated by: M. Vibal	Operation Team O

Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
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	Evaluated by:	Operation Team
	M. Vibal	O

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 9
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	Evaluated by: M. Vibal	Operation Team O

CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) Change of Condition for Seven Internal Combustion Engines
2) Amend Title V (and RECLAIM) Facility Permit
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

*“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year **or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.**”*

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

master file 533629

ROUTING RECORD			
DATE	FROM	TO	ACTION
MAR 14 2012	ALC	MV	CLC
10/2/12	WV	PLW	PC/PO
OCT 9 2012	ALC	P/S	620912

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

D9.1

Lead appl. 533629

w/ AN's 533631

533632

533635

Reclaim /TV appl. 533634

w/ AN's 533630

533634

BETA OFFSHORE

AP 533636

APPL # 533636

I.D. # 166073

BETA OFFSHORE

OCS LEASE PARCELS P300/P301

HUNTINGTON BEACH

~~OIL AND GAS PRODUCTION~~

ICE

Date: 03/08/12



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
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 _____
Contact Name **Marina Robertson** Title **HSE Manager**
Phone # **(562) 628-1526** Ext. _____ Fax # **(562) 628-1536**
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 Boulevard, Suite 1240
Address _____
City **Long Beach**, CA **90802-4645**
State _____ Zip _____
Contact Name **Marina Robertson** Title **HSE Manager**
Phone # **(562) 628-1526** Ext. _____ Fax # **(562) 628-1536**
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: <input type="radio"/> New Construction (Permit to Construct) <input type="radio"/> Equipment On-Site But Not Constructed or Operational <input type="radio"/> Equipment Operating Without A Permit * <input type="radio"/> Compliance Plan <input type="radio"/> Registration/Certification <input type="radio"/> Streamlined Standard Permit	7c. Equipment or Process with an Existing/Previous Application or Permit: <input type="radio"/> Administrative Change <input type="radio"/> Alteration/Modification <input type="radio"/> Alteration/Modification without Prior Approval * <input checked="" type="radio"/> Change of Condition (D) <input type="radio"/> Change of Condition without Prior Approval * <input type="radio"/> Change of Location <input type="radio"/> Change of Location without Prior Approval * <input type="radio"/> Equipment Operating with an Expired/Inactive Permit *
---	--

Existing or Previous Permit/Application

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

517841 D91
G1984

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

7b. Facility Permits:
☐ Title V Application or Amendment (Also submit Form 500-A1)
☐ RECLAIM Facility Permit Amendment

8a. Estimated Start Date of Construction (mm/dd/yyyy): _____ 8b. Estimated End Date of Construction (mm/dd/yyyy): _____ 8c. Estimated Start Date of Operation (mm/dd/yyyy): _____

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Change of condition - D91 (Ellen Center) crane engine to limit fuel use in addition to operating hours for R1110.2 "low-use" exemption

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? ☒ No ☐ Yes
If Yes, provide NOV/NC#: _____

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Oil and Gas Production

14. What is your business primary NAICS Code? (North American Industrial Classification System) **21111**

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: 	18. Title of Responsible Official: Executive VP and COO	19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) <input type="radio"/> No <input checked="" type="radio"/> Yes
20. Print Name: sliles@betaoffshore.com	21. Date: 12-29-11	22. Do you claim confidentiality of data? (If Yes, see instructions.) <input checked="" type="radio"/> No <input type="radio"/> Yes

23. Check List: <input checked="" type="checkbox"/> Authorized Signature/Date <input checked="" type="checkbox"/> Form 400-CEQA <input type="checkbox"/> Supplemental Form(s) (ie., Form 400-E-xx) <input checked="" type="checkbox"/> Fees Enclosed							
AQMD USE ONLY	APPLICATION TRACKING # 531328	CHECK # 5898	AMOUNT RECEIVED \$1,935.46	PAYMENT TRACKING #	VALIDATION 1/5/12		
DATE 1/24/2012	APP DATE	APP DATE	CLASS I	BASIC CONTROL	EQUIPMENT CATEGORY CODE 640901	TEAM W02	REASON/ACTION TAKEN

© South Coast Air Quality Management District, Form 400-A (2009.04)

533636 cu 29348 100402 4/8

S.C.A.G.M.I.
ENGINEERING

S.C.A.G.M.I.
ENGINEERING

12 JAN -5 AM 31

12 MAR -8 P3:09

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

FEE DATA - SUMMARY SHEET

Application No : 533636

IRS/SS No:

Previous Application No: 517841

Previous Permit No: G19814

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type : BASIC

Fee Charged by: B-CAT

B-CAT NO. : 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No : 533629

Identical Permit Unit: ☒

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$526.09
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$526.09
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 10/01/2012

REVIEWED BY: 

DATE: OCT 9 2012

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

Facility ID : 166073

Application Number : 533636
Estimated Completion Date : 09/28/12
Equipment Type : Basic
Equipment Description : I C E (50-500 HP) N-EM STAT DIESEL

Equipment B-Cat : 040901

Equipment C-Cat :

Emittants	Emissions	
	R1 LB/HR	R2 LB/HR
CO	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.01

Applicable Rules

1110.2 07/09/2010 Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02 Date: 09/28/12 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: 533636
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 517841, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.01 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: 5.1 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:41:42 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11A, ELLEN CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1063-7008, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533636	D91		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 7: ICE: PEDESTAL CRANE - PLATFORM EUREKA					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-030-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1067-8503, EUREKA WEST CRANE, 195 BHP A/N: 533630	D88		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-010-A2, EUREKA EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533631	D89		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits

- (2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

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EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

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Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 533629	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 533636	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 533630	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

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CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year.~~ or the fuel usage to no more than 1×10^9 BTUs, in any one year.

Meeting either criteria shall ~~The purpose(s) of this condition is to~~ exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

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The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment, **or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.**

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1×10^9 Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

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	M. Vibal	O

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136×10^9 BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1×10^9 BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NO _x		PM ₁₀		VOC, R1		VOC, R2		SO _x	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

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Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

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The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

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CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) **Change of Condition for Seven Internal Combustion Engines**
2) **Amend Title V (and RECLAIM) Facility Permit**
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

*“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year **or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.**”*

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

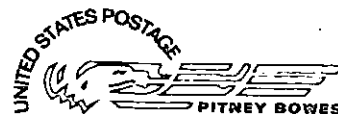
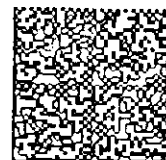
cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

Beta
OFFSHORE

111 W. Ocean Blvd., Suite 1240
Long Beach, CA 90802



7009 1410 0000 9130 6104



02 1P \$007.43⁰⁰
0003072573 JAN 04 2012
MAILED FROM ZIP CODE 90802

Permit Services
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

From: (562) 628-1526
 Marina Robertson
 Beta Offshore
 111 W. Ocean Blvd. Suite 1240
 Long Beach, CA 90802

Origin ID: LGBA



Ship Date: 07MAR12
 ActWgt: 1.0 LB
 CAD: 7415976/INET3250

Delivery Address Bar Code



SHIP TO: (909) 396-2000

BILL SENDER

Permit Services
 South Coast Air Quality Management
 21865 COPLEY DR

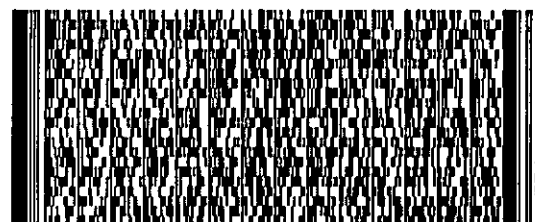
DIAMOND BAR, CA 91765

Ref #
 Invoice #
 PO #
 Dept #

THU - 08 MAR A1
 PRIORITY OVERNIGHT

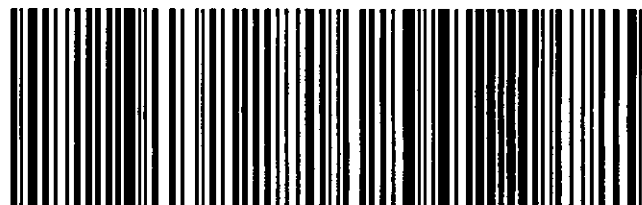
TRK# 7981 4423 2836

0201



WZ RBFA

91765
 CA-US
 LAX



512G18106/A278

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Lead application / master file

ROUTING RECORD			
DATE	FROM	TO	ACTION
MAR 14 2012	RG	MV	o/c
10/2/12	MV	RG	P/PO
OCT 9 2012	RG	P/S	G20908

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

D 87

Lead application

Identical to :

533631

533632

533635

533636

Reclaim / TV 533634

w/ AN 533630

533634

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
~~OIL AND GAS PRODUCTION~~

105

APPL # 533629
I.D. # 188073

Date: 03/08/12

BETA OFFSHORE
~~OIL AND GAS PRODUCTION~~ APPL # 533629
I.D. # 188073



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

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 Address4. 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

City 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 Boulevard, Suite 1240

Address

Long Beach, CA 90802-4645

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 Type6. 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

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

- ☐ Administrative Change
☐ Alteration/Modification
☐ 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 *

Existing or Previous Permit/Application

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

517840 D8

7b. Facility Permits:

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

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

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

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

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

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Change of condition for D87 (Ellen East) crane engine to limit fuel use in addition to operating hours for R1110.2 "low-use" exemption

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

4

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 ☐ Yes12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? ☒ No ☐ Yes
If Yes, provide NOV/NC#:**Section E - Facility Business Information**

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

Oil and Gas Production

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 ☐ Yes16. 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:

18. Title of Responsible Official:

Executive VP and COO

19. I wish to review the permit prior to issuance.

(This may cause a delay in the application process.)

☐ No
☒ Yes20. Print Name:
sliles@betaoffshore.com21. Date:
12-29-1122. Do you claim confidentiality of data? (If Yes, see instructions.) ☒ No ☐ Yes23. 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
	533629	5898	6,935.46		1/5/12 AC
DATE	APP. DATE	APP. REJ.	CLASS	BASIC	EQUIPMENT CATEGORY CODE
8/24/2011			(1) II	CONTROL	040901
TEAM	ENGINEER	REASON/ACTION TAKEN			
	HWB				

533629 c11 99348 100902

2/8

S.C.A.G.M.E.
ENGINEERING

12 JAN -5 A11:31

S.C.A.G.M.E.
ENGINEERING

12 MAR -8 P3:08

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

Application No : 533629

IRS/SS No:

Previous Application No: 517840

Previous Permit No: G19815

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type : BASIC

Fee Charged by: B-CAT

B-CAT NO. : 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No : 533629

Identical Permit Unit: ☒

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$1,052.18
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$1,052.18
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 09/28/2012

REVIEWED BY: _____

DATE: OCT 9, 2012

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

Facility ID : 166073

Application Number : 533629
Estimated Completion Date : 09/28/12
Equipment Type : Basic
Equipment Description : I C E (50-500 HP) N-EM STAT DIESEL

Equipment B-Cat : 040901

Equipment C-Cat :

Emittants	Emissions	
	R1 LB/HR	R2 LB/HR
CO	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.01

Applicable Rules

1110.2 07/09/2010 Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02 Date: 09/28/12 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: 533629
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 517840, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.01 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: 5.1 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:10:06 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, EN-020-E2, DIESEL FUEL, CATERPILLAR, MODEL D398PCTA, WITH AFTERCOOLER, TURBOCHARGER, 853 BHP WITH A/N: 516029 GENERATOR, RIG, 600 KW	D85		NOX: LARGE SOURCE**	CO: 250 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 450 PPMV DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 30 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.9, D28.1, D323.3, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, EN-030-E2, DIESEL FUEL, CATERPILLAR, MODEL D398PCTA, WITH AFTERCOOLER, TURBOCHARGER, 853 BHP WITH A/N: 516030 GENERATOR, RIG, 600 KW	D86		NOX: LARGE SOURCE**	CO: 250 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 450 PPMV DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 30 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.9, D28.1, D323.3, K40.1
System 6: ICE: PEDESTAL CRANE- PLATFORM ELLEN					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11B, ELLEN EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533629	D87		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, F448.5, H23.7, K40.1

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
- (2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements
- ** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
	9	1
	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by:	Operation Team
	M. Vibal	O

EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 2
	App. No. 533629-32, -34, -35, -36	Date Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 <u>533629</u>	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 <u>533636</u>	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 <u>533630</u>	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

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CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year.~~ **or the fuel usage to no more than 1×10^9 BTUs, in any one year.**

Meeting either criteria shall ~~The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).~~

<p align="center">SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p align="center">ENGINEERING AND COMPLIANCE DIVISION</p> <p align="center">APPLICATION EVALUATION AND CALCULATIONS</p>	No. of Pages	Page No.
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The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment. **or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.**

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1×10^9 Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

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The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136 10⁹ BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1 x 10⁹ BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NO _x		PM ₁₀		VOC, R1		VOC, R2		SO _x	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

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Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment; the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

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The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

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CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.

South Coast Air Quality Management District

NOV / NC Report

Notice No.	Type	Issued Date	Violation Date	Insp Id	Team	Facility Id	Facility Name	Final Action	Date	Asgmt. No	Follow-up Status	Follow-up Number	Inspector	Date	Violation Description
C57294	NC	11/23/11	08/23/11	KM03	Z	166073	BETA OFFSHORE			1273668	INCOMP		KM03	12/21/11	Ensure all future NOx pr
P52617	NOV	08/30/11	08/23/11	MT01	Z	166073	BETA OFF SHORE	CLO	09/18/12	1256466	INCOMP		MT01	08/30/11	ONE LEAK ABOVE 100
P52618	NOV	08/31/11	08/30/11	MT01	Z	166073	BETA OFF SHORE	CLO	09/18/12	1256470	INCOMP		MT01	08/30/11	ONE KEAK ABOVE 50.

Total: 3

NSR DATA SUMMARY SHEET

Application No: 485759
Application Type: Change of Conditions
Application Status: PROCESSING
Previous Apps, Dev, Permit #: 466198, 0 - , , NONE

Company Name: PACIFIC ENERGY RESOURCES, LTD.
Company ID: 151178
Address: OCS LEASE PARCELS, P300/P301, HUNTINGTON BE
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 - ,
Estimated Completion Date: 10-15-2008
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 lbs/yr
District Exemption: None

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

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

Processed By: vlee1 5/27/2010 7:56:19 AM

Facility Permit Application

File View Screens Facility LookUp Assignment Help

SEL FAC. FAC. INFO SEC. D SEC. E SEC. F SEC. G HP APPL DEV CND. SYS CND. PROC CND. FAC CND. EMIS. APPLY EMIS. VALDT. REU. MAINT. CHN. DWN ?

Facility Devices

Device Maintenance

FACID: 166073 BETA

Dev. Type

- ☒ Device
- ☐ Control
- ☐ Stacks
- ☐ No Emiss.
- ☐ R219

Device ID

0087

Facility Perr



Primary Device

Sec. Dev Order:

HP Appl Nbr:

SCC

20100102

Inactive

South Coast Air Quality Management District

Finance System DataWindow Print

Requested By: mvibal

Run Date: 9/26/2012 16:22:45

AR Transactions for Facility ID 166073

System error. Money was not credited for the app? -
Check if problem is fixed by Friday.
clear date help. needs to preserve
- email

[illegible]

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
7904389	ADJINV	10	516020	2/8/2011	PD	2273931	\$501.26		
7904389	PAYMENT	10	516020	2/8/2011	PD	2273931	(\$501.26)	\$0.00	
7904390	PERMIT PROCESS	10	516021	11/4/2010	PD	2273932	\$0.00		
7904390	ADJINV	10	516021	2/8/2011	PD	2273932	\$501.26		
7904390	PAYMENT	10	516021	2/8/2011	PD	2273932	(\$501.26)	\$0.00	
7904391	PERMIT PROCESS	10	516022	11/4/2010	PD	2273933	\$0.00		
7904391	ADJINV	10	516022	2/8/2011	PD	2273933	\$501.26		
7904391	PAYMENT	10	516022	2/8/2011	PD	2273933	(\$501.26)	\$0.00	
7904392	PERMIT PROCESS	10	516023	11/4/2010	PD	2273934	\$0.00		
7904392	ADJINV	10	516023	2/8/2011	PD	2273934	\$501.26		
7904392	PAYMENT	10	516023	2/8/2011	PD	2273934	(\$501.26)	\$0.00	
7904393	PERMIT PROCESS	10	516024	11/4/2010	PD	2273935	\$0.00		
7904393	PAYMENT	10	516024	2/8/2011	PD	2273935	(\$501.26)		
7904393	ADJINV	10	516024	2/8/2011	PD	2273935	\$501.26	\$0.00	
7904395	PERMIT PROCESS	10	516025	11/4/2010	PD	2273937	\$0.00		
7904395	ADJINV	10	516025	2/8/2011	PD	2273937	\$501.26		
7904395	PAYMENT	10	516025	2/8/2011	PD	2273937	(\$501.26)	\$0.00	
7904396	PERMIT PROCESS	10	516026	11/4/2010	PD	2273938	\$0.00		
7904396	ADJINV	10	516026	2/8/2011	PD	2273938	\$501.26		
7904396	PAYMENT	10	516026	2/8/2011	PD	2273938	(\$501.26)	\$0.00	
7904397	PERMIT PROCESS	10	516027	11/4/2010	PD	2273939	\$0.00		
7904397	ADJINV	10	516027	2/8/2011	PD	2273939	\$501.26		
7904397	PAYMENT	10	516027	2/8/2011	PD	2273939	(\$501.26)	\$0.00	
7904398	PERMIT PROCESS	10	516028	11/4/2010	PD	2273940	\$0.00		
7904398	ADJINV	10	516028	2/8/2011	PD	2273940	\$501.26		
7904398	PAYMENT	10	516028	2/8/2011	PD	2273940	(\$501.26)	\$0.00	
7904399	PERMIT PROCESS	10	516029	11/4/2010	PD	2273941	\$0.00		
7904399	ADJINV	10	516029	2/8/2011	PD	2273941	\$501.26		
7904399	PAYMENT	10	516029	2/8/2011	PD	2273941	(\$501.26)	\$0.00	
7904401	PERMIT PROCESS	10	516030	11/4/2010	PD	2273943	\$0.00		
7904401	ADJINV	10	516030	2/8/2011	PD	2273943	\$501.26		
7904401	PAYMENT	10	516030	2/8/2011	PD	2273943	(\$501.26)	\$0.00	
7904402	PERMIT PROCESS	10	516031	11/4/2010	PD	2273944	\$0.00		
7904402	ADJINV	10	516031	2/8/2011	PD	2273944	\$501.26		
7904402	PAYMENT	10	516031	2/8/2011	PD	2273944	(\$501.26)	\$0.00	
7904403	PERMIT PROCESS	10	516032	11/4/2010	PD	2273945	\$0.00		
7904403	ADJINV	10	516032	2/8/2011	PD	2273945	\$501.26		
7904403	PAYMENT	10	516032	2/8/2011	PD	2273945	(\$501.26)	\$0.00	
7904404	PERMIT PROCESS	10	516033	11/4/2010	PD	2273946	\$0.00		
7904404	ADJINV	10	516033	2/8/2011	PD	2273946	\$501.26		
7904404	PAYMENT	10	516033	2/8/2011	PD	2273946	(\$501.26)	\$0.00	
7904405	PERMIT PROCESS	10	516034	11/4/2010	PD	2273947	\$0.00		
7904405	ADJINV	10	516034	2/8/2011	PD	2273947	\$501.26		
7904405	PAYMENT	10	516034	2/8/2011	PD	2273947	(\$501.26)	\$0.00	
7904406	PERMIT PROCESS	10	516035	11/4/2010	PD	2273948	\$0.00		
7904406	ADJINV	10	516035	2/8/2011	PD	2273948	\$501.26		
7904406	PAYMENT	10	516035	2/8/2011	PD	2273948	(\$501.26)	\$0.00	
7904407	PERMIT PROCESS	10	516036	11/4/2010	PD	2273949	\$0.00		
7904407	ADJINV	10	516036	2/8/2011	PD	2273949	\$501.26		
7904407	PAYMENT	10	516036	2/8/2011	PD	2273949	(\$501.26)	\$0.00	

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
7904408	PERMIT PROCESS	10	516037	11/4/2010	PD	2273950	\$0.00		
7904408	ADJINV	10	516037	2/8/2011	PD	2273950	\$501.26		
7904408	PAYMENT	10	516037	2/8/2011	PD	2273950	(\$501.26)	\$0.00	
7904409	PERMIT PROCESS	10	516038	11/4/2010	PD	2273951	\$0.00		
7904409	ADJINV	10	516038	2/8/2011	PD	2273951	\$501.26		
7904409	PAYMENT	10	516038	2/8/2011	PD	2273951	(\$501.26)	\$0.00	
7904410	PERMIT PROCESS	10	516039	11/4/2010	PD	2273952	\$0.00		
7904410	ADJINV	10	516039	2/8/2011	PD	2273952	\$501.26		
7904410	PAYMENT	10	516039	2/8/2011	PD	2273952	(\$501.26)	\$0.00	
7904416	PERMIT PROCESS	10	516040	11/4/2010	PD	2273954	\$0.00		
7904416	ADJINV	10	516040	2/8/2011	PD	2273954	\$501.26		
7904416	PAYMENT	10	516040	2/8/2011	PD	2273954	(\$501.26)	\$0.00	
7904417	PERMIT PROCESS	10	516041	11/4/2010	PD	2273955	\$0.00		
7904417	ADJINV	10	516041	2/8/2011	PD	2273955	\$501.26		
7904417	PAYMENT	10	516041	2/8/2011	PD	2273955	(\$501.26)	\$0.00	
7904418	PERMIT PROCESS	10	516042	11/4/2010	PD	2273956	\$0.00		
7904418	ADJINV	10	516042	2/8/2011	PD	2273956	\$501.26		
7904418	PAYMENT	10	516042	2/8/2011	PD	2273956	(\$501.26)	\$0.00	
7904419	PERMIT PROCESS	10	516043	11/4/2010	PD	2273957	\$0.00		
7904419	ADJINV	10	516043	2/8/2011	PD	2273957	\$501.26		
7904419	PAYMENT	10	516043	2/8/2011	PD	2273957	(\$501.26)	\$0.00	
7904420	PERMIT PROCESS	10	516044	11/4/2010	PD	2273958	\$0.00		
7904420	ADJINV	10	516044	2/8/2011	PD	2273958	\$501.26		
7904420	PAYMENT	10	516044	2/8/2011	PD	2273958	(\$501.26)	\$0.00	
7904421	PERMIT PROCESS	10	516045	11/4/2010	PD	2273959	\$0.00		
7904421	ADJINV	10	516045	2/8/2011	PD	2273959	\$501.26		
7904421	PAYMENT	10	516045	2/8/2011	PD	2273959	(\$501.26)	\$0.00	
7904422	PERMIT PROCESS	10	516046	11/4/2010	PD	2273960	\$0.00		
7904422	ADJINV	10	516046	2/8/2011	PD	2273960	\$501.26		
7904422	PAYMENT	10	516046	2/8/2011	PD	2273960	(\$501.26)	\$0.00	
7904423	PERMIT PROCESS	10	516047	11/4/2010	PD	2273961	\$0.00		
7904423	ADJINV	10	516047	2/8/2011	PD	2273961	\$501.26		
7904423	PAYMENT	10	516047	2/8/2011	PD	2273961	(\$501.26)	\$0.00	
7904424	PERMIT PROCESS	10	516048	11/4/2010	PD	2273962	\$0.00		
7904424	ADJINV	10	516048	2/8/2011	PD	2273962	\$501.26		
7904424	PAYMENT	10	516048	2/8/2011	PD	2273962	(\$501.26)	\$0.00	
7904425	PERMIT PROCESS	10	516049	11/4/2010	PD	2273963	\$0.00		
7904425	ADJINV	10	516049	2/8/2011	PD	2273963	\$501.26		
7904425	PAYMENT	10	516049	2/8/2011	PD	2273963	(\$501.26)	\$0.00	
7904426	PERMIT PROCESS	10	516050	11/4/2010	PD	2273964	\$0.00		
7904426	PAYMENT	10	516050	2/10/2011	PD	2273964	\$0.00		
7904426	OVERPAYMNT	10	516050	2/10/2011	PD	2273964	(\$861.55)		
7904426	ADJINV	10	516050	2/11/2011	PD	2273964	\$861.52		
7904426	PAYMENT	10	516050	2/11/2011	PD	2273964	(\$861.52)		
7904426	REFUNDOPRQ	10	516050	3/10/2011	PD	2273964	(\$861.55)		
7904426	ADJOP	10	516050	3/10/2011	PD	2273964	\$861.55		
7904426	REFUNDOP	10	516050	8/5/2011	PD	2273964	(\$861.55)		
7904426	REFUNDOPRQ	10	516050	8/5/2011	PD	2273964	\$861.55	\$0.00	
7944597	PERMIT PROCESS	10	517506	1/12/2011	BL	2287357	\$0.00	\$0.00	
7949799	PERMIT PROCESS	10	517837	1/20/2011	PD	2289954	\$0.00		

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
7949799	PAYMENT	10	517837	1/21/2011	PD	2289954	\$0.00		
7949799	OVERPAYMNT	10	517837	1/21/2011	PD	2289954	(\$12,719.72)		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$2,094.60		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,047.30		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,047.30		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$523.65		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,047.30		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$523.65		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$2,094.60		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,047.30		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,047.30		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$523.65		
7949799	ADJINV	10	517837	3/17/2011	PD	2289954	\$1,723.07		
7949799	OVERPAYMNT	10	517837	3/17/2011	PD	2289954	\$1,723.07		
7949799	PAYMENT	10	517837	3/17/2011	PD	2289954	(\$1,723.07)	\$0.00	
7949800	PERMIT PROCESS	10	517838	1/20/2011	PD	2289955	\$0.00		
7949800	ADJINV	10	517838	3/17/2011	PD	2289955	\$2,094.60		
7949800	PAYMENT	10	517838	3/17/2011	PD	2289955	(\$2,094.60)	\$0.00	
7949801	PERMIT PROCESS	10	517839	1/20/2011	PD	2289956	\$0.00		
7949801	ADJINV	10	517839	3/17/2011	PD	2289956	\$1,047.30		
7949801	PAYMENT	10	517839	3/17/2011	PD	2289956	(\$1,047.30)	\$0.00	
7949802	PERMIT PROCESS	10	517840	1/20/2011	PD	2289957	\$0.00		
7949802	ADJINV	10	517840	3/17/2011	PD	2289957	\$1,047.30		
7949802	PAYMENT	10	517840	3/17/2011	PD	2289957	(\$1,047.30)	\$0.00	
7949803	PERMIT PROCESS	10	517841	1/20/2011	PD	2289958	\$0.00		
7949803	ADJINV	10	517841	3/17/2011	PD	2289958	\$2,094.60		
7949803	PAYMENT	10	517841	3/17/2011	PD	2289958	(\$2,094.60)	\$0.00	
7949804	PERMIT PROCESS	10	517842	1/20/2011	PD	2289959	\$0.00		
7949804	ADJINV	10	517842	3/17/2011	PD	2289959	\$1,047.30		
7949804	PAYMENT	10	517842	3/17/2011	PD	2289959	(\$1,047.30)	\$0.00	
7956033	EMISSIONS	84	151178	2/10/2011	PD	2293651	\$136.92		
7956033	PAYMENT	84	151178	2/10/2011	PD	2293651	(\$136.92)	\$0.00	
7966219	RECLAIM TEMP	22	516016	5/17/2011	PD	2297157	\$2,574.58		
7966219	REBATE	22	516016	5/17/2011	PD	2297157	(\$52.95)		
7966219	ADJINV	22	516016	5/18/2011	PD	2297157	(\$2,521.63)	\$0.00	
7966220	RECLAIM TEMP	22	516017	5/17/2011	PD	2297157	\$2,574.58		
7966220	REBATE	22	516017	5/17/2011	PD	2297157	(\$52.95)		
7966220	ADJINV	22	516017	5/18/2011	PD	2297157	(\$2,521.63)	\$0.00	
7966221	RECLAIM TEMP	22	516018	5/17/2011	PD	2297157	\$1,072.24		
7966221	REBATE	22	516018	5/17/2011	PD	2297157	(\$22.05)		
7966221	ADJINV	22	516018	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966222	RECLAIM TEMP	22	516019	5/17/2011	PD	2297157	\$1,072.24		
7966222	REBATE	22	516019	5/17/2011	PD	2297157	(\$22.05)		
7966222	ADJINV	22	516019	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966223	RECLAIM TEMP	22	516020	5/17/2011	PD	2297157	\$299.37		
7966223	REBATE	22	516020	5/17/2011	PD	2297157	(\$6.16)		
7966223	ADJINV	22	516020	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966224	RECLAIM TEMP	22	516021	5/17/2011	PD	2297157	\$299.37		
7966224	REBATE	22	516021	5/17/2011	PD	2297157	(\$6.16)		
7966224	ADJINV	22	516021	5/18/2011	PD	2297157	(\$293.21)	\$0.00	

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
7966225	RECLAIM TEMP	22	516022	5/17/2011	PD	2297157	\$299.37		
7966225	REBATE	22	516022	5/17/2011	PD	2297157	(\$6.16)		
7966225	ADJINV	22	516022	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966226	RECLAIM TEMP	22	516023	5/17/2011	PD	2297157	\$299.37		
7966226	REBATE	22	516023	5/17/2011	PD	2297157	(\$6.16)		
7966226	ADJINV	22	516023	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966227	RECLAIM TEMP	22	516024	5/17/2011	PD	2297157	\$299.37		
7966227	REBATE	22	516024	5/17/2011	PD	2297157	(\$6.16)		
7966227	ADJINV	22	516024	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966228	RECLAIM TEMP	22	516025	5/17/2011	PD	2297157	\$1,072.24		
7966228	REBATE	22	516025	5/17/2011	PD	2297157	(\$22.05)		
7966228	ADJINV	22	516025	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966229	RECLAIM TEMP	22	516030	5/17/2011	PD	2297157	\$1,072.24		
7966229	REBATE	22	516030	5/17/2011	PD	2297157	(\$22.05)		
7966229	ADJINV	22	516030	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966230	RECLAIM TEMP	22	516031	5/17/2011	PD	2297157	\$299.37		
7966230	REBATE	22	516031	5/17/2011	PD	2297157	(\$6.16)		
7966230	ADJINV	22	516031	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966231	RECLAIM TEMP	22	516032	5/17/2011	PD	2297157	\$299.37		
7966231	REBATE	22	516032	5/17/2011	PD	2297157	(\$6.16)		
7966231	ADJINV	22	516032	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966232	RECLAIM TEMP	22	516033	5/17/2011	PD	2297157	\$299.37		
7966232	REBATE	22	516033	5/17/2011	PD	2297157	(\$6.16)		
7966232	ADJINV	22	516033	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966233	RECLAIM TEMP	22	516034	5/17/2011	PD	2297157	\$299.37		
7966233	REBATE	22	516034	5/17/2011	PD	2297157	(\$6.16)		
7966233	ADJINV	22	516034	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966234	RECLAIM TEMP	22	516035	5/17/2011	PD	2297157	\$299.37		
7966234	REBATE	22	516035	5/17/2011	PD	2297157	(\$6.16)		
7966234	ADJINV	22	516035	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966235	RECLAIM TEMP	22	516036	5/17/2011	PD	2297157	\$299.37		
7966235	REBATE	22	516036	5/17/2011	PD	2297157	(\$6.16)		
7966235	ADJINV	22	516036	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966236	RECLAIM TEMP	22	516037	5/17/2011	PD	2297157	\$299.37		
7966236	REBATE	22	516037	5/17/2011	PD	2297157	(\$6.16)		
7966236	ADJINV	22	516037	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966237	RECLAIM TEMP	22	516038	5/17/2011	PD	2297157	\$1,072.24		
7966237	REBATE	22	516038	5/17/2011	PD	2297157	(\$22.05)		
7966237	ADJINV	22	516038	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966238	RECLAIM TEMP	22	516039	5/17/2011	PD	2297157	\$1,072.24		
7966238	REBATE	22	516039	5/17/2011	PD	2297157	(\$22.05)		
7966238	ADJINV	22	516039	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966239	RECLAIM TEMP	22	516040	5/17/2011	PD	2297157	\$1,072.24		
7966239	REBATE	22	516040	5/17/2011	PD	2297157	(\$22.05)		
7966239	ADJINV	22	516040	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966240	RECLAIM TEMP	22	516041	5/17/2011	PD	2297157	\$1,072.24		
7966240	REBATE	22	516041	5/17/2011	PD	2297157	(\$22.05)		
7966240	ADJINV	22	516041	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966241	RECLAIM TEMP	22	516042	5/17/2011	PD	2297157	\$1,072.24		
7966241	REBATE	22	516042	5/17/2011	PD	2297157	(\$22.05)		

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
7966241	ADJINV	22	516042	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966242	RECLAIM TEMP	22	516043	5/17/2011	PD	2297157	\$1,072.24		
7966242	REBATE	22	516043	5/17/2011	PD	2297157	(\$22.05)		
7966242	ADJINV	22	516043	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966243	RECLAIM TEMP	22	516044	5/17/2011	PD	2297157	\$1,072.24		
7966243	REBATE	22	516044	5/17/2011	PD	2297157	(\$22.05)		
7966243	ADJINV	22	516044	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966244	RECLAIM TEMP	22	516045	5/17/2011	PD	2297157	\$1,072.24		
7966244	REBATE	22	516045	5/17/2011	PD	2297157	(\$22.05)		
7966244	ADJINV	22	516045	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966245	RECLAIM TEMP	22	516046	5/17/2011	PD	2297157	\$1,072.24		
7966245	REBATE	22	516046	5/17/2011	PD	2297157	(\$22.05)		
7966245	ADJINV	22	516046	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966246	RECLAIM TEMP	22	516047	5/17/2011	PD	2297157	\$1,072.24		
7966246	REBATE	22	516047	5/17/2011	PD	2297157	(\$22.05)		
7966246	ADJINV	22	516047	5/18/2011	PD	2297157	(\$1,050.19)	\$0.00	
7966247	RECLAIM TEMP	22	516048	5/17/2011	PD	2297157	\$299.37		
7966247	REBATE	22	516048	5/17/2011	PD	2297157	(\$6.16)		
7966247	ADJINV	22	516048	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7966248	RECLAIM TEMP	22	516049	5/17/2011	PD	2297157	\$299.37		
7966248	REBATE	22	516049	5/17/2011	PD	2297157	(\$6.16)		
7966248	ADJINV	22	516049	5/18/2011	PD	2297157	(\$293.21)	\$0.00	
7968840	PERMIT PROCESS	10	519178	2/25/2011	PD	2297197	\$0.00		
7968840	PAYMENT	10	519178	2/25/2011	PD	2297197	\$0.00		
7968840	OVERPAYMNT	10	519178	2/25/2011	PD	2297197	(\$515.96)		
7968840	OVERPAYMNT	10	519178	2/25/2011	PD	2297197	\$515.96		
7968840	ADJINV	10	519178	2/25/2011	PD	2297197	\$515.96		
7968840	PAYMENT	10	519178	2/25/2011	PD	2297197	(\$515.96)	\$0.00	
7984429	PERMIT PROCESS	15	517838	3/17/2011	PD	2305087	\$1,047.30		
7984429	PAYMENT	15	517838	3/17/2011	PD	2305087	(\$1,047.30)	\$0.00	
7984431	PERMIT PROCESS	15	517839	3/17/2011	PD	2305089	\$523.65		
7984431	PAYMENT	15	517839	3/17/2011	PD	2305089	(\$523.65)	\$0.00	
7984434	PERMIT PROCESS	15	517840	3/17/2011	PD	2305092	\$523.65		
7984434	PAYMENT	15	517840	3/17/2011	PD	2305092	(\$523.65)	\$0.00	
7984436	PERMIT PROCESS	15	517841	3/17/2011	PD	2305094	\$1,047.30		
7984436	PAYMENT	15	517841	3/17/2011	PD	2305094	(\$1,047.30)	\$0.00	
7984437	PERMIT PROCESS	15	517842	3/17/2011	PD	2305095	\$523.65		
7984437	PAYMENT	15	517842	3/17/2011	PD	2305095	(\$523.65)	\$0.00	
8001474	EMISSIONS	84	156741	4/28/2011	PD	2314545	\$136.92		
8001474	PAYMENT	84	156741	5/5/2011	PD	2314545	(\$136.92)	\$0.00	
8078215	HOT SPOTS	29	AB2588	6/13/2011	PD	2361708	\$112.31		
8078215	PENALTY	29	AB2588	8/18/2011	PD	2361708	\$5.62		
8078215	ADJINV	29	AB2588	2/2/2012	PD	2361708	(\$117.93)	\$0.00	
8137849	EMISSIONS	84	800181	8/11/2011	PD	2380015	\$138.84		
8137849	PAYMENT	84	800181	8/11/2011	PD	2380015	(\$138.84)	\$0.00	
8155401	EMISSIONS	80	CY2011	9/16/2011	PD	2393821	\$61,307.82		
8155401	PAYMENT	80	CY2011	9/16/2011	PD	2393821	(\$23,063.36)		
8155401	PAYMENT	80	CY2011	12/6/2011	PD	2393821	(\$38,244.46)	\$0.00	
8155402	EMISSIONS	80	CY2011	9/16/2011	PD	2393821	\$3,083.51		
8155402	ADJINV	80	CY2011	11/22/2011	PD	2393821	(\$3,083.21)		

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8155402*	ADJINV	80	CY2011	11/22/2011	PD	2393821	(\$0.30)	\$0.00	
8183225	EMISSIONS	84	800181	10/28/2011	PD	2408734	\$138.84		
8183225	PAYMENT	84	800181	10/28/2011	PD	2408734	(\$138.84)	\$0.00	
8198333	EMISSIONS	90	FY11-12	11/1/2011	PD	2413736	\$112.85		
8198333	REBATE	90	FY11-12	11/1/2011	PD	2413736	\$0.00		
8198333	PAYMENT	90	FY11-12	12/14/2011	PD	2413736	(\$112.85)	\$0.00	
8202002	RECLAIM ANNUAL	20	516016	11/8/2011	PD	2414379	\$2,610.62		
8202002	PAYMENT	20	516016	12/7/2011	PD	2414379	(\$2,610.62)	\$0.00	
8202003	RECLAIM ANNUAL	20	516017	11/8/2011	PD	2414379	\$2,610.62		
8202003	PAYMENT	20	516017	12/7/2011	PD	2414379	(\$2,610.62)	\$0.00	
8202004	RECLAIM ANNUAL	20	516018	11/8/2011	PD	2414379	\$1,087.25		
8202004	PAYMENT	20	516018	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202005	RECLAIM ANNUAL	20	516019	11/8/2011	PD	2414379	\$1,087.25		
8202005	PAYMENT	20	516019	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202006	RECLAIM ANNUAL	20	516020	11/8/2011	PD	2414379	\$303.56		
8202006	PAYMENT	20	516020	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202007	RECLAIM DEVICE	20	D76	11/8/2011	PD	2414379	\$146.07		
8202007	PAYMENT	20	D76	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202008	RECLAIM ANNUAL	20	516021	11/8/2011	PD	2414379	\$303.56		
8202008	PAYMENT	20	516021	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202009	RECLAIM DEVICE	20	D77	11/8/2011	PD	2414379	\$146.07		
8202009	PAYMENT	20	D77	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202010	RECLAIM ANNUAL	20	516022	11/8/2011	PD	2414379	\$303.56		
8202010	PAYMENT	20	516022	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202011	RECLAIM DEVICE	20	D78	11/8/2011	PD	2414379	\$146.07		
8202011	PAYMENT	20	D78	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202012	RECLAIM ANNUAL	20	516023	11/8/2011	PD	2414379	\$303.56		
8202012	PAYMENT	20	516023	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202013	RECLAIM DEVICE	20	D79	11/8/2011	PD	2414379	\$146.07		
8202013	PAYMENT	20	D79	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202014	RECLAIM ANNUAL	20	516024	11/8/2011	PD	2414379	\$303.56		
8202014	PAYMENT	20	516024	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202015	RECLAIM DEVICE	20	D80	11/8/2011	PD	2414379	\$146.07		
8202015	PAYMENT	20	D80	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202016	RECLAIM ANNUAL	20	516025	11/8/2011	PD	2414379	\$1,087.25		
8202016	PAYMENT	20	516025	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202017	RECLAIM DEVICE	20	D81	11/8/2011	PD	2414379	\$146.07		
8202017	PAYMENT	20	D81	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202018	RECLAIM TEMP	22	516026	11/8/2011	PD	2414379	\$1,087.25		
8202018	PAYMENT	22	516026	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202019	RECLAIM DEVICE	20	D82	11/8/2011	PD	2414379	\$146.07		
8202019	PAYMENT	20	D82	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202020	RECLAIM TEMP	22	516027	11/8/2011	PD	2414379	\$1,087.25		
8202020	PAYMENT	22	516027	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202021	RECLAIM DEVICE	20	D83	11/8/2011	PD	2414379	\$146.07		
8202021	PAYMENT	20	D83	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202022	RECLAIM TEMP	22	516028	11/8/2011	PD	2414379	\$1,087.25		
8202022	PAYMENT	22	516028	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202023	RECLAIM DEVICE	20	D84	11/8/2011	PD	2414379	\$146.07		
8202023	PAYMENT	20	D84	12/7/2011	PD	2414379	(\$146.07)	\$0.00	

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8202024	RECLAIM TEMP	22	516029	11/8/2011	PD	2414379	\$1,087.25		
8202024	PAYMENT	22	516029	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202025	RECLAIM DEVICE	20	D85	11/8/2011	PD	2414379	\$146.07		
8202025	PAYMENT	20	D85	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202026	RECLAIM TEMP	22	516030	11/8/2011	PD	2414379	\$1,087.25		
8202026	PAYMENT	22	516030	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202027	RECLAIM DEVICE	20	D86	11/8/2011	PD	2414379	\$146.07		
8202027	PAYMENT	20	D86	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202028	RECLAIM ANNUAL	20	516031	11/8/2011	PD	2414379	\$303.56		
8202028	PAYMENT	20	516031	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202029	RECLAIM DEVICE	20	D87	11/8/2011	PD	2414379	\$146.07		
8202029	PAYMENT	20	D87	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202030	RECLAIM ANNUAL	20	516032	11/8/2011	PD	2414379	\$303.56		
8202030	PAYMENT	20	516032	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202031	RECLAIM DEVICE	20	D91	11/8/2011	PD	2414379	\$146.07		
8202031	PAYMENT	20	D91	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202032	RECLAIM ANNUAL	20	516033	11/8/2011	PD	2414379	\$303.56		
8202032	PAYMENT	20	516033	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202033	RECLAIM DEVICE	20	D89	11/8/2011	PD	2414379	\$146.07		
8202033	PAYMENT	20	D89	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202034	RECLAIM ANNUAL	20	516034	11/8/2011	PD	2414379	\$303.56		
8202034	PAYMENT	20	516034	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202035	RECLAIM DEVICE	20	D88	11/8/2011	PD	2414379	\$146.07		
8202035	PAYMENT	20	D88	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202036	RECLAIM ANNUAL	20	516035	11/8/2011	PD	2414379	\$303.56		
8202036	PAYMENT	20	516035	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202037	RECLAIM DEVICE	20	D90	11/8/2011	PD	2414379	\$146.07		
8202037	PAYMENT	20	D90	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202038	RECLAIM ANNUAL	20	516036	11/8/2011	PD	2414379	\$303.56		
8202038	PAYMENT	20	516036	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202039	RECLAIM DEVICE	20	D92	11/8/2011	PD	2414379	\$146.07		
8202039	PAYMENT	20	D92	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202040	RECLAIM DEVICE	20	D99	11/8/2011	PD	2414379	\$146.07		
8202040	PAYMENT	20	D99	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202041	RECLAIM ANNUAL	20	516037	11/8/2011	PD	2414379	\$303.56		
8202041	PAYMENT	20	516037	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202042	RECLAIM DEVICE	20	D93	11/8/2011	PD	2414379	\$146.07		
8202042	PAYMENT	20	D93	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202043	RECLAIM ANNUAL	20	516038	11/8/2011	PD	2414379	\$1,087.25		
8202043	PAYMENT	20	516038	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202044	RECLAIM DEVICE	20	D95	11/8/2011	PD	2414379	\$146.07		
8202044	PAYMENT	20	D95	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202045	RECLAIM ANNUAL	20	516039	11/8/2011	PD	2414379	\$1,087.25		
8202045	PAYMENT	20	516039	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202046	RECLAIM DEVICE	20	D96	11/8/2011	PD	2414379	\$146.07		
8202046	PAYMENT	20	D96	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202047	RECLAIM ANNUAL	20	516040	11/8/2011	PD	2414379	\$1,087.25		
8202047	PAYMENT	20	516040	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202048	RECLAIM DEVICE	20	D97	11/8/2011	PD	2414379	\$146.07		
8202048	PAYMENT	20	D97	12/7/2011	PD	2414379	(\$146.07)	\$0.00	

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8202049	RECLAIM ANNUAL	20	516041	11/8/2011	PD	2414379	\$1,087.25		
8202049	PAYMENT	20	516041	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202050	RECLAIM DEVICE	20	D98	11/8/2011	PD	2414379	\$146.07		
8202050	PAYMENT	20	D98	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202051	RECLAIM ANNUAL	20	516042	11/8/2011	PD	2414379	\$1,087.25		
8202051	PAYMENT	20	516042	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202052	RECLAIM ANNUAL	20	516043	11/8/2011	PD	2414379	\$1,087.25		
8202052	PAYMENT	20	516043	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202053	RECLAIM DEVICE	20	D100	11/8/2011	PD	2414379	\$146.07		
8202053	PAYMENT	20	D100	12/7/2011	PD	2414379	(\$146.07)	\$0.00	
8202054	RECLAIM ANNUAL	20	516044	11/8/2011	PD	2414379	\$1,087.25		
8202054	PAYMENT	20	516044	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202055	RECLAIM DEVICE	20	D101	11/8/2011	PD	2414379	\$730.32		
8202055	PAYMENT	20	D101	12/7/2011	PD	2414379	(\$730.32)	\$0.00	
8202056	RECLAIM ANNUAL	20	516045	11/8/2011	PD	2414379	\$1,087.25		
8202056	PAYMENT	20	516045	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202057	RECLAIM ANNUAL	20	516046	11/8/2011	PD	2414379	\$1,087.25		
8202057	PAYMENT	20	516046	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202058	RECLAIM DEVICE	20	D103	11/8/2011	PD	2414379	\$730.32		
8202058	PAYMENT	20	D103	12/7/2011	PD	2414379	(\$730.32)	\$0.00	
8202059	RECLAIM ANNUAL	20	516047	11/8/2011	PD	2414379	\$1,087.25		
8202059	PAYMENT	20	516047	12/7/2011	PD	2414379	(\$1,087.25)	\$0.00	
8202060	RECLAIM ANNUAL	20	516048	11/8/2011	PD	2414379	\$303.56		
8202060	PAYMENT	20	516048	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8202061	RECLAIM ANNUAL	20	516049	11/8/2011	PD	2414379	\$303.56		
8202061	PAYMENT	20	516049	12/7/2011	PD	2414379	(\$303.56)	\$0.00	
8231726	LAB SOURCE TEST	36	P 11544	1/18/2012	PD	2430003	\$611.63		
8231726	PAYMENT	36	P 11544	2/22/2012	PD	2430003	(\$611.63)	\$0.00	
8231748	LAB SOURCE TEST	36	P 11545	1/18/2012	PD	2430025	\$611.63		
8231748	PAYMENT	36	P 11545	2/22/2012	PD	2430025	(\$611.63)	\$0.00	
8232908	EMISSIONS	84	700153	1/20/2012	PD	2430551	\$138.84		
8232908	PAYMENT	84	700153	1/20/2012	PD	2430551	(\$138.84)	\$0.00	
8233038	PERMIT PROCESS	10	531454	1/25/2012	PD	2430676	\$0.00		
8233038	PAYMENT	10	531454	1/26/2012	PD	2430676	\$0.00		
8233038	OVERPAYMNT	10	531454	1/26/2012	PD	2430676	(\$6,418.72)		
8233038	OVERPAYMNT	10	531454	2/16/2012	PD	2430676	\$1,747.19		
8233038	ADJINV	10	531454	2/16/2012	PD	2430676	\$1,747.19		
8233038	OVERPAYMNT	10	531454	2/16/2012	PD	2430676	\$3,114.35		
8233038	PAYMENT	10	531454	2/16/2012	PD	2430676	(\$1,747.19)		
8233038	OVERPAYMNT	10	531454	2/16/2012	PD	2430676	\$1,557.18	\$0.00	
8233039	PERMIT PROCESS	10	531455	1/25/2012	PD	2430677	\$0.00		
8233039	ADJINV	10	531455	2/16/2012	PD	2430677	\$3,114.35		
8233039	PAYMENT	10	531455	2/16/2012	PD	2430677	(\$3,114.35)	\$0.00	
8233140	PERMIT PROCESS	10	531522	1/26/2012	BL	2430774	\$0.00	\$0.00	
8233141	PERMIT PROCESS	10	531523	1/26/2012	BL	2430775	\$0.00	\$0.00	
8233142	PERMIT PROCESS	10	531524	1/26/2012	BL	2430776	\$0.00	\$0.00	
8233143	PERMIT PROCESS	10	531525	1/26/2012	BL	2430777	\$0.00	\$0.00	
8233145	PERMIT PROCESS	10	531527	1/26/2012	BL	2430779	\$0.00	\$0.00	
8233147	PERMIT PROCESS	10	531528	1/26/2012	BL	2430781	\$0.00	\$0.00	
8233148	PERMIT PROCESS	10	531529	1/26/2012	BL	2430782	\$0.00	\$0.00	

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8233149	PERMIT PROCESS	10	531530	1/26/2012	BL	2430783	\$0.00	\$0.00	
8238931	PERMIT PROCESS	15	531455	2/16/2012	PD	2434307	\$1,557.18		
8238931	PAYMENT	15	531455	2/16/2012	PD	2434307	(\$1,557.18)	\$0.00	
8275692	EMISSIONS	80	CY2011	3/3/2012	PD	2456592	\$68,036.16		
8275692	PAYMENT	80	CY2011	3/6/2012	PD	2456592	(\$60,036.16)		
8275692	PAYMENT	80	CY2011	3/6/2012	PD	2456592	(\$8,000.00)	\$0.00	
8278159	PERMIT PROCESS	10	533625	3/14/2012	RQ	2458196	\$0.00		
8278159	PAYMENT	10	533625	3/14/2012	RQ	2458196	\$0.00		
8278159	OVERPAYMNT	10	533625	3/14/2012	RQ	2458196	(\$6,935.46)		
8278159	PAYMENT	10	533625	8/22/2012	RQ	2458196	\$0.00		
8278159	OVERPAYMNT	10	533625	8/22/2012	RQ	2458196	(\$72.63)		
8278159	REFUNDOPRQ	10	533625	9/13/2012	RQ	2458196	(\$7,008.09)		
8278159	ADJOP	10	533625	9/13/2012	RQ	2458196	\$7,008.09	\$0.00	
8278165	PERMIT PROCESS	10	533629	3/14/2012	BL	2458202	\$0.00	\$0.00	
8278166	PERMIT PROCESS	10	533630	3/14/2012	BL	2458203	\$0.00	\$0.00	
8278167	PERMIT PROCESS	10	533631	3/14/2012	BL	2458204	\$0.00	\$0.00	
8278168	PERMIT PROCESS	10	533632	3/14/2012	BL	2458205	\$0.00	\$0.00	
8278170	PERMIT PROCESS	10	533634	3/14/2012	BL	2458207	\$0.00	\$0.00	
8278171	PERMIT PROCESS	10	533635	3/14/2012	BL	2458208	\$0.00	\$0.00	
8278173	PERMIT PROCESS	10	533636	3/14/2012	BL	2458210	\$0.00	\$0.00	
8278363	LAB SOURCE TEST	36	P R 11545	3/15/2012	PD	2458380	\$310.13		
8278363	PAYMENT	36	P R 11545	4/19/2012	PD	2458380	(\$310.13)	\$0.00	
8282066	LAB SOURCE TEST	36	P R 11544	3/21/2012	PD	2460393	\$1,472.83		
8282066	PAYMENT	36	P R 11544	4/19/2012	PD	2460393	(\$1,472.83)	\$0.00	
8298378	EMISSIONS	84	800181	4/20/2012	PD	2471063	\$138.84		
8298378	PAYMENT	84	800181	4/24/2012	PD	2471063	(\$138.84)	\$0.00	
8344658	PERMIT PROCESS	10	536965	5/18/2012	PD	2491416	\$0.00		
8344658	PAYMENT	10	536965	5/22/2012	PD	2491416	\$0.00		
8344658	OVERPAYMNT	10	536965	5/22/2012	PD	2491416	(\$8,210.16)		
8344658	ADJINV	10	536965	8/14/2012	PD	2491416	\$3,114.35		
8344658	OVERPAYMNT	10	536965	8/14/2012	PD	2491416	\$3,114.35		
8344658	OVERPAYMNT	10	536965	8/14/2012	PD	2491416	\$4,572.62		
8344658	PAYMENT	10	536965	8/14/2012	PD	2491416	(\$3,114.35)		
8344658	OVERPAYMNT	10	536965	8/14/2012	PD	2491416	\$523.19	\$0.00	
8344660	PERMIT PROCESS	10	536967	5/18/2012	PD	2491418	\$0.00		
8344660	ADJINV	10	536967	8/14/2012	PD	2491418	\$4,572.62		
8344660	PAYMENT	10	536967	8/14/2012	PD	2491418	(\$4,572.62)	\$0.00	
8344662	PERMIT PROCESS	10	536969	5/18/2012	PD	2491420	\$0.00		
8344662	ADJINV	10	536969	8/14/2012	PD	2491420	\$523.19		
8344662	PAYMENT	10	536969	8/14/2012	PD	2491420	(\$523.19)	\$0.00	
8351657	EMISSIONS	91	CY2012	6/5/2012	PD	2495094	\$64,671.99		
8351657	PAYMENT	91	CY2012	8/8/2012	PD	2495094	(\$64,671.99)	\$0.00	
8351658	EMISSIONS	91	CY2012	6/5/2012	PD	2495094	\$2,685.53		
8351658	ADJINV	91	CY2012	8/7/2012	PD	2495094	(\$2,685.53)	\$0.00	
8358203	LAB SOURCE TEST	36	R 11503	6/12/2012	PD	2498965	\$1,472.83		
8358203	PAYMENT	36	R 11503	7/13/2012	PD	2498965	(\$1,472.83)	\$0.00	
8370533	LAB SOURCE TEST	36	R 12201	6/28/2012	PD	2506426	\$310.13		
8370533	PAYMENT	36	R 12201	7/31/2012	PD	2506426	(\$310.13)	\$0.00	
8370570	LAB SOURCE TEST	36	R 12200	6/28/2012	PD	2506463	\$542.67		
8370570	PAYMENT	36	R 12200	7/31/2012	PD	2506463	(\$542.67)	\$0.00	

Transaction Number	Action Type	Trans Type	Reference Number	Trans Date	Status	Invoice Number	Transaction Amount	Ar Bal	Transfer Flag
8383737*	EMISSIONS	84	800181	7/19/2012	PD	2514003	\$142.17		
8383737	PAYMENT	84	800181	7/19/2012	PD	2514003	(\$142.17)	\$0.00	
8383811	LAB SOURCE TEST	36	R 12199	7/19/2012	PD	2514077	\$542.67		
8383811	PAYMENT	36	R 12199	8/22/2012	PD	2514077	(\$542.67)	\$0.00	
8383818	LAB SOURCE TEST	36	R 12202	7/19/2012	PD	2514084	\$310.13		
8383818	PAYMENT	36	R 12202	8/22/2012	PD	2514084	(\$310.13)	\$0.00	
8407990	LAB SOURCE TEST	36	R 12198	9/18/2012	BL	2528021	\$317.57	\$317.57	



March 7, 2012

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: **SECOND SUBMITTAL**
Applications / Requests for:
1) **Change of Condition for Seven Internal Combustion Engines**
2) **Amend Title V (and RECLAIM) Facility Permit**
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting, for the second time, seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The original submittal was returned to us due to "unpaid fees" in your accounting system. Upon investigation, we discovered that the fees were not delinquent, but were within their normal and allowed payment period. We are very disappointed that this package was returned for "unpaid fees" that were NOT DELINQUENT. As a result, over two months of potential processing time has been wasted.

Beta Offshore is likely to have other invoices on the books from time to time, but we always pay on time. If any "unpaid" but not delinquent fees are due upon receipt of this application package, please contact me at (562) 683-3497 before rejecting this submittal.

Sincerely,

Marina Robertson
HSE Manager

Enclosures:

1. One Form 400-CEQA
2. Eight Forms 400-A
3. One Form 500-A1
4. One Form 500-A2
5. One Form 500-C1
6. One Form 500-C2
7. Check for \$6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) **Change of Condition for Seven Internal Combustion Engines**
2) **Amend Title V (and RECLAIM) Facility Permit**
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.”

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO _x (ppmvd) ¹	VOC (ppmvd) ²	CO (ppmvd) ¹
11	30	250

¹ Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.


² Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

1110.2(d)(1)(B) The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

If the operator of a two-stroke engine equipped with an oxidation catalyst and insulated exhaust ducts and catalyst housing demonstrates that the CO and VOC limits effective on and after July 1, 2010 are not achievable, then the Executive Officer may, with United States Environmental Protection Agency (EPA) approval, establish technologically achievable, case-by-case CO and VOC limits in place of the concentration limits effective on and after July 1, 2010. The case-by-case limits shall not exceed 250 ppmvd VOC and 2000 ppmvd CO.

If the operator of an engine that uses non-pipeline quality natural gas demonstrates that due to the varying heating value of the gas a longer averaging time is necessary, the Executive Officer may establish for the engine a longer averaging time, not to exceed six hours, for any of the concentration limits of Table II. Non-pipeline quality natural gas is a gas that does not meet the gas specifications of the local gas utility and is not supplied to the local gas utility.

- (C) Notwithstanding the provisions in subparagraph (d)(1)(B), the operator of any stationary engine fired by landfill or digester gas (biogas) shall not operate the engine in a manner that exceeds the emission concentration limits of Table III, provided that the facility

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PACIFIC ENERGY RESOURCES, LTD.
111 W. OCEAN BLVD.
LONG BEACH, CA 90802-4622

FACILITY ID: 151178

EQUIPMENT LOCATION: OCS Lease Parcels
Huntington Beach, CA 92648

CONDITION CHANGES TO PERMITS TO OPERATE OR CONSTRUCT

EQUIPMENT DESCRIPTION

Note: The changes to the facility permit are indicated in bold font for additions and in strike-out for deletions.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
System 6: ICE: PEDESTAL CRANE PLATFORM ELLEN					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLEN EAST CRANE, 195 BHP A/N: 466198 485759	D87		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11A, DIESEL FUEL, DETROIT DIESEL, MODEL 1063-7008, ELLEN CENTER CRANE, 195 BHP A/N: 466194 485765	D91		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
System 7: ICE: PEDESTAL CRANE - PLATFORM EUREKA					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-030-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1067-8503.	D88		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469	A63.6, C1.3, D28.1, D323.3,



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Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
EUREKA WEST CRANE, 195 BHP A/N: 466200 485761				LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6- 2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON- EMERGENCY, CR-010-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, EUREKA EAST CRANE, 195 BHP A/N: 466180 485762	D89		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6- 2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON- EMERGENCY, CR-020-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, EUREKA CENTER CRANE, 195 BHP A/N: 466183 485764	D90		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6- 2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE PEDESTAL CRANE PLATFORM LELLY					
INTERNAL COMBUSTION ENGINE, NON- EMERGENCY, L-01A, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY EAST CRANE, 195 BHP A/N: 466178 485766	D92		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6- 2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON- EMERGENCY, L-01B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY WEST CRANE, 195 BHP A/N: <i>Note: See Section H, A/N 503608, for P/C issued 12/10/09.</i>	D93		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6- 2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.6, C1.3, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1

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- | | |
|--|--|
| (1) Denotes RECLAIM emission factor | (2) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emissions limit |
| (5)(5A)(5B) Denotes command & control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY CONDITIONS

Note: This appears in both Sections D and H.

F14.2 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

The MSDS shall be made available to AQMD upon request.

[RULE 431.2, 9-15-2000]

DEVICE CONDITIONS

A63.6 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 171.4 LBS PER DAY
PM	Less than or equal to 8.4 LBS PER DAY
ROG	Less than or equal to 33.7 LBS PER DAY
SOX	Less than or equal to 1.8 LBS PER DAY


[~~RULE 1303(b)(2) Offset, 12-6-2002~~ 40 CFR 55 OCS, 9-4-1992]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92, D93]

C1.3 The operator shall limit the operating time to no more than 500 hour(s) in any one year.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

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To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92]

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the VOC emissions at the outlet.

~~The test shall be conducted when the equipment is running at maximum operating load.~~

~~The test shall be conducted at least once every three years.~~

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted in compliance with the source testing requirements of Rule 1110.2(f)(1)(C).


The test shall be conducted in accordance with an AQMD approved protocol.

The test shall be conducted to demonstrate compliance with Rule 1110.2.

[RULE 1110.2, 6-3-2005 2-1-2008; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93]

D323.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a quarterly basis, at least, unless the equipment did not operate during the entire quarterly period. The routine quarterly inspection shall be conducted while the equipment is in operation and during daylight hours.

 <p align="center">SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p align="center">ENGINEERING AND COMPLIANCE</p> <p align="center">APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 30	PAGE 5
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If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: D81, D82, D83, D84 D85, D86, D87, D88, D89, D90, D91, D92, D93]

E448.2 The operator shall comply with the following requirements:

Maintain a quarterly engine operating log that includes:

- A. Total hours of operation;
- B. Type of liquid fuel;
- C. Fuel consumption (gallons of liquid); and
- D. Cumulative hours of operation since the last source test required in Rule 1110.2 (f)(1)(C).



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[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92]

E448.4 The operator shall comply with the following requirements:

The operator shall comply with the requirements of the Inspection and Monitoring (I&M) plan.

RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92]

E448.5 The operator shall comply with the following requirements:

The operator shall comply with the reporting requirements of Rule 1110.2(f)(1)(H) pertaining to any equipment breakdown that results in emissions in excess of rule or permit emission limits for VOC or CO.

RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92]

H23.7 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule /Subpart
CO	District Rule	1110.2
VOC	District Rule	1110.2

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D87, D88, D89, D90, D91, D92]

K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.



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PROCESSED BY

V. Lee

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All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

Emission data shall be expressed in terms of mass rate (lbs/hr). In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

Emission data shall be expressed in terms of concentration (ppmv), corrected to 15 percent oxygen, dry basis.

[RULE 1110.2, ~~6-3-2005~~ **2-1-2008**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93]

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
System 8: DIESEL PEDESTAL CRANE - PLATFORM ELLY					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY WEST CRANE, WITH OXIDATION CATALYST, CLEAN EMISSIONS PROD, MODEL 4-400, 195 BHP A/N: 503608 485767	D93		NOX: PROCESS UNIT**	CO: 2000 PPMV DIESEL (5) [RULE 1110.2, 6-3-2005 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV DIESEL (5) [RULE 1110.2, 6-3-2005 2-1-2008]	A63.11 A63.6, C1.3, D12.3 , D12.4, D12.7, D28.1, D28.3 , D29.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Permit to Construct Issued: 12/10/09					

- | | |
|--|--|
| (1) Denotes RECLAIM emission factor | (2) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emissions limit |
| (5)(5A)(5B) Denotes command & control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

DEVICE CONDITIONS


~~A63.11~~ A63.6 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 171.4 LBS PER DAY
PM	Less than or equal to 8.4 LBS PER DAY
ROG	Less than or equal to 33.7 LBS PER DAY
SOX	Less than or equal to 1.8 LBS PER DAY

[~~RULE 1303(b)(2) Offset, 12-6-2002~~ 40 CFR 55 OCS, 9-4-1992]

[Devices subject to this condition: D93]

C1.3 The operator shall limit the operating time to no more than 500 hours in any one calendar year.

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The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011 per section (d)(1)(B)(ii) of Rule 1110.2.

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D93]

D12.3 ~~The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.~~

~~[RULE 1110.2, 6-3-2005; RULE 2012, 5-6-2005]~~

~~[Devices subject to this condition: D81, D93 See new condition C1.3 for D93, and new condition C1.4 for D81-D86 (see separate evaluation).~~

D12.4 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in of the exhaust at the inlet to the oxidization catalyst.


~~The catalyst inlet temperature shall not exceed 840 degrees F.~~

~~The catalyst minimum inlet temperature shall be 480 degrees F.~~

The temperature of the engine exhaust at the inlet of the catalyst shall be between 480 and 1380 degrees F.

The temperature range requirement of this condition does shall not apply during start-up operations of the engine not to exceed 30 minutes per start-up.

[RULE 1303(a)(1)-BACT, 12-6-2002]

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[Devices subject to this condition: D93]

D12.7 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the oxidation catalyst.

The pressure drop across the oxidation catalyst shall not exceed 53 inches water column.

The catalyst shall be cleaned or replaced if the pressure drop exceeds the recommended limits.

[RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: D93]

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the VOC emissions at the outlet.

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted in compliance with the source testing requirements of Rule 1110.2(f)(1)(C).

The test shall be conducted in accordance with an AQMD approved protocol.

The test shall be conducted to demonstrate compliance with Rule 1110.2.


[RULE 1110.2, 2-1-2008; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D81, D93]

~~D28.3 The operator shall conduct source test(s) in accordance with the following specifications:~~

~~The test shall be conducted to determine the VOC emissions at the outlet.~~

~~The test shall be conducted to determine the CO emissions at the outlet.~~

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~~The test shall be conducted to demonstrate compliance with Rule 1110.2.~~

~~The test shall be conducted to comply with Rule 1110.2(f)(1)(C) adopted on 2/1/2008.~~

~~The test shall be conducted with Rule 1110.2 compliance test, the pressure drop across the catalyst shall be measured and checked against the manufacturer's recommended limits. The catalyst shall be cleaned or replaced if the pressure drop exceeds the recommend limits. Records shall be maintained for a period of five years:~~

~~[RULE 1110.2, 6-3-2005; RULE 1303(b)(2) Offset, 12-6-2002]~~

~~[Devices subject to this condition: D81, D93]~~

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Location
VOC emissions	District method 25.1	District-approved averaging time	Outlet


The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (gal/hr) and the flue gas flow rate.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The operator may use a previously approved source test protocol for the test, but include a copy of the protocol in the Ssource test report. The test protocol shall include the proposed operating conditions of the engine during the tests, ~~the identity of the testing,~~

~~continuing from the above paragraph~~ the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted per Rule 1110.2(f)(1)(C) as adopted on 2/1/2008.

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For D93, The test shall be conducted for compliance verification of the Rule 1110.2 VOC 250 ppmvd limit for VOC (Rule adopted 6/3/2005).

For D81, the test shall be conducted for compliance verification of the 30 ppmvd limit for VOC in advance of the effective date. The primary purpose is to demonstrate the oxidation catalyst is successful in reducing VOC emissions to the 30 ppmvd limit.

The source test report shall be submitted to the District within 45 days after the test has been conducted.

[RULE 1110.2, 6-3-2005 2-1-2008]

[Devices subject to this condition: D81, D93]


D323.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a quarterly basis, at least, unless the equipment did not operate during the entire quarterly period. The routine quarterly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;

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- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: D81, D93]

E448.2 The operator shall comply with the following requirements:

Maintain a quarterly engine operating log that includes:

- A. Total hours of operation;
- B. Type of liquid fuel;
- C. Fuel consumption (gallons of liquid); and
- D. Cumulative hours of operation since the last source test required in Rule 1110.2 (f)(1)(C).

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D93]

E448.4 The operator shall comply with the following requirements:


The operator shall comply with the requirements of the Inspection and Monitoring (I&M) plan.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D93]

E448.5 The operator shall comply with the following requirements:

The operator shall comply with the reporting requirements of Rule 1110.2(f)(1)(H) pertaining to any equipment breakdown that results in emissions in excess of rule or permit emission limits for VOC or CO.

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[RULE 1110.2, 2-1-2008]

[Devices subject to this condition: D93]

H23.7 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule /Subpart
CO	District Rule	1110.2
VOC	District Rule	1110.2

~~Per 40 CFR Part 55, Appendix A, for the purpose of this condition, D93 and D81 is subject to Rule 1110.2 adopted on 6/3/2005.~~

~~Once Rule 1110.2 adopted on 2/1/2008 is added to Appendix A of 40 CFR Part 55, then D93 is subject to all the applicable requirements of this Rule.~~

~~Once Rule 1110.2 adopted on 2/1/2008 is added to Appendix A of 40 CFR Part 55, then D81 is subject to all the applicable requirements of this Rule. Effective 7/1/2010, the VOC limit is 30 ppmv and CO limits is 250 ppmv per section (d)(1)(B)(ii) of Rule 1110.2.~~

[RULE 1110.2, 6-3-2005 2-1-2008]

[Devices subject to this condition: D81, D93]


K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

Emission data shall be expressed in terms of mass rate (lbs/hr). In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

Emission data shall be expressed in terms of concentration (ppmv), corrected to 15 percent oxygen, dry basis.

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[RULE 1110.2, ~~6-3-2005~~ 2-1-2008; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D81, D93]

Permit Condition Changes Discussion

Condition no A63.6 (Sections D and H)—Operating since the 1980s, this facility was regulated by the EPA until 1994 because it is located in federal waters. On May 9, 1994, EPA delegated the authority to the District to implement and enforce the requirements of the Outer Continental Shelf (OCS) air regulations (40 CFR Part 55), pursuant to Section 328(a)(3) of the Clean Air Act, because the facility is located within 25 miles of the state's seaward boundary. At that time, EPA required the District to include this condition (and the other A63 conditions) to list the daily potential to emit emissions. These PTEs were provided by Shell Western E & P Inc. (SWEPI), the operator in 1994, and are not related to the District's NSR rules. Consequently, the rule tag for this condition (and the other A63 conditions) will be corrected from RULE 1303(b)(2)-Offset, 12-6-2002" to "40 CFR 55 OCS, 9-4-1992."

Condition changes related to Rule 1110.2—See discussion, below, under RULE EVALUATION for Rule 1110.2.


BACKGROUND

Facility

Pacific Energy Resources, Ltd (ID 151178) operates the Beta OCS Platforms Facility, an oil and gas production facility consisting of three offshore platforms--Eureka, Ellen, and Elly—located on the federal OCS", approximately 9 miles offshore of Huntington Beach. The oil and gas wells and some minor process equipment 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 crude oil product is shipped to shore via pipeline to the onshore receiving facility (ID 151177), known as the Beta Pump Station, located in Long Beach. The natural gas product is used on Platform Elly as fuel in turbines that generate electricity and drive pumps, and the produced water is re-injected in the oil reservoir via wells used exclusively for that purpose.

The facility is a Cycle 1 RECLAIM and Title V facility. A RECLAIM facility permit was issued to Pacific Energy on 8/21/07 to implement the change of operator from Aera Energy LLC (ID 104012). The Title V facility permit was issued on 3/12/10.

See discussion below on applicability of SCAQMD rules to OCS facilities, including Rule 1110.2 as amended 2/1/08.


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Applications Submitted

On 7/29/08, the facility submitted the following applications to limit the annual operating hours for the crane engines to 500 hours to exempt them from the emissions standards for VOC (30 ppmvd) and CO (250 ppmvd) that would have been effective July 1, 2011, pursuant to Rule 1110.2(d)(1)(B)(ii), as amended February 1, 2008. With the 500 hour limit, the engines will continue to be subject to the existing emission standards for VOC (250 ppmvd) and CO (2000 ppmvd). The submittal of the applications met the August 1, 2008 deadline by which the operator of any stationary engine that is required to add operating restrictions to a permit to operate to meet the requirements of this rule is required to submit an application for a change of permit conditions, per Rule 1110.2(e)(2)(C).

The applications are summarized below:

A/N	Prior Permit (A/N)	Equipment	Device No.	Proposed Condition Changes	Recommended Disposition
485757		RECLAIM Facility Permit Amendment—Convert to Title V/RECLAIM Facility Permit Amendment ¹			Approve after EPA minor Title V revision review and the 2/1/08 version of Rule 1110.2 is incorporated into Appendix A of 40 CFR Part 55.
485759 Permit condition change	F91749 (A/N 466198)	Ellen East Crane Engine	D87	Add condition to limit annual operating time to 500 hours to exempt engine from VOC and CO emissions standards pursuant to Rule 1110.2 (2/1/08 version), which would have been effective 7/1/11.	Same.
485761 Permit condition change	F91751 (A/N 466200)	Eureka West Crane Engine	D88	Same.	Same.
485762 Permit	F91743	Eureka East Crane Engine	D89	Same.	Same.

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condition change	(A/N 466180)				
485764 Permit condition change	F91744 (A/N 466183)	Eureka Center Crane Engine	D90	Same.	Same.
485765 Permit condition change	F91748 (A/N 466194)	Ellen Center Crane Engine	D91	Same.	Same.
485766 Permit condition change	F91767 (A/N 466178)	Elly East Crane Engine	D92	Same.	Same.
485767 Permit condition change	(A/N 503608)	Elly West Crane Engine	D93	Same.	Same.

These applications to add the 500 hour annual limit to the crane engines will be proposed to EPA at the same time as the applications to modify five rig engines to install oxidation catalysts to meet new Rule 1110.2 emission standards (A/N 500154-500158 for D82-D86—see separate evaluation). Therefore, only one Title V/RECLAIM facility permit amendment application, A/N 485757, is required.

Note: The master file is A/N 485759.

The facility also submitted related applications, A/N 500154-500159, to modify five rig engines (D82-86) to add oxidation catalyst to meet the new VOC limit of 30 ppmvd and CO limit of 250 ppmvd. Those applications are being evaluated in a separate engineering evaluation simultaneously with these applications.


Fees

The fees for the change of condition applications were based on two non-identical engines and five identical engines: D91 (non-identical—Model 1063-7008), D88 (non-identical—Model 1067-8503), and D87, D89, D90, D92, D93 (identical—Model 1064-7001). D93 is no longer identical because it was subsequently equipped with an oxidation catalyst (P/C issued for A/N 503608), but it will be treated as identical because the 500 hour limit could have been added later when the P/C is converted to P/O in a few months.

A/N 485757 was submitted as a RECLAIM facility permit amendment application. However, since the initial Title V facility permit was subsequently issued, the application has been converted to a Title V/RECLAIM facility permit amendment application and the fee will be adjusted accordingly.

Applicability of Rule 1110.2, as amended 2/1/08, on OCS facility

As the facility is located on the OCS, it is subject only to the State and local rules and regulations that are specifically listed in Appendix A of 40 CFR Part 55 ("Appendix A"). Appendix A is periodically

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updated via USEPA's consistency review and update process for OCS sources which, in effect, replaces the SIP process for this facility. The SIP process has no relevance to this facility. Only the State and local rules and regulations specifically listed (with specific version dates) in the most recent version of Appendix A are referenced in the permit as the basis for applicable State and local requirements. These rules and regulations are therefore federally enforceable. On the current facility permit, the rules tagged for the emission limits and permit conditions, and the rules listed in Section K are only those rules with version dates that appear in the most recent version of Appendix A, which is dated 7/1/09. **The most recent version of Appendix A includes the 6/3/05 version of Rule 1110.2. Therefore, the 2/1/08 version of Rule 1110.2, with the more stringent emission standards, will not be applicable to the facility until the amendment to update Appendix A is finalized by EPA.**

On 12/21/09, the EPA published in the Federal Register a proposed rule to update Appendix A to incorporate a list of more recently adopted rules, including the 2/1/08 version of Rule 1110.2, into Part 55. Although the 30-day comment period has closed, the EPA has not finalized the rulemaking by publishing the final rule in the Federal Register. The final approval action is effective 30 days after publication in the Federal Register. Although the 2/1/08 version of Rule 1110.2 is not effective on the OCS until EPA's final action approving it into Part 55 is effective, the facility has been informed that, once approval is effective, the requirements will be immediately effective unless otherwise stated in the rule. Accordingly, the following revisions will be made to the facility permit and proposed to EPA for the 45-day minor Title V revision review, but the permit will not be issued until the 2/1/08 version of Rule 1110.2 has been incorporated into Appendix A.

1. A/N 485757, 485759, 485761-485762, 485764-485767—Add permit condition to limit the annual operating hours for the crane engines to 500 hours to exempt engines from the emissions standards for VOC (30 ppmvd) and CO (250 ppmvd), that would have been effective July 1, 2011, pursuant to Rule 1110.2, as amended February 1, 2008.
2. Add condition A63.1 for devices D98, D99, D100 back into Section D. This condition was inadvertently deleted from Section D when it was correctly deleted from Section H in response to facility's comments regarding the P/C issued for A/N 503608 (D93). This condition will now be condition A63.11 because the facility permit program assigns the next available permit condition number to an added permit condition. The rule tag will be corrected from "RULE 1303(b)(2)-Offset, 12-6-2002" to "40 CFR 55 OCS, 9-4-1992", because the EPA required the inclusion of this condition to list the daily potential to emit emissions when they transferred this OCS facility to the District in 1994. These PTEs were provided by Shell Western E & P Inc. (SWEPI), the operator in 1994, and are not related to the District's NSR rules.

~~A63.1~~ **A63.11** The operator shall limit emissions from this equipment as follows:

<u>CONTAMINANT</u>		<u>EMISSIONS LIMIT</u>
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CO	Less than or equal to 110.6 LBS PER DAY
PM	Less than or equal to 61.7 LBS PER DAY
ROG	Less than or equal to 24.1 LBS PER DAY
SOX	Less than or equal to 49.5 LBS PER DAY

[~~RULE 1303(b)(2) Offset, 12-6-2002~~ **40 CFR 55 OCS, 9-4-1992**]

[Devices subject to this condition D98, D99, D100]

3. The new version of Appendix A to 40 CFR Part 55 will include four rules applicable to this facility that have amendment dates that are more recent than those included in the 7/9/09 version of Appendix A. The rules tagged for the emission limits and permit conditions, and the rules in Section K will be updated to reflect the new amendment dates. The applicable rules, changes in version dates listed in Appendix A, and changes to the facility permit to reflect the new version dates are summarized below.
- a. Rule 1110.2--Emissions from Gaseous- and Liquid Fueled Engines
Appendix A: Version will be updated from 6/3/05 to 2/1/08.
Facility permit updates: For Sections D and H, will update rule tag for the (1) emission limits and permit conditions for D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93—Non-Emergency ICEs, and (2) condition nos. C1.1 and D12.1—Emergency ICEs. Also update Section K listing.
 - b. Rule 1113—Architectural Coatings
Appendix A: Version updated from 6/9/06 to 7/13/07.
Facility permit updates: Will update rule tag for the emissions limits for E176, and Section K listing.
 - c. Rule 1149—Storage Tank Cleaning and Degassing
Appendix A: Version updated from 7/14/95 to 5/2/08.
Facility permit updates: Will update rule tag for condition no. H23.4, and Section K listing.
 - d. Rule 1171—Solvent Cleaning Operations
Appendix A: Version updated from 7/14/06 to 2/1/08.
Facility permit updates: Will update rule tag for the emissions limits for E176, E180, E181, E182, and Section K listing.

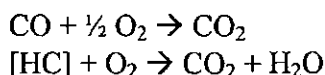
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PROCESS DESCRIPTION

The platforms are equipped with a total of seven stationary platform cranes. The cranes, each powered by a 195 bhp diesel engine, are used to move equipment, supplies, and personnel between the platforms and boats and to move equipment from one location to another on the platform. The crane engines are shut down most of the time. Only when a lift is needed will an operator climb up to the crane, turn on the engine, check the gauges for proper operational conditions and then proceed to lift the load. When the lift is done the engine is promptly shut down again.

The tri-annual source testing required by condition D28.1 demonstrated the crane engines, with the exception of Platform Elly West Crane Engine (D93), are in compliance with the 250 ppm VOC limit and the 2000 ppmvd CO limit. A source test of the Elly West Crane Engine conducted on August 12, 2009 successfully demonstrated compliance with the CO limit (406 ppmv vs. 2000 ppmv), but not the VOC limit (399 ppmv vs. 250 ppmv). The engine failed the VOC retest conducted in October 2009. On 11/1/09, the facility submitted an application, A/N 503608, to modify the engine to add an oxidation catalyst for which a P/C was issued on 12/9/09 (approved in NSR system on 12/10/09).

The oxidation catalyst is a two-way oxidation system because it controls VOC and CO. The oxidation equations are as follows:



To operate properly, the minimum and maximum operating range for the catalyst is from 480°F to 1380°F. The maximum backpressure for the catalyst, considering its use on the Detroit Diesel 1064-7001 engine model, is 53 inches water.

A source test conducted on 2/15/10 on D93 resulted in a VOC level of 83 ppm @ 15% O₂ at normal load. Although the source test report is pending evaluation by the District's Source Test Engineering Team, the engine with oxidation catalyst can reasonably be expected to meet the 250 ppmvd limit. (The engine operated under a short variance, Case No. 4636-15, from 12/9/09 through 3/9/10 during the time required to receive a permit to install the catalyst, test the catalyst and receive the test results.)

EMISSIONS CALCULATIONS

1. A/N 485759, condition change to F91749 (A/N 466198)—D87
 - a. Pre-condition change, F91749
Operating schedule: 52 wk/yr, 7 days/wk, 2 hr/day

Per A/N 293884, the vendor provided daily emissions, based on 24 hr/day, for RHC, NO_x, CO, and PM, which were converted to emission factors in lb/hr. SO_x was based on AER default factor, correct to 0.02% S = 1.56/24 hr = 0.07 lb/hr.



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CO:	(0.04 lb/hr) (2 hr/day) = 0.08 lb/day	30DA = 0 lb/day
NOx:	(0.2 lb/hr) (2 hr/day) = 0.4 lb/day	30DA = 0 lb/day
PM ₁₀ :	(0.01 lb/hr) (2 hr/day) = 0.02 lb/day	30DA = 0 lb/day
ROG:	(0.02 lb/hr) (2 hr/day) = 0.04 lb/day	30DA = 0 lb/day
SO _x :	(0.07 lb/hr) (2 hr/day) = 0.14 lb/day	30DA = 0 lb/day

b. Post-condition change, A/N 485759

Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr.

The emission factors have not changed except for SO_x. The sulfur content of diesel fuel has decreased. Pursuant to the Rule 431.2 requirement that the diesel fuel is to contain 15 ppm or less sulfur by weight, the emission factor for SO_x is 0.0049 g/bhp-hr.

CO:	(0.04 lb/hr)(1.4 hr/day) = 0.06 lb/day	30DA = 0 lb/day
NOx:	(0.2 lb/hr) (1.4 hr/day) = 0.28 lb/day	30DA = 0 lb/day
PM ₁₀ :	(0.01 lb/hr) (1.4 hr/day) = 0.01 lb/day	30DA = 0 lb/day
ROG:	(0.02 lb/hr) (1.4 hr/day) = 0.03 lb/day	30DA = 0 lb/day
SO _x :	(0.0049 g/bhp-hr) (195 bhp) (lb/453.5 g) (1.4 hr/day) = (0.002 lb/hr)(1.4 hr/day) = 0.003 lb/day	30DA = 0 lb/day

c. Change in Emissions

CO:	0 lb/day - 0 lb/day = 0 lb/day
NOx:	0 lb/day - 0 lb/day = 0 lb/day
PM ₁₀ :	0 lb/day - 0 lb/day = 0 lb/day
ROG:	0 lb/day - 0 lb/day = 0 lb/day
SO _x :	0 lb/day - 0 lb/day = 0 lb/day


2. A/N 485761, condition change to F91751 (A/N 466200)—D88

a. Pre-condition change, F91751 (A/N 466200)

Operating schedule: 52 wk/yr, 7 days/wk, 1 hr/day

Per A/N 293885, the original application, vendor provided daily emissions, based on 24 hr/day, for RHC, NO_x, CO, and PM. SO_x based on AER default factor, correct to 0.02% S.

CO:	(0.06 lb/hr)(1 hr/day) = 0.06 lb/day	30DA = 0 lb/day
NOx:	(0.29 lb/hr)(1 hr/day) = 0.29 lb/day	30DA = 1 lb/day

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Note: The 30DA of 1 lb/day is a carry-over from the original operating schedule of 3 hr/day per A/N 293885. On 5/21/10, Sr. Engineer Rob Castro performed an emissions update to correct the 30DA for NOx to 0 lb/day.

PM₁₀: (0.02 lb/hr)(1 hr/day) = 0.02 lb/day 30DA = 0 lb/day
 ROG: (0.02 lb/hr)(1 hr/day) = 0.02 lb/day 30DA = 0 lb/day
 SOx: (0.07 lb/hr)(1 hr/day) = 0.07 lb/day 30DA = 0 lb/day

b. Post-condition change, A/N 485761

Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

CO: (0.06 lb/hr)(1.4 hr/day) = 0.08 lb/day 30DA = 0 lb/day
 NOx: (0.29 lb/hr)(1.4 hr/day) = 0.406 lb/day 30DA = 0 lb/day
 PM₁₀: (0.02 lb/hr)(1.4 hr/day) = 0.02 lb/day 30DA = 0 lb/day
 ROG: (0.02 lb/hr)(1.4 hr/day) = 0.02 lb/day 30DA = 0 lb/day
 SOx: (0.0049 g/bhp-hr)(195 bhp)(lb/453.5 g/lb)(1.4 hr/day) =
 (0.002 lb/hr) (1.4 hr/day) = 0.003 lb/day 30DA = 0 lb/day

c. Change in Emissions

CO: 0 lb/day - 0 lb/day = 0 lb/day
 NOx: 0 lb/day - 0 lb/day = 0 lb/day
 PM₁₀: 0 lb/day - 0 lb/day = 0 lb/day
 ROG: 0 lb/day - 0 lb/day = 0 lb/day
 SOx: 0 lb/day - 0 lb/day = 0 lb/day

3. A/N 485762, condition change to F91743 (A/N 466180)—D89

a. Pre-condition change, F91743

Operating schedule: 52 wk/yr, 7 days/wk, 2 hr/day

Same as F91749 for A/N 485759, above.

b. Post-condition change, A/N 485762


Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

Same as A/N 485759, above.

c. Change in Emissions

Same as A/N 485759, above.

4. A/N 485764, condition change to F91744 (A/N 466183)—D90

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- a. Pre-condition change, F91744
Operating schedule: 52 wk/yr, 7 days/wk, 2 hr/day

Same as F91749 for A/N 485759, above.

- b. Post-condition change, A/N 485764
Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

Same as A/N 485759, above.

- c. Change in Emissions
Same as A/N 485759, above.

5. A/N 485765, condition change to F91748 (A/N 466194)—D91

- a. Pre-condition change, F91748
Operating schedule: 52 wk/yr, 7 days/wk, 2 hrs/day

Same as F91749 for A/N 485759, above.

- b. Post-condition change, A/N 485765
Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

Same as A/N 485759, above.

- c. Change in Emissions
Same as A/N 485759, above.

6. A/N 485766, condition change to F91767 (A/N 466178)—D92

- a. Pre-condition change, F91767
Operating schedule: 52 wk/yr, 7 days/wk, 2 hrs/day


Same as F91749 for A/N 485759, above.

- b. Post-condition change, A/N 485766
Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

Same as A/N 485759, above.

7. A/N 485767, condition change to P/C for A/N 503608—D93

- a. Pre-condition change, 503608

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Operating schedule: 52 wk/yr, 7 days/wk, 24 hrs/day

CO: 0.04 lb/hr = 0.96 lb/day 30DA = 0 lb/day
 NOx: 0.19 lb/hr = 4.56 lb/day 30DA = 0 lb/day
 PM₁₀: 0.01 lb/hr = 0.34 lb/day 30DA = 0 lb/day
 ROG: 0.016 lb/hr = 0.38 lb/day 30DA = 0 lb/day

Note: Based on A/N 466179, the application prior to A/N 503608, the operating schedule should be 52 wk/yr, 7 days/wk, 2 hrs/day. The P/C for A/N 503608 was based on 24 hr/day because there was no condition limiting the operating hours. On 5/21/10, Sr. Engineer Rob Castro updated the NSR system to correct the operating schedule for A/N 503608 to 2 hr/day.

b. Post-condition change, A/N 485767

Operating schedule: 52 wk/yr, 7 days/wk, 1.4 hr/day, based on 500 hr/yr

Same as A/N 485759, above.

c. Change in Emissions

Same as A/N 485759, above.

RULE EVALUATION

The addition of the 500 hour annual operating limit to the crane engines is expected to comply with all applicable SCAQMD rules and regulations as follows:

Rule 212—Standards for Approving Permits

Public notice is not required because there will not be an increase in emissions.

Rule 401--Visible Emissions


Visible emissions are not expected from well-maintained and properly operated equipment.

Rule 402--Nuisance

Nuisance problems are not expected from well-maintained and properly operated equipment.

Rule 431.2--Sulfur Content of Gaseous Fuels

The operation of the engines is expected to continue to comply with the requirement that diesel fuel supplied to equipment is to contain 15 ppm or less sulfur by weight. See facility condition F14.2.

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Rule 1110.2—Emissions from Gaseous- and Liquid-Fueled Engines, as amended 2/1/08

This rule is applicable to all stationary and portable engines over 50 rated brake horsepower (bhp). The purpose is to reduce NO_x, VOC, and CO emissions from engines.

As explained above, the facility will not be subject to the requirements of the 2/1/08 version until its adoption into Appendix A of 40 CFR Part 55 becomes effective. As this Title V permit revision will not be issued until the 2/1/08 version is effective on this facility, the following analysis is based on the 2/1/08 version.

Subpart (d)(1)(B)(ii) provides that the operator of any other stationary engine subject to this rule shall not operate the engine in a manner that exceeds the emission concentration limits listed in Table II. Pursuant to Table II, effective July 1, 2011, the VOC limit is 30 ppmvd and the CO limit is 250 ppmvd.

Table II also includes a NO_x limit of 11 ppmvd, effective July 1, 2011. Table 1 of Rule 2001, however, specifies that Rule 1110.2 is not applicable to RECLAIM facilities for requirements pertaining to NO_x emissions. *Rule 1110.2(d)(1)(F)(iv)* states that notwithstanding Rule 2001, the requirements of this subparagraph shall apply to NO_x emissions from new non-emergency engines driving electrical-generators subject to Regulation XX (RECLAIM), but these crane engines are not new engines.

This subpart also provides an exemption for engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel. With the addition of the 500 hour annual operating limit, the crane engines will be subject to the existing emission standards for VOC (250 ppmvd) and CO (2000 ppmvd). As discussed above, all crane engines currently meet these limits. New condition C1.3 has been added to sections D and H to limit the annual operating hours to 500 hours, require a non-resettable elapsed time meter, and clarify the applicable emissions standards.

Existing condition H23.7 in Section H specifies this equipment is subject to the applicable requirements of Rule 1110.2 (2-1-08) for CO and VOC. The child conditions regarding 40 CFR Part 55, Appendix A, and the applicability of the 6/3/05 version versus the 2/1/08 version have been removed. Condition H23.7, as revised above, has been added to Section D.

Subpart (e)(2)(C) requires applications for a change of permit condition to add operating restrictions to a permit to operate to meet the requirements of this rule to be submitted by August 1, 2008. These applications were submitted on July 29, 2008.

Subpart (e)(4) sets for the following schedule for the I&M plan submittal.



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(A)—By August 1, 2008, submit an initial I&M plan application to the Executive Officer for approval. On July 29, 2008, the facility submitted A/N 485715 for the I&M compliance plan for the seven crane engines and six rig engines. On 1/27/10, the facility submitted a new I&M plan, A/N 505783, to include the new oxidation catalysts.

(B)—By December 1, 2008, implement an approved I&M plan or the I&M plan as submitted if the plan is not yet approved. The facility is not yet subject to the 2/1/08 version of Rule 1110.2.

Subpart (f)(1)(A)(ii)(III) provides a list of categories of engines that are not required to have a CEMS by this clause. The categories include engines rated at less than 500 bhp and engines that are limited by permit conditions to operate less than 1000 hours per year. As the crane engines are rated at 195 bhp and limited by permit condition to operate less than 500 hours per year, they are not required to be equipped with a CEMS.


Subpart (f)(1)(B) requires an operational non-resettable totalizing time meter to determine the engine elapsed operating time. Condition C1.3 (Sections D and H) requires such a time meter. The crane engines are each equipped with a time meter.

Subpart (f)(1)(C)(i) requires, effective August 1, 2008, source testing for VOC reported as carbon, and CO concentrations (concentrations in ppm by volume, corrected to 15 percent oxygen on dry basis) at least once every two years, or every 8,760 operating hours, whichever occurs first. The source test frequency may be reduced to once every three years if the engine has operated less than 2,000 hours since the last source test.

Existing condition D28.1 (Section D) has been revised to remove the requirement to test every three years (from the 6/3/05 version of Rule 1110.2), and to add the requirement to meet the source testing requirements of Rule 1110.2(f)(1)(C).

Existing condition D28.3 (Section H) has been replaced with condition D28.1 (Section D), as revised above. The child condition in condition D28.3 requiring the measurement of the pressure drop across the catalyst during a source test has been removed. New condition D12.7 (Section H) has been added to require a differential pressure gauge and to specify the maximum allowable pressure drop (53 inches water).

Subpart (f)(1)(C)(ii) requires source testing for at least 30 minutes during normal operation (actual duty cycle). This test shall not be conducted under a steady-state condition unless it is the normal operation. In addition, source testing for CO emissions is required for at least 15 minutes at an engine's actual peak load, or the maximum load that can be practically achieved during the test, and; at actual minimum load, excluding idle, or the minimum load that can be practically achieved during the test.

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Existing condition D28.1 (Section D) has been revised to remove the requirement to test at maximum load (6/3/05 version of Rule 1110.2 did not specify load requirements), and to add the requirement to meet the source testing requirements of Rule 1110.2(f)(1)(C).

Existing condition D28.3 (Section H) has been replaced with condition D28.1, as revised above.


Subpart (f)(1)(C)(iii) requires the use of a contractor to conduct the source testing that is approved by the Executive officer under the Laboratory Approval Program for the necessary test methods. Accordingly, existing condition D28.1 (Section D) has been revised to add the requirement to meet the source testing requirements of Rule 1110.2(f)(1)(C). Existing condition D28.3 (Section H) has been replaced with condition D28.1, as revised above.

Subpart (f)(1)(C)(iv) requires a source test protocol to be submitted to the Executive Officer for written approval at least 60 days before the scheduled date of the test. The source test protocol shall include the name, address and phone number of the engine operator and a District-approved source testing contractor that will conduct the test, the application and permit number(s), emission limits, a description of the engine(s) to be tested, the test methods and procedures to be used, the number of tests to be conducted and under what loads, the required minimum testing time for the VOC test, based on the analytical detection limit and expected VOC levels, and a description of the parameters to be measured in accordance with the I&M plan required by subparagraph (f)(1)(D). The source test protocol shall be approved by the Executive Officer prior to any testing. The operator is not required to submit a protocol for approval if: there is a previously approved protocol that meets these requirements; the engine has not been altered in a manner that requires a permit alteration; and emission limits have not changed since the previous test. If the operator submits the protocol by the required date, and the Executive Officer takes longer than 60 days to approve the protocol, the operator shall be allowed additional time needed to conduct the test.

Existing condition D28.1 (Section D) has been revised to add the requirement that the test shall be conducted in accordance with AQMD approved protocol. A new protocol will be required to meet the new requirements of the 2/1/08 version of Rule 1110.2.

Existing condition D28.3 (Section H) has been replaced with condition D28.1, as revised above.

Subpart (f)(1)(C)(v) requires the operator to provide the Executive Officer at least 30 days prior notice to any source test to afford the Executive Officer the opportunity to have an observer present. Existing condition D28.1 (Section D) has been revised to add the requirement to meet the source testing requirements of Rule 1110.2(f)(1)(C). Existing condition D28.3 (Section H) has been replaced with condition D28.1, as revised above.

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Subpart (f)(1)(C)(vi) requires the operator to submit all source test reports, including a description of the equipment tested, to the Executive Officer within 60 days of completion of the test. Existing condition K40.1 (Sections D and H) incorporates this requirement.

Subpart (f)(1)(C)(vii) requires, by February 1, 2009, sampling ports; safe sampling platforms, scaffolding or mechanical lifts; and utilities for sampling and testing equipment. As source testing has been conducted every three years on these engines, all the aforementioned presumably are available.

Subpart (f)(1)(D) requires an operator to submit an I&M plan to the Executive Officer for written approval and implement the plan. One plan application is required for each facility. This provision enumerates the required elements. New condition E448.4 has been added to Section D and H to require compliance with the I&M plan.

Subpart (f)(1)(E) requires a monthly operating log that includes total hours of operation, type of liquid fuel, fuel consumption, cumulative hours of operation since the last source test required in subparagraph (f)(1)(C). Further, facilities subject to Regulation XX may maintain a quarterly log for engines that are designated as a process unit on the facility permit. New condition E448.2 has been added to Sections H and D to require a quarterly log, as the crane engines are RECLAIM process units.


Subpart (f)(1)(H) sets forth reporting requirements for breakdowns. As this is a RECLAIM facility, new condition E448.5 requires compliance with the breakdown requirements for VOC and CO only.

Subpart (g) specifies the test method for CO is District Method 100.1, and VOC is District Method 25.1 or 25.3. The protocol will be required to incorporate these requirements.

Subpart (h)(10) provides that the provisions of subdivision (d), which includes the emission limits for VOC and CO, during an engine start-up, until sufficient operating temperatures are reached for proper operation of the emission control equipment. The start-up period shall not exceed 30 minutes, unless the Executive Officer approves a longer period for an engine and makes it a condition of the engine permit. Existing condition D12.4 (Section H) states the temperature range requirements of the condition shall not apply during start-up operations not to exceed 30 minutes per start-up.

Regulation XIII—New Source Review

This facility is subject to NSR because Rule 1302(p) defines “facility” to include “an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2.”

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- Rule 1303(a)—BACT
- Rule 1303(b)(1)—Modeling
- Rule 1303(b)(2)—Offsets

The BACT, modeling, and offsets requirements are not triggered because there will not be an increase in emissions.

Rule 1401--New Source Review of Carcinogenic Air Contaminants

Subpart (g)(1)(B) exempts a modification of a permit unit that causes a reduction or no increase in the cancer burden, MICR or acute or chronic HI at any receptor location.

Rule 1470—Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

Subpart (g)(10) provides that the requirements specified in paragraphs (c)(2) through (c)(9) do not apply to diesel-fueled engines used solely on outer continental shelf (OCS) platforms located within 25 miles of California's seaward boundary.

Regulation XX—RECLAIM

- Rule 2005—New Source Review for RECLAIM

- (b)(1)(A)—BACT
- (b)(1)(B)—Modeling
- (b)(2)—Offsets

The BACT, modeling, and offsets requirements are not triggered because there will not be an increase in emissions.

- (h)—Public Notice

This requires compliance with Rule 212, see discussion above.


- (i)—Rule 1401 Compliance

This requires compliance with Rule 1401, see discussion above.

Regulation XXX—Title V Permits

- Rule 3003—Applications

As noted above, this facility is a RECLAIM facility. The proposed project is considered as a "minor permit revision" for RECLAIM pollutant, non-RECLAIM pollutants, and hazardous air pollutants (HAPs) to the RECLAIM/Title V permit for this facility. Rule 3000(b)(12) specifies that a "minor permit revision" includes, but is not limited to any Title V permit revision that:

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- Rule 3000(b)(12)(A)(v)—does not result in an emission increase of any RECLAIM pollutant over the facility's starting allocation plus the non-tradeable Allocation, or higher Allocation amount which has previously undergone a significant permit revision process.
- Rule 3000(b)(12)(A)(vi)—does not result in an increase in emissions of a pollutant subject to Regulation XIII = New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP).

The proposed project is not expected to result in an emission increase of any RECLAIM pollutant or an increase in emissions of a pollutant subject to Regulation XIII - New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP), and therefore is considered as a "minor permit revision" pursuant to Rule 3000(b)(12)(A)(v) and rule 3000(b)(12)(A)(vi).

This proposed project is included in the first permit revision (Rev. 10) to the initial Title V permit (Rev. 9) issued to this facility on 3/12/10. This minor permit revision will include (1) this project to add the 500 hr annual operating limit to the six crane engines—minor permit revision, (2) the project to modify the five rig engines (D82-D87) to each add an oxidation catalyst—minor permit revision (see separate engineering evaluation for A/N 500154-500159), and (3) Rev. 8 to the RECLAIM permit—minor permit revision. Rev. 8 was issued as a RECLAIM permit revision for the modification of Ellen Rig Engine No. 1 (D81) to add an oxidation catalyst (A/N 500153) in the interim period between the submittal of the proposed initial Title V facility permit to the EPA for review and the issuance of the initial Title V facility permit.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision," it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised title V permit will be issued to this facility.

See lead appl. 533629

ROUTING RECORD

DATE	FROM	TO	ACTION
MAR 14 2012	RBC	MV	C/C
10/2/12	M3	RBC	P/L/O
OCT 9 2012	RBC	P/S	620909

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

DSX

W/ AN 533634 533635
533629 533636
533631
533632

Reclaim / TV 533454

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
~~OIL AND GAS PRODUCTION~~

ICE

APPL # 533630
I.D. # 186073

Date: 03/08/12

BETA OFFSHORE
OIL AND GAS PRODUCTION OCS LEASE PARCELS P300/P301
AP 533630
JUL 18 2012



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (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 Address4. 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

City 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 Boulevard, Suite 1240

Address

Long Beach, CA 90802-4645

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 Type6. 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

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

- ☐ Administrative Change
☐ Alteration/Modification
☐ 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 *

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

516034

G12364

7b. Facility Permits:

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

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

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

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

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

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Change of condition - D88(Eureka West) crane engine to limit fuel
use in addition to operating hours for R1110.2 "low-use" exemption10. 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 ☐ Yes12. 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?

Oil and Gas Production

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

21111

15. Are there other facilities in the SCAQMD
jurisdiction operated by the same operator?☒ No ☐ Yes16. 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:

sliles

18. Title of Responsible Official:

Executive 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:

sliles@betaoffshore.com

21. Date:

12-29-11

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 EnclosedAQMD
USE ONLYAPPLICATION TRACKING #
533630CHECK #
5898AMOUNT RECEIVED
\$10,935.46

PAYMENT TRACKING #

VALIDATION
11/5/12

DATE

APP

DATE

APP

CLASS

BASIC

CONTROL

EQUIPMENT CATEGORY CODE
640901

TEAM

ENGINEER

REASON/ACTION TAKEN

MEET

533630

100402
99348

3/8

S.C.A.G.M.E.
ENGINEERING

S.C.A.G.M.E.
ENGINEERING

12 MAR -8 P3:08

12 JAN -5 A11:31

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

FEE DATA - SUMMARY SHEET

Application No : 533630

IRS/SS No:

Previous Application No: 516034

Previous Permit No: G12364

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type: BASIC

Fee Charged by: B-CAT

B-CAT NO.: 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type: CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No :

Identical Permit Unit: ☐

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$1,052.18
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$1,052.18
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 10/01/2012

REVIEWED BY: _____

DATE: ~~OCT 9~~, 2012

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

AEIS DATA SHEET

Company Name : BETA OFFSHORE

Facility ID : 166073

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

Application Number : 533630

Equipment B-Cat : 040901

Estimated Completion Date : 10/01/12

Equipment C-Cat :

Equipment Type : Basic

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

Emissions

Emittants	R1 LB/HR	R2 LB/HR
CO	0.06	0.06
NOX	0.29	0.29
PM10	0.02	0.02
ROG	0.02	0.02

Applicable Rules

1110.2 07/09/2010 Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02 Date: 10/01/12 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: 533630
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 516034, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
 Max Hourly: 0.06 lbs/hr
 Max Daily: 0.08 lbs/day
UNCONTROLLED EMISSION
 Max Hourly: 0.06 lbs/hr
 Max Daily: 0.08 lbs/day
CURRENT EMISSION
 BACT 30 days Avg: 0 lbs/day
 Annual Emission: 30.58 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: 0.29 lbs/hr
 Max Daily: 0.41 lbs/day
UNCONTROLLED EMISSION
 Max Hourly: 0.29 lbs/hr
 Max Daily: 0.41 lbs/day
CURRENT EMISSION
 BACT 30 days Avg: 0 lbs/day
 Annual Emission: 147.78 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: 0.02 lbs/hr
 Max Daily: 0.03 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: 10.19 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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/1/2012 1:45:52 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-11A, ELLEN CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1063-7008, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533636	D91		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 7: ICE: PEDESTAL CRANE - PLATFORM-EUREKA					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-030-A2, DIESEL FUEL, DETROIT DIESEL, MODEL 1067-8503, EUREKA WEST CRANE, 195 BHP A/N: 533630	D88		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-010-A2, EUREKA EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533631	D89		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

* (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
(2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
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	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by:	Operation Team
	M. Vibal	O

EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

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	Evaluated by: M. Vibal	Operation Team O

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 533629	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 533636	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 533630	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 3
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	Evaluated by: M. Vibal	Operation Team O

CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year.~~ **or the fuel usage to no more than 1 x 10⁹ BTUs, in any one year.**

Meeting either criteria shall ~~The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).~~

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	Evaluated by:	Operation Team
	M. Vibal	O

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment. **or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.**

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a(n)-non-resettable elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1×10^9 Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 5
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	Evaluated by: M. Vibal	Operation Team O

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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	Evaluated by:	Operation Team
	M. Vibal	O

Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136 10⁹ BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1 x 10⁹ BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NOx		PM ₁₀		VOC, R1		VOC, R2		SOx	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 7
	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team O

Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

²Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages	Page No.
	9	8
	App. No.	Date
	533629-32, -34, -35, -36	Sept. 25, 2012
	Evaluated by:	Operation Team
	M. Vibal	O

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 9
	App. No. 533629-32, - 34 , -35, -36	Date Sept. 25, 2012
	Evaluated by: M. Vibal	Operation Team
		O

CONCLUSIONS AND RECOMMENDATIONS

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.

NSR DATA SUMMARY SHEET

Application No: 485761
Application Type: Change of Conditions
Application Status: PROCESSING
Previous Apps, Dev, Permit #: 466200, 0 - , , NONE

Company Name: PACIFIC ENERGY RESOURCES, LTD.
Company ID: 151178
Address: OCS LEASE PARCELS, P300/P301, HUNTINGTON BE
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 - , ,
Estimated Completion Date: 10-15-2008
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.06 lbs/hr
Max Daily: 0.08 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.06 lbs/hr
Max Daily: 0.08 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 30.58 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: 0.29 lbs/hr
Max Daily: 0.41 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.29 lbs/hr
Max Daily: 0.41 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 147.78 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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 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: 0.02 lbs/hr
Max Daily: 0.03 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: 10.19 lbs/yr
District Exemption: None

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

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

Processed By: vlee1 5/27/2010 9:21:44 AM



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) Change of Condition for Seven Internal Combustion Engines
2) Amend Title V (and RECLAIM) Facility Permit
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.”

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) Change of Condition for Seven Internal Combustion Engines
2) Amend Title V (and RECLAIM) Facility Permit
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
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- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	$1,052.18 \times 2$	\$ 2,075.30 \rightarrow 2,104.36
Change of Condition for D87 @ \$1,037.65 (Schedule B)	$1,052.18 \times 1$	\$ 1,037.65 \rightarrow 1,052.18
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)		\$ 2,075.32 \rightarrow 2,104.36
Amend Title V (and RECLAIM) Facility Permit	526.09×4	\$ 1,747.19 \rightarrow 1,747.19
<hr/>		
Total		\$ 6,935.46 \rightarrow 7,008.09
		$\Delta = 72.63$

See master file 533629

ROUTING RECORD			
DATE	FROM	TO	ACTION
MAR 14 2012	RLC	NK	c/c
10/2/12	NW	Rev	P4/P0
OCT 9 2012	RLC	P/S	620911
REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES			

D90

Lead appl: 533629

w/ AN's 533631

533635

533636

Reclaim/TV appl. 533454

w/ AN's 533630

533634

BETA OFFSHORE
OCS LEASE PARCELS P300/P301
HUNTINGTON BEACH
~~OIL AND GAS PRODUCTION~~

10E

APPL # 533632
I.D. # 186073

Date: 03/08/12

BETA OFFSHORE
OIL AND GAS PRODUCTION
AP 533632
I.D. # 186073



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.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
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 _____
Contact Name **Marina Robertson** Title **HSE Manager**
Phone # **(562) 628-1526** Ext. _____ Fax # **(562) 628-1536**
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 Boulevard, Suite 1240
Address _____
City **Long Beach**, CA **90802-4645**
State _____ Zip _____
Contact Name **Marina Robertson** Title **HSE Manager**
Phone # **(562) 628-1526** Ext. _____ Fax # **(562) 628-1536**
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
- ☐ Alteration/Modification without Prior Approval *
- ☒ Change of Condition **(60)**
- ☐ 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:

517838
G19817

8a. Estimated Start Date of Construction (mm/dd/yyyy):	8b. Estimated End Date of Construction (mm/dd/yyyy):	8c. Estimated Start Date of Operation (mm/dd/yyyy):
9. Description of Equipment or Reason for Compliance Plan (list applicable rule): Change of condition-D90(Eureka Center) crane engine to limit fuel use in addition to operating hours for R1110.2 "low-use" exemption		
10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process)		4
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)		<input checked="" type="radio"/> No <input type="radio"/> Yes
12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? If Yes, provide NOV/NC#:		<input checked="" type="radio"/> No <input type="radio"/> Yes

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location? Oil and Gas Production	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? <input checked="" type="radio"/> No <input type="radio"/> Yes	16. Are there any schools (K-12) within 1000 feet of the facility property line? <input checked="" type="radio"/> No <input type="radio"/> 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: 	18. Title of Responsible Official: Executive VP and COO	19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) <input type="radio"/> No <input checked="" type="radio"/> Yes
20. Print Name: sliles@betaoffshore.com	21. Date: 12-29-11	22. Do you claim confidentiality of data? (If Yes, see instructions.) <input checked="" type="radio"/> No <input type="radio"/> Yes

23. Check List:	<input checked="" type="checkbox"/> Authorized Signature/Date	<input checked="" type="checkbox"/> Form 400-CEQA	<input type="checkbox"/> Supplemental Form(s) (ie., Form 400-E-xx)	<input checked="" type="checkbox"/> Fees Enclosed
AQMD USE ONLY	APPLICATION TRACKING # 531527	CHECK # 5898	AMOUNT RECEIVED \$ 164,935.46	PAYMENT TRACKING #
DATE 12/29/11	APP DATE 12/29/11	APP CLASS III	EQUIPMENT CATEGORY CODE 040901	REASON/ACTION TAKEN NEW

533632

c 99348

100402

5/8

aw

S.C.A.O.M.D.
ENGINEERING

12 JAN -5 A11:31

S.C.A.O.M.D.
ENGINEERING

12 MAR -8 P3:08

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

FEE DATA - SUMMARY SHEET

Application No : 533632

IRS/SS No:

Previous Application No: 517838

Previous Permit No: G19817

Company Name : BETA OFFSHORE

Facility ID: 166073

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

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

Equipment Type : BASIC

Fee Charged by: B-CAT

B-CAT NO. : 040901

C-CAT NO: 00

Fee Schedule: B

Facility Zone : 18

Deemed Compl. Date: 4/7/2012

Public Notice: NO

Evaluation Type : CHANGE OF CONDITIONS, (PO)

Small Business: ☐

Disposition : Approve PO, Recommended by Engineer

Higher Fees for Failing
to Obtain a Permit: ☐

Lead Appl. No : 533629

Identical Permit Unit: ☒

Air quality Analysis	\$0.00	Filing Fee Paid:	\$0.00
E.I.R	\$0.00	Permit Processing Fee Paid:	\$526.09
Health Risk Assessment	\$0.00	Permit Processing Fee Calculated*:	\$526.09
Public Notice Preparation Fee	\$0.00	Permit Processing Fee Adjustment:	\$0.00
Public Notice Publication Fee	\$0.00		
Expedited Processing	Hours: 0.00		
Source Test Review	Hours: 0.00		
Time & Material	Hours: 0.00		
		Total Additional Fee:	\$0.00
		Additional Charge:	\$0.00

COMMENTS:

RECOMMENDED BY: MARIA VIBAL

DATE: 09/28/2012

REVIEWED BY: 

DATE: OCT 9, 2012

* 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 : 533632

Equipment B-Cat : 040901

Estimated Completion Date : 09/28/12

Equipment C-Cat :

Equipment Type : Basic

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

Emissions

Emittants	R1 LB/HR	R2 LB/HR
CO	0.04	0.04
NOX	0.20	0.20
PM10	0.01	0.01
ROG	0.02	0.01

Applicable Rules

1110.2

07/09/2010

Emissions from Gaseous-and Liquid-fueled Engines

	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 :	09:24	09:24	09:24	09:24	09:24	09:24	09:24

User's Initials : MV02

Date: 09/28/12

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: 533632
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 517838, 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: 05-01-2013
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 09:24
Tuesday Operating Hours: 08:00 to 09:24
Wednesday Operating Hours: 08:00 to 09:24
Thursday Operating Hours: 08:00 to 09:24
Friday Operating Hours: 08:00 to 09:24
Saturday Operating Hours: 08:00 to 09:24
Sunday Operating Hours: 08:00 to 09:24

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: 0.01 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: 5.1 lbs/yr
District Exemption: None

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

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

Processed By: mvibal 10/2/2012 1:15:56 PM



FACILITY PERMIT TO OPERATE BETA OFFSHORE

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, CR-020-A2, EUREKA CENTER CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533632	D90		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: PEDESTAL CRANE - PLATFORM ELLY					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01A, ELLY EAST CRANE, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, WITH OXIDATION CATALYST, JOHNSON MATTHEY, MODEL JM P/N CXXO-S-8-4, 195 BHP A/N: 533635	D92		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, L-01B, DIESEL FUEL, DETROIT DIESEL, MODEL 1064-7001, ELLY WEST CRANE, WITH OXIDATION CATALYST, CLEAN EMISSIONS PROD, MODEL 4-400, 195 BHP A/N: 533634	D93		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 1110.2, 2-1-2008]; NOX: 469 LBS/1000 GAL DIESEL (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 250 PPMV (5) [RULE 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 10: TURBINES: PUMP MECHANICAL POWER - PLATFORM ELLY					

- * (1) (1A) (1B) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5) (5A) (5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
- (2) (2A) (2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

M E M O R A N D U M

Date: September 26, 2012
To: Application File
From: Maria Vibal
Subject: Issuance of Permit Applications
Beta Offshore (Fac. ID 166073)

09/21/2012 Based on the permitting guidance provided by Sr. Engr. Rob Castro and Air Quality Analysis and Compliance Supervisor Gary Turner, the actions stated below will be completed on the following permit applications :

Appl. No.	RECLAIM/TV Appl.	Appl. Type	Action
517838-42	517837	C/O, P/C's Issued	Convert to P/O's; incorporate in RECLAIM/TV appl. 517837.
517837	-	RECLAIM/TV Mod.	Disposition; don't issue.
519178	-	Rule 1110.2 I&M Plan	Process; incorporate in RECLAIM/TV appl. 531454 as admin. revision.
531455	531454	Ch. of condition	Process as PC/PO; incorporate in RECLAIM/TV appl. 531454.
531454	-	RECLAIM/TV Mod.	Process as minor revision w/ EPA review.
533629-32, 533634-36	533625	Ch. of condition	Process as PC/PO, correction on condition C1.3; incorporate in RECLAIM/TV appl. 531454 as admin. revision.

Note : Change of condition A/N's 533629-32, 533634-36 supersede A/N's 517838-42.

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EVALUATION REPORT FOR PERMITS TO CONSTRUCT/OPERATE
Change of Condition and Administrative Revision of RECLAIM /Title V Facility Permit

APPLICANT'S NAME: Beta Offshore (Fac. ID 166073)

MAILING ADDRESS: 111 West Ocean Blvd. Ste. 1240
Long Beach, CA 90802-4645

EQUIPMENT LOCATION: OCS Lease Parcels P300/P301
Federal Waters

CONTACT : Marina Robertson
HSE & Regulatory Manager
Tel: (562) 683-3497

EQUIPMENT DESCRIPTION:

A/N's 533629-32, 533634, 533635, 533636 [Permits to Construct/Operate]

Beta Offshore (Beta) is proposing to change condition no. C1.3 to include the language on fuel usage limit to exempt the engines from the Rule 1110.2 concentration limits that would have been effective on July 1, 2011. The equipment are seven crane engines with device ID numbers D87 up to D93.

Device Id No.	Appl. No.	Previous Appl. No.
D87	533629	517840
D88	533630	516034
D89	533631	517839
D90	533632	517838
D93	533634	516037
D92	533635	517842
D91	533636	517841

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Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 6: ICE: Pedestal Crane - Platform Ellen					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, L-11B, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen East Crane, 195 BHP, A/N 517840 533629	D87		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-11A, Diesel Fuel, Detroit Diesel, Model 1063-7008, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Ellen Center Crane, 195 BHP, A/N 517841 533636	D91		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

Section D: Permit to Construct and Operate

Process 3: Internal Combustion Engines System 7: ICE: Pedestal Crane - Platform Eureka					
DESCRIPTION	ID No.	Connected to	Source Type/ Monitoring Unit	Emissions and Requirements	Equipment Specific Condition
Internal Combustion Engine, Non-Emergency, CR-030-A2, Diesel Fuel, Detroit Diesel, Model 1067-8503, Eureka West Crane, 195 BHP, A/N 516034 533630	D88		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D28.1, D323.3, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, CR-010-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N	D89		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

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CXXO-S-8-4, Eureka East Crane, 195 BHP, A/N 517839 533631				1-2008]	
Internal Combustion Engine, Non-Emergency, CR-020-A2, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Eureka Center Crane, 195 BHP, A/N 517838 533632	D90		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
System 8: ICE: Pedestal Crane - Platform Elly					
Internal Combustion Engine, Non-Emergency, L-01A, Diesel Fuel, Detroit Diesel, Model 1064-7001, with Oxidation Catalyst, Johnson Matthey, Model JM P/N CXXO-S-8-4, Elly East Crane, 195 BHP, A/N 517842 533635	D92		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1
Internal Combustion Engine, Non-Emergency, L-01B, Diesel Fuel, Detroit Diesel, Model 1064-7001, Elly West Crane, with Oxidation Catalyst, Clean Emissions Prod, Model 4-400, 195 BHP, A/N 516037 533634	D93		NOx: Process Unit	CO: 2000 ppmv (5) [Rule 1110.2, 2-1-2008]; NOx: 469 lbs/1000 Gal, Diesel (3) [Rule 2012, 5-6-2005]; PM: (9) [Rule 404, 2-7-1986]; VOC: 250 ppmv (5) [Rule 1110.2, 2-1-2008]	A63.6, C1.3, C1.4, D12.4, D28.1, D323.3, E193.1, E448.2, E448.4, E448.5, H23.7, K40.1

PERMIT CONDITIONS:

C. Throughput or Operating Parameter Limits

Proposed Permit Condition :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) ~~in any one year.~~ **or the fuel usage to no more than 1×10^9 BTUs, in any one year.**

Meeting either criteria shall ~~The purpose(s) of this condition is to~~ exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

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	M. Vibal	O

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a ~~non-resettable~~ elapsed time meter to accurately indicate the elapsed operating time of the equipment ~~or a non-resettable totalizing fuel meter to accurately indicate the fuel usage, for the engine.~~

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

The Facility Permit Program cannot accommodate the above changes in the permit wording. The permit condition will be split into two according to the following wording :

C1.3 The operator shall limit the operating time to no more than 500 hours(s) in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.4.

The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂. To comply with this condition, the operator shall install and maintain a ~~non-resettable~~ elapsed time meter to accurately indicate the elapsed operating time of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

C1.4 The operator shall limit the fuel usage to no more than 1 x 10⁹ Btu in any one year.

In lieu of complying with this condition, the operator may comply with Condition C1.3.

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The purpose(s) of this condition is to exempt the engine from the VOC limit of 30 ppmvd and the CO limit of 250 ppmvd, both corrected to 15% O₂, effective 7/1/2011, pursuant to Rule 1110.2(d)(1)(B)(ii).

The engine shall emit no more than 250 ppmvd of VOC and 2000 ppmvd of CO, both corrected to 15% O₂.

To comply with this condition, the operator shall install and maintain a(n)-non-resettable totalizing fuel meter to accurately indicate the fuel usage of the equipment.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1110.2, 2-1-2008]

[Devices subject to this condition : D87, D88, D89, D90, D91, D92, D93]

BACKGROUND:

Beta Offshore acquired this offshore facility from Pacific Energy and operates the OCS oil/gas production facility consisting of three offshore platforms – Elly, Ellen, and Eureka. The facility is located on the federal OCS, approximately 9 miles offshore of Huntington Beach. The oil and gas wells and a few minor equipment are located on Platforms Ellen and Eureka. The oil/gas/water produced from the wells on Ellen and Eureka are transported via subsea pipelines to Platform Elly for additional processing. The produced oil is shipped to the shore by subsea pipeline to the onshore receiving facility. The natural gas produced is used on platform Elly as fuel for electrical power generating turbines. The platform's total power demand is met by the turbines which are dual fuel and also operate on diesel. The produced water is re-injected into the reservoir.

Beta is a RECLAIM/Title V facility and is in Cycle 1. The change of ownership permit [Pacific Energy Resources to Beta] was issued on Mar. 15, 2011. Pacific Energy Resources requested the annual operating hours exemption on the crane engines in 2010. The exemption allowed the crane engines to comply with the old emission standards for CO and VOC, instead of the more stringent standards that became effective on July 1, 2011. The new limits are 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂. Device condition C1.3 addressing the exemption was added to the facility permit and apply to all seven crane engines. The evaluation report for this added condition processed by Engr. Vicky Lee is included in the file. At the time that condition C1.3 was generated, Pacific Energy Resources did not request for the exemption with the annual fuel usage limit.

Pacific Energy Resources kept the old emission limits of 250 ppmvd for VOC and 2000 ppmvd for CO, both measured at 15% O₂ in the facility permit until Beta assumed ownership in March, 2011. Beta applied to retrofit five (D87, D89, D90, D91, D92) of the crane engines with diesel oxidation catalysts to comply with the VOC emission requirement of 250 ppmvd per Rule 1110.2 (d)(1)(B)(ii), as amended on 2/1/2008. Beta submitted the retrofit applications in January, 2011 and permits to operate were issued.

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	M. Vibal	O

Beta filed the referenced applications (533629-36) on January 5, 2012 to change condition C1.3 to include the fuel usage limit provided in the Rule 1110.2 exemption from the concentration limits of 30 ppmvd for VOC and 250 ppmvd for CO, both measured at 15% O₂ that became effective on July 1, 2011. Permit Services rejected the applications received in January because of delinquent fees. Beta resubmitted the applications on Mar. 8, 2012.

Beta exceeded the 500 hrs/yr limit on crane engine D91 for the 2011 compliance year. This exceedance was reported to the AQMD as Title V deviation (No. 291589) and to the District Prosecutor's office. Although the engine exceeded the annual operating hours for low-usage, it did not exceed the fuel usage portion of the low-use criteria under Rule 1110.2(d)(1)(B). According to Beta, they are not expecting to exceed the fuel use portion of the criteria. In compliance year 2011, Beta provided information that they consumed only 988 gallons of diesel for this engine or 0.136×10^9 BTUs. The fuel usage required in Rule 1110.2(d)(1)(B) is less than 1×10^9 BTUs per year (HHV) to qualify for the exemption.

Since the requested change amounts to a correction of Facility Permit condition C1.3, no emission increases are expected. The change of condition for the seven crane engines is classified as "administrative revision" to the RECLAIM/Title V facility permit.

PROCESS DESCRIPTION:

The crane engines are used to move equipment around the platforms, transport equipment, material, supplies, waste, and personnel from crew boats and service boats to and from the platform. The cranes are also used to deploy boat for safety and environmental drill. These cranes operate at about 50% load and operate on an as needed basis for limited periods of time. The crane engines qualify for the exemption in Rule 1110.2 (d)(1)(B) because of their low use operation.

EMISSION CALCULATIONS:

Since there are no emission increases that are anticipated from the requested change of condition, the emissions from the previous application will be used in these applications. All crane engines are limited to 500 hrs/yr. The operating schedule is 52 wks/yr, 7 days/wk, 1.4 hrs/day.

Devices D87, D89, D90 and D92 are identical (same model number). Device D91 has a different engine model number but emissions are the same as HP rating is the same as the four crane engines. D93 was retrofitted with the diesel oxidation catalyst under Pacific Energy Resources. D93 has the same engine model number as the first four engines; however the catalyst is different and emissions are not the same. D93 cannot be considered identical to these engines. D88 is not equipped with the catalyst.

A/N	CO		NO _x		PM ₁₀		VOC, R1		VOC, R2		SO _x	
	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d	#/h	#/30-d
533629, -31, -32, -35, -36	0.04	0	0.2	0	0.01	0	0.02	0	0.006	0	0.002	0
533630	0.06	0	0.29	0	0.02	0	0.02	0	0.02	0	0.002	0
533634	0.04	0	0.2	0	0.01	0	0.02	0	0.02	0	0.002	0

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Toxic Air Contaminants'(TACs) Emissions:

Since there are no increases in emissions of any criteria pollutant, a detailed toxic analysis is not required.

RULES EVALUATION:

RULE 212 - STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^{-6}) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^{-6}) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

The requested change in condition to add the annual fuel usage limit for low-use criteria to condition C1.3 does not trigger an increase of any emissions. The applications do not require any public notice per subsections (c)(1) – EQUIPMENT AND SCHOOL LOCATIONS, (c)(2) – DAILY EMISSIONS and (c)(3) – MAXIMUM INDIVIDUAL CANCER RISK (MICR).

RULE 1110.2 - EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

Rule 1110.2(d)(1)(B)

This section of the rule requires that engines meet the following emission standards as of July 1, 2011:

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)¹	VOC (ppmvd)²	CO (ppmvd)¹
11	30	250

¹ Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

² Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

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	Evaluated by:	Operation Team
	M. Vibal	O

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

Beta provided information that they will not exceed the fuel usage of 1×10^9 British Thermal Units (Btus) per year (higher heating value). Condition C1.3 will be corrected to include the restriction on the fuel usage limit for low-use operation. Compliance is expected from the facility.

REGULATION XIII – NEW SOURCE REVIEW

RULE 1303(a) – BACT (Best Available Control Technology)

The Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The proposed change of condition is not expected to result in an increase in emissions; therefore, BACT requirements are not triggered.

RULE 1303(b)(1) – MODELING

The proposed change of condition does not result in an increase of any emissions. The modeling requirements of Rule 1303 are not triggered.

RULE 1303(b)(2) – OFFSETS

The proposed change of condition does not result in an increase of any emissions. The offset requirements of Rule 1303 are not triggered.

REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Beta Offshore is a NOx RECLAIM facility. The proposed change of condition does not impact the NOx emissions. A detailed analysis of Regulation XX is not required for the applications.

REGULATION XXX – TITLE V PERMITS

Beta Offshore is also operating under the federal Title V permitting program. The requirements of this regulation apply to the facility. Beta Offshore was issued its Initial Title V permit on March 12, 2010 and is valid through March 11, 2015. The proposed change of condition requires a correction on device condition C1.3. Incorporating the change in the RECLAIM/Title V facility permit qualifies as administrative change which does not require a federal review by the Environmental Protection Agency per Rule 3003(j)(1)(B). Compliance is expected from the facility.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION EVALUATION AND CALCULATIONS	No. of Pages 9	Page No. 9
	App. No. 533629-32, - 34 , -35, -36	Date Sept. 25, 2012
	Evaluated by: . M. Vibal	Operation Team O

CONCLUSIONS AND RECOMMENDATIONS:

The applications are expected to comply with all applicable District Rules and Regulations. It is recommended that Permits to Construct/Operate be issued to the facility with the permit conditions provided in the draft facility permit.



December 29, 2011

Permit Services
South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765-0944

Re: Applications / Requests for:
1) Change of Condition for Seven Internal Combustion Engines
2) Amend Title V (and RECLAIM) Facility Permit
Beta Offshore - Beta OCS Platforms Facility (ID 166073)

Dear Sir / Madam:

Beta Offshore is submitting seven applications for Change of Condition to more clearly and completely classify seven internal combustion (IC) engines as "Low Use Engines" under Rule 1110.2 and an application to amend its Title V (and RECLAIM) facility permit to reflect same.

The necessary application forms are enclosed as follows:

- One Form 400-CEQA; and
- Eight Forms 400-A (Seven to Limit the Operating Hours for Seven IC Engines and One to Amend the Facility Permit).
- One Form 500-A1
- One Form 500-A2
- One Form 500-C1
- One Form 500-C2

The seven permits for which the change of condition is requested are IC engines that serve as platform crane engines (D87, D88, D89, D90, D91, D92, and D93). Each of the seven crane engines has a maximum rated capacity of 195 bhp (Rule 301 Schedule B). Five of the seven crane engines - D87, D89, D90, D92, and D93 - are identical.

Because five of the seven engines are identical and, thus qualify for a 50% fee discount, our check in the amount of \$ 6,935.46 is enclosed for fees as follows:

Changes of Condition for D88 and D91 @ \$1,037.65 (Schedule B)	\$ 2,075.30
Change of Condition for D87 @ \$1,037.65 (Schedule B)	\$ 1,037.65
Changes of Condition for D89, 90, 92 and 93 @ \$518.83 (50% of Schedule B)	\$ 2,075.32
Amend Title V (and RECLAIM) Facility Permit	\$ 1,747.19
<hr/>	
Total	\$ 6,935.46

We request that permit condition C1.3, which currently limits the use of each of these engines to no more than 500 hours per year (to exempt them from Rule 1110.2 concentration limits that otherwise would have been effective July 1, 2011), be modified to include the “or” language in subparagraph (d)(1)(B) of Rule 1110.2, which reads as follows (emphasis added):

*“The concentration limits effective on and after July 1, 2010, shall not apply to engines that operate less than 500 hours per year **or use less than 1×10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.**”*

Accordingly, we request that permit condition C1.3 be revised for the permits for each of the seven IC engines to read as follows:

“The operator shall limit the operating time to no more than 500 hour(s) in any one year or limit the fuel usage to no more than 1×10^9 Btus per year. Meeting either criteria shall exempt the engine from the emission limits that otherwise would have been effective on or after July 1, 2010 as specified in Table VI of Rule 1110.2 (as amended February 1, 2008).”

In accordance with subparagraph (e)(1)(C) of the rule, the previous facility operator, Pacific Energy Resources, Ltd, submitted similar applications in July 2008. However, that application package failed to specifically request the entire Rule 1110.2(d)(1)(B) language be included in the permit condition that would clearly classify the engines as “Low Use Engines”. As a result, permit condition C1.3 specifies the 500 hours per year operating time limit, but does not specify the alternative fuel usage limit. Beta Offshore wishes to modify the language in condition C1.3 in each of the seven permits to bring these fully in line with the entire exemption language in Rule 1110.2 (d)(1)(B) shown above. We also request that the Title V (and RECLAIM) facility permit (# 166073) be amended to reflect the above changes.

Also, subparagraph (e)(9) of Rule 1110.2 says:

“If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.”

In September 2011, D91 exceeded its 500 hours per year limit for the 2011 compliance year. The exceedance was reported to the District as a Title V deviation (No. 291589) and to the District Prosecutor's office, with whom we are currently negotiating a settlement. (Beta Offshore cannot take the engine out service because it is needed to complete a pipeline project required to go forward in order to meet Federal requirements.) Although the engine exceeded the operating hours portion of the low-use criteria in Rule 1110.2 (d)(1)(B), it did not (and will not) exceed the fuel use portion of those criteria. As of November 30, 2011, the engine had used 888 gallons of diesel during the 2011 compliance year, which equates to 0.122×10^9 Btus. Anticipated additional usage during the month of December is approximately 100 gallons of diesel, or 0.0137×10^9 Btus. Thus, the engine's fuel use during compliance year 2011 will be far less than the Rule 1110.2 low use criteria of 1×10^9 Btus. Because the engine only exceeded the 500 hours per year criteria and not the fuel use criteria, the requirements of Rule 1110.2(e)(9) are not triggered and the 250 ppmv VOC and 2000 ppmv CO limits in Table II of Rule 1110.2 continue to be applicable.

The following certification is provided to satisfy the requirements of Rule 3005(e)(2)(ii) and Rule 3003(c)(7):

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in the enclosed application package are true, accurate, and complete. Furthermore, each of the permit revisions meet the criteria defined in Rule 3000(b)(6) for use of de minimus significant permit revision procedures and we request that such procedures be used.

If you have any questions or require additional information, please contact me at (562) 628-1526.
Thank you.

Sincerely,



Steve Liles
Executive Vice President and Chief Operating Officer

Enclosures:

- 1) One Form 400-CEQA
- 2) Eight Forms 400-A
- 3) One Form 500-A1
- 4) One Form 500-A2
- 5) One Form 500-C1
- 6) One Form 500-C2
- 7) Check for \$ 6,935.46

cc: (w/o Enclosures) Ms. Maria Vibal, AQ Engr. II, South Coast AQMD

Attachment A5-1 Ongoing Evaluation of Potential Sources for the Revised Cumulative Air Quality Impacts Analysis

Facilities within 6 Mile Radius of HBEP										
Facility ID	Facility Name (provided by SCAQMD)	Facility within 6 mile radius?	Included (Y/N)	Reason for Exclusion	Location Street Address	Location City	Location State	Location Zip Code	Location UTM East	Location UTM North
3361	BEHR PROCESS CORP	> 6 miles	N	More than 6 miles from HBEP	1603 W ALTON AVE	SANTA ANA	CA	92704	417.614	3729.466
3496	FAIRVIEW DEVELOPMENTAL CENTER	< 4 miles	N	Facility Emissions < 5 tpy	2501 HARBOR BLVD	COSTA MESA	CA	92626	414.758	3725.004
3550	PACIFIC LIFE INSURANCE	~ 6 miles	N	Facility Emissions < 5 tpy	700 NEWPORT CENTER DR	NEWPORT BEACH	CA	92660	418.589	3720.003
4591	ORANGE COUNTY WATER DISTRICT	< 4 miles	N	Facility Emissions < 5 tpy	18700 WARD ST	FOUNTAIN VALLEY	CA	92708	412.37	3728.13
5076	PIONEER CIRCUITS INC	< 6 miles	N	Facility Emissions < 5 tpy	3000-10 S SHANNON ST	SANTA ANA	CA	92704	414.444	3729.887
8309	CAMBRO MANUFACTURING CO	< 3 miles	N	Facility Emissions < 5 tpy	7601 CLAY AVE	HUNTINGTON BEACH	CA	92648	407.74	3727.26
8408	OMNI METAL FINISHING INC	< 6 miles	N	Facility Emissions < 5 tpy	11665 COLEY RIVER CIR	FOUNTAIN VALLEY	CA	92708	414.12	3730.415
11818	HIKSON METAL FINISHING	< 3 miles	N	Facility Emissions < 5 tpy	817-853 PRODUCTION PL	NEWPORT BEACH	CA	92663	413.73	3721.32
14523	PACIFIC BELL, AT&T CALIFORNIA, DBA	> 6 miles	N	More than 6 miles from HBEP	3220 S BRISTOL ST	SANTA ANA	CA	92704	417.94	3729.61
16025	SOUNDCAST CO., DIVISION OF GRISWOLD IND.	< 3 miles	N	Facility Emissions < 5 tpy	1731-41 PLACENTIA AVE	COSTA MESA	CA	92627	413.6	3722.2
16660	THE BOEING COMPANY	> 6 miles	N	More than 6 miles from HBEP	5301 BOLSA AVE	HUNTINGTON BEACH	CA	92647	403.98	3734.11
17301	ORANGE COUNTY SANITATION DISTRICT	< 4 miles	Y	N/A	10844 ELLIS AVE	FOUNTAIN VALLEY	CA	92708	413.24	3728.49
19097	SKILL-CRAFT BODY SHOP INC	< 5 miles	N	Facility Emissions < 5 tpy	17072 GOTHARD ST	HUNTINGTON BEACH	CA	92647	407.327	3730.809
19353	GOLDEN WEST COLLEGE, COMMUNITY COLLEGE	~ 6 miles	N	Facility Emissions < 5 tpy	15744 GOLDEN WEST ST	HUNTINGTON BEACH	CA	92647	406.72	3732.898
20231	HUNTINGTON BEACH CITY, WATER DEPT	< 3 miles	Y	N/A	19001-71 HUNTINGTON ST	HUNTINGTON BEACH	CA	92648	407.73	3728.75
21104	HUNTINGTON BEACH CITY, WATER DEPT	> 6 miles	N	More than 6 miles from HBEP	14561 SPRINGDALE ST	HUNTINGTON BEACH	CA	92647	405.095	3734.853
23401	HOOD MFG INC	> 6 miles	N	More than 6 miles from HBEP	2621 S BIRCH ST	SANTA ANA	CA	92707	419.268	3730.367
24427	HUNTINGTON BEACH CITY, WATER DEPT	< 6 miles	N	Facility Emissions < 5 tpy	16221 GOTHARD ST	HUNTINGTON BEACH	CA	92648	407.33	3732.13
29110	ORANGE COUNTY SANITATION DISTRICT	< 1 mile	Y	N/A	22212 BROOKHURST ST	HUNTINGTON BEACH	CA	92646	410.92	3722.36
29986	AUTOMOBILE CLUB OF SO CALIF	< 6 miles	N	Facility Emissions < 5 tpy	3333 FAIRVIEW RD	COSTA MESA	CA	92626	415.85	3728.02
33395	HUNTINGTON BEACH CITY	< 3 miles	N	Facility Emissions < 5 tpy	2000 MAIN ST	HUNTINGTON BEACH	CA	92648	407.149	3726.468
33837	BODYCOTE THERMAL PROCESSING	> 6 miles	N	More than 6 miles from HBEP	7474 GARDEN GROVE BLVD	WESTMINSTER	CA	92683	407.465	3737.313
35667	VERIZON CALIFORNIA INC	> 6 miles	N	More than 6 miles from HBEP	6802 WESTMINSTER AVE	WESTMINSTER	CA	92683	406.404	3735.696
42775	WEST NEWPORT OIL CO	< 3 miles	N	Facility Emissions < 5 tpy	1080 W 17TH ST	COSTA MESA	CA	92627	412.671	3722.006
47211	B & B ENAMELING INC	< 5 miles	N	Facility Emissions < 5 tpy	17591 SAMPSON LN	HUNTINGTON BEACH	CA	92647	407.59	3729.887
52201	VERIZON CALIFORNIA INC	< 3 miles	N	Facility Emissions < 5 tpy	19111 BUSHARD ST	HUNTINGTON BEACH	CA	92646	410.746	3727.442
53733	HUNTINGTON BEACH CITY, WATER DEPT	< 6 miles	Y	N/A	16192 SHER LN	HUNTINGTON BEACH	CA	92647	407.85	3732.15
58591	ORANGE COAST COLLEGE, COMMUNITY COLLEGE	< 5 miles	N	Facility Emissions < 5 tpy	2701 FAIRVIEW RD	COSTA MESA	CA	92626	415.85	3725.75
60541	FOUNTAIN VALLEY REGIONAL HOSP,B HANNA ET	< 6 miles	N	Facility Emissions < 5 tpy	17100 EUCLID ST	FOUNTAIN VALLEY	CA	92708	413.169	3730.815
68159	RADISSON HOTEL NEWPORT BEACH	> 6 miles	N	More than 6 miles from HBEP	4545 MACARTHUR BLVD	NEWPORT BEACH	CA	92660	419.835	3725.696
68458	IRVINE OFFICE CO, TOWER 4	> 6 miles	N	More than 6 miles from HBEP	660 NEWPORT CENTER DR	NEWPORT BEACH	CA	92660	418.9	3720.07
68459	IRVINE OFFICE CO, C/O INSIGNIA ESG.	> 6 miles	N	More than 6 miles from HBEP	450-550 NEWPORT CENTER DR	NEWPORT BEACH	CA	92660	418.74	3720.07
71510	ORANGE, COUNTY OF - JOHN WAYNE AIRPORT	> 6 miles	N	More than 6 miles from HBEP	18601 AIRPORT WAY	SANTA ANA	CA	92707	420.36	3727.07
80026	FREY ENVIRONMENTAL INC	Unknown	N	Facility Emissions < 5 tpy	VARIOUS LOCATIONS IN SCAQMD	NEWPORT BEACH	CA	92663	0	0
80066	LAIRD COATINGS CORPORATION	> 6 miles	N	More than 6 miles from HBEP	15541 COMMERCE LN	HUNTINGTON BEACH	CA	92649	404.463	3733.207
80246	SEGERSTROM CENTER FOR THE ARTS	> 6 miles	N	More than 6 miles from HBEP	600 TOWN CENTER	COSTA MESA	CA	92626	418.42	3727.93
81767	BEHR PROCESS CORP	< 6 miles	N	Facility Emissions < 5 tpy	3400 W GARRY AVE	SANTA ANA	CA	92704	415.18	3729.71
86987	MARRIOTT CORP,COSTA MESA MARRIOTT SUITES	> 6 miles	N	More than 6 miles from HBEP	500 ANTON BLVD	COSTA MESA	CA	92626	418.485	3727.962
88442	600 ANTON BLV ASSOC,SO COAST PLZ TWN CTR	> 6 miles	N	More than 6 miles from HBEP	600 ANTON BLVD	COSTA MESA	CA	92626	418.31	3727.964
89400	FOUNTAIN VALLEY BODY WORKS INC	< 6 miles	N	Facility Emissions < 5 tpy	17481 NEWHOPE ST	FOUNTAIN VALLEY	CA	92708	413.923	3729.812
94967	MESA WATER DISTRICT	< 5 miles	Y	N/A	3596 CADILLAC AVE	COSTA MESA	CA	92626	413.88	3729.13
95067	MESA WATER DISTRICT	< 3 miles	N	Facility Emissions < 5 tpy	1971 PLACENTIA AVE	COSTA MESA	CA	92627	413.57	3723.1
95212	FABRICA	< 6 miles	Y	N/A	3201 S SUSAN ST	SANTA ANA	CA	92704	415.49	3729.48
95535	HUNTINGTON BEACH CITY, WATER DIVISION	< 5 miles	N	Facility Emissions < 5 tpy	8851 WARNER AVE	HUNTINGTON BEACH	CA	92647	409.69	3730.89
98334	SANTA ANA UNI SCH DIST, LATHROP INTERMED	> 6 miles	N	More than 6 miles from HBEP	1111 S BROADWAY	SANTA ANA	CA	92707	419.419	3732.846
98380	MESA WATER DISTRICT	< 5 miles	Y	N/A	2340 ORANGE AVE	COSTA MESA	CA	92627	416.46	3723.89
103083	SOUTHERN CALIFORNIA BOILER INC	Unknown	N	Facility Emissions < 5 tpy	VARIOUS LOCATIONS IN SCAQMD	HUNTINGTON BEACH	CA	92649	0	0
103167	THE GAFFOGLIO FAMILY METAL CRAFTERS INC	< 6 miles	N	Facility Emissions < 5 tpy	11161 SLATER AVE	FOUNTAIN VALLEY	CA	92708	413.228	3730.104
107553	JOHN A THOMAS	< 4 miles	N	Facility Emissions < 5 tpy	W ELLIS/EDWARDS ST (BOLSA LEASE)	HUNTINGTON BEACH	CA	92648	0	0
107891	ORANGE COAST MEMORIAL MEDICAL CENTER	< 5 miles	N	Facility Emissions < 5 tpy	9900-40 TALBERT AVE	FOUNTAIN VALLEY	CA	92708	413.38	3729.31
111110	BRISTOL FIBERLITE INDUSTRIES, INC	> 6 miles	N	More than 6 miles from HBEP	401 E GOETZ AVE	SANTA ANA	CA	92707	420.006	3730.306
112292	FLETCHER JONES MOTORCARS	> 6 miles	N	More than 6 miles from HBEP	3300 JAMBOREE RD	NEWPORT BEACH	CA	92707	419.645	3723.328
113160	HILTON COSTA MESA	~ 6 miles	N	Facility Emissions < 5 tpy	3050 BRISTOL ST	COSTA MESA	CA	92626	417.91	3727.11
113318	SIGNATURE COMBS INC.	> 6 miles	N	More than 6 miles from HBEP	19301 CAMPUS DR STE 100	SANTA ANA	CA	92707	419.43	3725.54
115389	AES HUNTINGTON BEACH, LLC	0 miles	N	Preparing PTA for this Facility	21730 NEWLAND ST	HUNTINGTON BEACH	CA	92646	409.16	3723.23
120651	HUNTINGTON BEACH HOSPITAL	< 5 miles	N	Facility Emissions < 5 tpy	17772 BEACH BLVD	HUNTINGTON BEACH	CA	92647	408.337	3729.622
125300	CITY OF HUNTINGTON BEACH- WATER OPER.	< 4 miles	N	Facility Emissions < 5 tpy	6401 OVERLOOK DR	HUNTINGTON BEACH	CA	92648	405.81	3728.25
127513	ONLY CREMATIONS FOR PETS, INC	> 6 miles	N	More than 6 miles from HBEP	4263 BIRCH ST	NEWPORT BEACH	CA	92660	419.559	3725.382
127592	TOYOTA RACING DEVELOPMENT	> 6 miles	N	More than 6 miles from HBEP	335 E BAKER ST	COSTA MESA	CA	92626	418.692	3726.664
127790	BEHR PROCESS CORP, BEHR YALE FACILITY	< 6 miles	N	Facility Emissions < 5 tpy	3500 W SEGERSTROM AVE	SANTA ANA	CA	92704	415.06	3730.037
129416	WESTIN SOUTH COAST PLAZA	> 6 miles	N	More than 6 miles from HBEP	686 ANTON BLVD	COSTA MESA	CA	92626	417.98	3727.97
130223	CALIBER BODY WORKS INC	< 6 miles	N	Facility Emissions < 5 tpy	11528 MARTENS RIVER CIR	FOUNTAIN VALLEY	CA	92708	414	3730.22
131732	NEWPORT FAB, LLC	> 6 miles	N	More than 6 miles from HBEP	4321 JAMBOREE RD	NEWPORT BEACH	CA	92660	419.622	3723.813
136183	ORANGE COUNTY TRANSPORTATION AUTHORITY	< 6 miles	N	Facility Emissions < 5 tpy	4301 W MACARTHUR BLVD	SANTA ANA	CA	92704	0	0
136381	ECOTECH ENVIRONMENTAL, CORPORATION	Unknown	N	Facility Emissions < 5 tpy	VARIOUS LOCATIONS IN SCAQMD	FOUNTAIN VALLEY	CA	92708	0	0
142065	SEGERSTROM CENTER FOR THE ARTS	> 6 miles	N	More than 6 miles from HBEP	615 TOWN CENTER DR	COSTA MESA	CA	92626	0	0
142592	THE FIRST AMERICAN CORPORATION	> 6 miles	N	More than 6 miles from HBEP	9 FIRST AMERICAN WAY	SANTA ANA	CA	92707	0	0
143700	MIREF I, LLC	> 6 miles	N	More than 6 miles from HBEP	1500 QUAIL ST	NEWPORT BEACH	CA	92660	419.48	3724.69
143741	DCOR LLC	< 4 miles	N	Facility Emissions < 5 tpy	OFFSHORE PLATFORM EDITH OCS P-0296	HUNTINGTON BEACH	CA	92649	403.56	3724.74

Facilities within 6 Mile Radius of HBEP										
Facility ID	Facility Name (provided by SCAQMD)	Facility within 6 mile radius?	Included (Y/N)	Reason for Exclusion	Location Street Address	Location City	Location State	Location Zip Code	Location UTM East	Location UTM North
147434	FAIRMONT NEWPORT BEACH	> 6 miles	N	More than 6 miles from HBEP	4500 MACARTHUR BLVD	NEWPORT BEACH	CA	92660	419.855	3725.619
148034	THE ISLAND HOTEL	> 6 miles	N	More than 6 miles from HBEP	690 NEWPORT CENTER DR	NEWPORT BEACH	CA	92660	418.76	3720.1
155585	DOUBLETREE HOTEL	> 6 miles	N	More than 6 miles from HBEP	201 E MACARTHUR BLVD	SANTA ANA	CA	92707	419.77	3729.05
159607	TIAA - CREF - 3 HUTTON CENTRE	> 6 miles	N	More than 6 miles from HBEP	3 HUTTON CENTRE DR	SANTA ANA	CA	92707	419.78	3729.02
163996	HARBOR JUSTICE CTR, NEWPORT BCH, JCC AOC	> 6 miles	N	More than 6 miles from HBEP	4601 JAMBOREE RD	NEWPORT BEACH	CA	92660	420.63	3725.07
166073	BETA OFFSHORE	> 6 miles	N	More than 6 miles from HBEP	OCS LEASE PARCELS P300/P301	HUNTINGTON BEACH	CA	92648	395.21	3725.82
167066	ARLON GRAPHICS L.L.C.	< 6 miles	N	Facility Emissions < 5 tpy	2811 S HARBOR BLVD	SANTA ANA	CA	92704	414.79	3716.44
169754	SO CAL HOLDING, LLC	< 3 miles	Y	N/A	20101 GOLDENWEST ST	HUNTINGTON BEACH	CA	92648	406.22	3726.28
169961	IRVINE COMPANY	> 6 miles	N	More than 6 miles from HBEP	650 NEWPORT CENTER DR	NEWPORT BEACH	CA	92660	418.94	3720.05
173582	CERADYNE, INC. 3M COMPANY	> 6 miles	N	More than 6 miles from HBEP	3163-69 RED HILL AVE	COSTA MESA	CA	92626	419.64	3727.58
177008	HARBOR DISTRIBUTION, LLC	> 6 miles	N	More than 6 miles from HBEP	5901 BOLSA AVE	HUNTINGTON BEACH	CA	92647	404.97	3734.11
177077	BRE/OC GRIFFIN L.L.C.	> 6 miles	N	More than 6 miles from HBEP	5 & 6 HUTTON CENTER DR	SANTA ANA	CA	92707	0	0
177515	GE POWER AND WATER	> 6 miles	N	More than 6 miles from HBEP	150 BAKER E ST SUITE 100	COSTA MESA	CA	92626	0	0
180663	USPF V 1301 DOVE, LP	> 6 miles	N	More than 6 miles from HBEP	1301 DOVE ST SUITE 370	NEWPORT BEACH	CA	92660	419.74	3724.84
800318	GRISWOLD INDUSTRIES	< 3 miles	N	Facility Emissions < 5 tpy	1701-41 PLACENTIA AVE	COSTA MESA	CA	92627	413.56	3722.003
800389	SANMINA CORPORATION	~ 6 miles	N	Facility Emissions < 5 tpy	2950 RED HILL AVE	COSTA MESA	CA	92626	418.434	3725.588
148232	CHEVRON ENVIRONMENTAL MANAGEMENT CO	< 4 miles	N	Facility Emissions < 5 tpy	18501 BEACH BLVD	HUNTINGTON BEACH	CA	92648	408336.3	3728656.48
168160	YAKULT U.S.A., INC.	< 6 miles	N	Facility Emissions < 5 tpy	17235 NEWHOPE ST	FOUNTAIN VALLEY	CA	92708	413972.5	3730794.29
800302	CHEVRON PRODUCTS COMPANY	< 5 miles	N	Facility Emissions < 5 tpy	17881 GOTHARD ST	HUNTINGTON BEACH	CA	92647	407333.1	3729686.71
800419	PLAINS WEST COAST TERMINALS LLC	< 1 mile	N	Facility Emissions < 5 tpy	21652 NEWLAND ST	HUNTINGTON BEACH	CA	92646	409170.5	3723610.34
14146	MAC GREGOR YACHT CORP	< 3 miles	N	Facility Emissions < 5 tpy	1631 & 1647 PLACENTIA AVE	COSTA MESA	CA	92627	413.559	3721.74
94938	FOUNTAIN VALLEY CITY, PUBLIC WORKS DEPT	< 5 miles	N	Facility Emissions < 5 tpy	18460 EUCLID ST	FOUNTAIN VALLEY	CA	92708	413.36	3728.779
111945	GOGLANIAN BAKERIES, INC.	< 6 miles	N	Facility Emissions < 5 tpy	3401 W SEGERSTROM AVE	SANTA ANA	CA	92704	0	0
172696	CYTEC ENGINEERED MATERIALS, INC	< 3 miles	N	Facility Emissions < 5 tpy	851 W 18TH ST	COSTA MESA	CA	92627	0	0

Notes:

If facility emission were not available in the SCAQMD FIND Database, it was assumed the facility emitted less than the reportable quantities of CO, NOx, SOx, and TSP.

Facility UTM coordinates were changed to be consistent with the location of the emission sources, which are at an offshore location that differs from the location in the SCAQMD database.

Facilities were added to be consistent with previous Public Records Requests regarding facilities located within 6 miles of HBEP.

		Facility Data from SCAQMD (tpy)																													
		2009				2010				2011				2012				2013				2014				2015					
Facility ID	Facility Name (provided by SCAQMD)	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP		
3361	BEHR PROCESS CORP																														
3496	FAIRVIEW DEVELOPMENTAL CENTER	0.929	1.876	0.028	0.276	0.387	1.15	0.042	0.43	1.513	1.57	0.033	0.407	0.299	1.064	0.029	0.438	1.26	0.845	0.031	0.444		Data not available					Data not available			
3550	PACIFIC LIFE INSURANCE	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
4591	ORANGE COUNTY WATER DISTRICT	0.013	0.063	0	0.011	0.015	0.069	0.001	0.012	Data not available				Data not available				Data not available				Data not available				Data not available					
5076	PIONEER CIRCUITS INC	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
8309	CAMBRO MANUFACTURING CO	0.717	0.532	0	0.082	0.04	0.148	0	0.031	0.287	0.304	0	0.033	0.144	0.222	0.001	0.038	0.13	0.135	0	0.034		Data not available					Data not available			
8408	OMNI METAL FINISHING INC	0.057	0.094	0	0.028	0.055	0.084	0	0.031	0.052	0.077	0	0.05	0.052	0.096	0	0.177	0.056	0.106	0	0.162		Data not available					Data not available			
11818	HIXSON METAL FINISHING	0.029	0.111	0	0.016	0.046	0.172	0	0.017	0.056	0.209	0	0.022	0.058	0.216	0	0.019	0.065	0.243	0.001	0.024		Data not available					Data not available			
14523	PACIFIC BELL, AT&T CALIFORNIA, DBA																														
16025	SOUNDCAST CO., DIVISION OF GRISWOLD IND.	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
16660	THE BOEING COMPANY																														
17301	ORANGE COUNTY SANITATION DISTRICT	213.546	23.714	0.719	2.963	227.6	24.471	0.729	3.465	120.471	17.836	0.806	1.393	96.786	25.584	0.981	3.044	132.53	22.902	0.403	1.883		Data not available					Data not available			
19097	SKILL-CRAFT BODY SHOP INC	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
19353	GOLDEN WEST COLLEGE, COMMUNITY COLLEGE	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
20231	HUNTINGTON BEACH CITY, WATER DEPT	13.013	0.818	0.002	0.034	12.935	7.685	0.002	0.034	10.281	6.108	0.001	0.027	0.562	0.024	0.001	0.022	0.893	0.039	0.002	0.035		Data not available					Data not available			
21104	HUNTINGTON BEACH CITY, WATER DEPT																														
23401	HOOD MFG INC																														
24427	HUNTINGTON BEACH CITY, WATER DEPT	0.613	0.161	0.003	0.057	0.246	0.064	0.001	0.022	0.219	0.057	0.001	0.02	Data not available				0.118	0.031	0	0.011		Data not available					Data not available			
29110	ORANGE COUNTY SANITATION DISTRICT	360.768	34.04	0.99	6.381	348.361	35.815	1.194	5.196	245.843	35.186	0.974	4.416	166.73	34.015	15.595	3.424	159.478	36.24	15.237	2.67		Data not available					Data not available			
29986	AUTOMOBILE CLUB OF SO CALIF	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
33395	HUNTINGTON BEACH CITY	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
33837	BODYCOTE THERMAL PROCESSING																														
35667	VERIZON CALIFORNIA INC																														
42775	WEST NEWPORT OIL CO	0.584	0.762	2.026	0.063	0.554	0.768	2.378	0.062	1.941	0.831	2.164	0.165	1.632	0.73	2.617	0.16	2.048	0.868	2.914	0.135		Data not available					Data not available			
47211	B & B ENAMELING INC	0.028	0.104	0	0.052	Data not available				Data not available				Data not available				0.039	0.144	0	0.142		Data not available					Data not available			
52201	VERIZON CALIFORNIA INC	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
53733	HUNTINGTON BEACH CITY, WATER DEPT	34.089	2.144	0.005	0.089	0	0	0	0	2.276	1.352	0	0.006	0.313	0.031	0.006	0.109	0.313	0.031	0.006	0.109		Data not available					Data not available			
58591	ORANGE COAST COLLEGE, COMMUNITY COLLEGE	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
60541	FOUNTAIN VALLEY REGIONAL HOSP,B HANNA ET	0.282	0.778	0.013	0.137	Data not available				0.459	0.788	0.015	0.146	0.523	0.737	0.008	0.131	1.298	0.449	0.008	0.132		Data not available					Data not available			
68159	RADISSON HOTEL NEWPORT BEACH																														
68458	IRVINE OFFICE CO, TOWER 4																														
68459	IRVINE OFFICE CO, C/O INSIGNIA ESG.																														
71510	ORANGE, COUNTY OF - JOHN WAYNE AIRPORT																														
80026	FREY ENVIRONMENTAL INC	0.239	0.887	0.004	0.051	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
80066	LAIRD COATINGS CORPORATION																														
80246	SEGERSTROM CENTER FOR THE ARTS																														
81767	BEHR PROCESS CORP	0.013	0.055	0	1.42	0.009	0.037	0	1.557	0.011	0.044	0	0.287	Data not available				0.016	0.072	0	0.253		Data not available					Data not available			
86987	MARRIOTT CORP,COSTA MESA MARRIOTT SUITES																														
88442	600 ANTON BLV ASSOC,SO COAST PLZ TWN CTR																														
89400	FOUNTAIN VALLEY BODY WORKS INC	0.021	0.08	0	0.004	0.034	0.129	0	0.007	Data not available				Data not available				Data not available				Data not available				Data not available					
94967	MESA WATER DISTRICT	7.772	0.224	0.008	0.149	6.444	0.185	0.007	0.124	50.555	3.18	0.007	0.133	2.086	0.538	0.007	0.126	4.319	0.312	0.004	0.072		Data not available					Data not available			
95067	MESA WATER DISTRICT	0.345	0.057	0	0.008	0.389	0.065	0	0.01	2.726	0.263	0	0.01	0.742	0.074	0	0.012	0.387	0.096	0	0.01		Data not available					Data not available			
95212	FABRICA	7.281	0.913	0.021	1.05	8.772	1.122	0.026	2.112	Data not available				Data not available				Data not available				Data not available				Data not available					
95535	HUNTINGTON BEACH CITY, WATER DIVISION	2.997	0.188	0	0.007	0.517	0.057	0.003	0.051	0.372	0.041	0.002	0.373	0.55	0.024	0.001	0.022	0.253	0.011	0	0.01		Data not available					Data not available			
98334	SANTA ANA UNI SCH DIST, LATHROP INTERMED																														
98380	MESA WATER DISTRICT	0.279	0.119	0.001	0.029	0.253	0.11	0.001	0.026	8.125	0.622	0.001	0.026	1.088	0.296	0.001	0.025	1.119	0.211	0.001	0.026		Data not available					Data not available			
103083	SOUTHERN CALIFORNIA BOILER INC	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
103167	THE GAFFOGLIO FAMILY METAL CRAFTERS INC	0.064	0.241	0.001	0.051	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
107553	JOHN A THOMAS	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
107891	ORANGE COAST MEMORIAL MEDICAL CENTER	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
111110	BRISTOL FIBERLITE INDUSTRIES, INC																														
112292	FLETCHER JONES MOTORCARS																														
113160	HILTON COSTA MESA	Data not available				0.931	1.703	0.008	0.156	Data not available				Data not available				Data not available				Data not available				Data not available					
113318	SIGNATURE COMBS INC.																														
115389	AES HUNTINGTON BEACH, LLC	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
120651	HUNTINGTON BEACH HOSPITAL	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
125300	CITY OF HUNTINGTON BEACH- WATER OPER.	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
127513	ONLY CREMATIONS FOR PETS, INC																														
127592	TOYOTA RACING DEVELOPMENT																														
127790	BEHR PROCESS CORP, BEHR YALE FACILITY	0	0	0	0.263	0	0	0	0.271	0	0	0	0.144	Data not available				0	0	0	0.314		Data not available					Data not available			
129416	WESTIN SOUTH COAST PLAZA																														
130223	CALIBER BODY WORKS INC	Data not available				Data not available				0.014	0.052	0	0.011	Data not available				Data not available				Data not available				Data not available					
131732	NEWPORT FAB, LLC																														
136183	ORANGE COUNTY TRANSPORTATION AUTHORITY	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
136381	ECOTECH ENVIRONMENTAL, CORPORATION	0.521	0.578	0.009	0.02	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available					
142065	SEGERSTROM CENTER FOR THE ARTS																														
142592	THE FIRST AMERICAN CORPORATION																														
143700	MIREF I, LLC																														
143741	DCOR LLC	0.51	2.647	0.017	0.127	0.726	2.859	0.022	0.176	Data not available				Data not available				0.962	3.971	0.009	0.257		Data not available					Data not available			

		Facility Data from SCAQMD (tpy)																											
		2009				2010				2011				2012				2013				2014				2015			
Facility ID	Facility Name (provided by SCAQMD)	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP	CO	NOX	SOX	TSP
147434	FAIRMONT NEWPORT BEACH																												
148034	THE ISLAND HOTEL																												
155585	DOUBLETREE HOTEL																												
159607	TIAA - CREF - 3 HUTTON CENTRE																												
163996	HARBOR JUSTICE CTR, NEWPORT BCH, JCC AOC																												
166073	BETA OFFSHORE	Data not available				Data not available				23.686	197.094	0.073	4.522	26.198	219.597	0.104	5.777	Data not available				Data not available				Data not available			
167066	ARLON GRAPHICS L.L.C.	Data not available				Data not available				0.461	0	0.007	0.093	0.385	1.393	0.006	0.077	0.506	0	0.008	0.106	Data not available				Data not available			
169754	SO CAL HOLDING, LLC	Data not available				Data not available				0.576	1.205	0.082	0.114	2.012	4.195	0.03	0.428	2.6	6.359	0.037	0.49	Data not available				Data not available			
169961	IRVINE COMPANY																												
173582	CERADYNE, INC. 3M COMPANY																												
177008	HARBOR DISTRIBUTION, LLC																												
177077	BRE/OC GRIFFIN L.L.C.																												
177515	GE POWER AND WATER																												
180663	USPF V 1301 DOVE, LP																												
800318	GRISWOLD INDUSTRIES	0.323	0.861	0.004	0.342	0.264	0.98	0.005	0.731	0.594	1.825	0.008	0.969	0.651	2.018	0.009	0.828	0.513	1.837	0.008	0.769	Data not available				Data not available			
800389	SANMINA CORPORATION	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available			
148232	CHEVRON ENVIRONMENTAL MANAGEMENT CO	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available			
168160	YAKULT U.S.A., INC.	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available			
800302	CHEVRON PRODUCTS COMPANY	1.337	1.902	0.029	0.286	1.495	2.127	0.034	0.32	1.335	1.9	0.031	0.286	1.207	1.717	0.02	0.258	1.54	2.24	0.036	0.329	Data not available				Data not available			
800419	PLAINS WEST COAST TERMINALS LLC	Data not available				Data not available				Data not available				0	0	0	0	0	0	0	0	Data not available				Data not available			
14146	MAC GREGOR YACHT CORP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Data not available				Data not available			
94938	FOUNTAIN VALLEY CITY, PUBLIC WORKS DEPT	Data not available				Data not available				Data not available				Data not available				Data not available				Data not available				Data not available			
111945	GOGLANIAN BAKERIES, INC.	1.538	2.803	0.019	0.25	1.886	3.397	0.025	0.318	1.881	1.616	0.025	0.318	1.568	1.369	0.021	0.263	1.484	2.715	0.019	0.373	Data not available				Data not available			
172696	CYTEC ENGINEERED MATERIALS, INC	Data not available				Data not available				Data not available				Data not available				0.593	2.203	0.01	0.41	Data not available				Data not available			

Notes:

If facility emission were not available in the SCAQMD FIND Database, it was assumed the facility emitted less than the reportable qnanitites of CO, NOx, SOx, and TSP.

Facility UTM coordinates were changed to be consistent with the location of the emission sources, which are at an offshore location that differs from the location in the SCAQMD database.

Facilities were added to be consistent with previous Public Records Requests regarding facilities located within 6 miles of HBEP.

Facility Name: Orange County Sanitation District								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 10844 Ellis Avenue, Fountain Valley, CA 92708												
FIND Date: 1/15/2016												
Control #: 84574												
Miles from HBEP: < 4 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
573478				Basic	RULE 1415 PLAN NOTIFICATIONS	3/20/2015	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
571379				Basic	ERC ALTERATION	1/13/2015	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
568969	G35620	5/13/2015	ACTIVE	Basic	ABRASIVE BLASTING (CABINET/MACHINE/ROOM)	10/9/2014	PERMIT TO OPERATE GRANTED	Yes	Permit to Operate without prior Permit to Construct	Pending		
568970				Basic	Title V Permit Revision	10/9/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	De Minimis Significant Permit Revision			
565934				Control	ODOR CONTROL UNIT	6/25/2014	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
565933				Basic	Title V Permit Revision	6/25/2014	BANKING/ PLAN GRANTED, NON BILLABLE	Yes	Minor Permit Revision	Pending		
563042				Basic	RULE 1415 PLAN NOTIFICATIONS	4/3/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
559225				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559226				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559227				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559061				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559062				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559063				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
557227				Basic	STORAGE TANK MISC ORGANIC MATERIALS	10/11/2013	PERMIT TO CONSTRUCT GRANTED	No	Source does not emit applicable emissions			
557228				Basic	STORAGE TANK MISC ORGANIC MATERIALS	10/11/2013	PERMIT TO CONSTRUCT GRANTED	No	Source does not emit applicable emissions			
554225				Basic	TITLE V PERMIT RENEWAL APPLICATION	7/16/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Title V Permit Renewal Application			
546360				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546361				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546362				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546359				Basic	Title V Permit Revision	1/8/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	De Minimis Significant Permit Revision			

Notes:
All permit applications dated 2/1/2012 and before were analyzed in the previous cumulative source analysis.

Facility Name: Huntington Beach City, Water Dept.								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 19001-71 Huntington Street, Huntington Beach, CA 92648												
FIND Date: 1/15/2016												
Control #: 84575												
Miles from HBEP: < 3 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
562829	G31423	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562831	G31424	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562833	G31425	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562838	G31426	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562839	G31427	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562840	G31428	6/6/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
562836	G31643	6/20/2014	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/27/2014	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
561605	G35553	5/5/2015	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	3/11/2014	PERMIT TO OPERATE GRANTED	Yes	Alteration / Modification	Pending		
504178	G7139	1/29/2010	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	12/3/2009	PERMIT TO OPERATE GRANTED	No	Change of Condition / Administrative Action			
504176	G7137	1/29/2010	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	12/3/2009	PERMIT TO OPERATE GRANTED	No	Inactive			
504177	G7138	1/29/2010	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	12/3/2009	PERMIT TO OPERATE GRANTED	No	Inactive			
504179	G7140	1/29/2010	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	12/3/2009	PERMIT TO OPERATE GRANTED	No	Inactive			
487867	N22711	10/23/2008	ACTIVE	Basic	SERV STAT STORAGE & DISPENSING GASOLINE	9/2/2008	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
485841				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	7/30/2008	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			
456928				Basic	SERV STAT STORAGE & DISPENSING GASOLINE	5/11/2006	APPLICATION CANCELLED	No	Prior to 01/01/2009			
448286	N17970	9/13/2005	INACTIVE	Basic	SERV STAT STORAGE & DISPENSING GASOLINE	8/17/2005	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
435451	F88192	3/7/2007	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/16/2004	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
435450	F88193	3/7/2007	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/16/2004	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
347989	N8809	1/31/2001	INACTIVE	Basic	SERV STAT STORAGE & DISPENSING GASOLINE	12/1/1998	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281005	D74527	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281006	D74528	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281016	D74529	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281021	D74530	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281023	D74531	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281024	D74532	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281025	D74533	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281026	D74534	6/23/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281005	D74527	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281006	D74528	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281016	D74529	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281021	D74530	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281023	D74531	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281024	D74532	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281025	D74533	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
281026	D74534	6/23/1993	INACTIVE	Control	NON-CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
278628				Basic	RULE 1110.2 EMISSION CONTROL PLAN	2/22/1993	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			
240392	D47225	1/24/1992	INACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-NAT GAS	9/29/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
240391	D47226	1/24/1992	INACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-NAT GAS	9/28/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
238900	D66869	12/14/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/28/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
238901	D67663	12/31/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/28/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
238903	D67664	12/31/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/28/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
221327	D51212	4/16/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	1/24/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
221328	D51213	4/16/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	1/24/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
221339	D51219	4/16/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	1/24/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
221327	D51212	4/16/1992	INACTIVE	Control	VAPOR RECOVERY UNIT COMPRESS & CONDENSE	1/24/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			

Notes:
All applications were evaluated for this facility since it was not evaluated as part of our previous modeling efforts.

Facility Name: Orange County Sanitation District								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 22212 Brookhurst Street, Huntington Beach, CA 92646												
FIND Date: 1/15/2016												
Control #: 84576												
Miles from HBEP: < 1 mile												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
577621				Basic	ERC ALTERATION	8/19/2015	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
570972				Control	ODOR CONTROL UNIT	12/31/2014	ASSIGNED TO ENGINEER - CLASS I	No	Emission Control Technology			
570971				Basic	Title V Permit Revision	12/31/2014	ASSIGNED TO ENGINEER - CLASS III	No	De Minimis Significant Permit Revision			
565930				Control	ODOR CONTROL UNIT	6/25/2014	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
565929				Basic	Title V Permit Revision	6/25/2014	BANKING/ PLAN GRANTED, NON BILLABLE	Yes	Minor Permit Revision	Pending		
563064				Basic	RULE 1415.1 PLAN NOTIFICATIONS	4/3/2014	APPLICATION REJECTED	No	Application Rejected			
563065				Basic	RULE 1415.1 PLAN NOTIFICATIONS	4/3/2014	APPLICATION REJECTED	No	Application Rejected			
559331				Basic	ERC ALTERATION	12/24/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
559228				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559229				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559230				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559231				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559232				Control	CONTROL SYS, TWO SERIES	12/20/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
559056				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559057				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559058				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559059				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
559060				Control	CONTROL SYS, TWO SERIES	12/18/2013	APPLICATION REJECTED	No	Application Rejected			
557229				Basic	STORAGE TANK MISC ORGANIC MATERIALS	10/11/2013	PERMIT TO CONSTRUCT GRANTED	No	Source does not emit applicable emissions			
557230				Basic	STORAGE TANK MISC ORGANIC MATERIALS	10/11/2013	PERMIT TO CONSTRUCT GRANTED	No	Source does not emit applicable emissions			
556626				Basic	SEWAGE TREATMENT (>5 MG/D) ANEROBIC	10/3/2013	PERMIT TO CONSTRUCT GRANTED	No	Source does not emit applicable emissions			
556627				Control	CONTROL SYS, TWO SERIES	10/3/2013	PERMIT TO CONSTRUCT GRANTED	No	Emission Control Technology			
556625				Basic	Title V Permit Revision	10/3/2013	BANKING/ PLAN GRANTED, NON BILLABLE	Yes	Minor Permit Revision	Pending		
554223				Basic	TITLE V PERMIT RENEWAL APPLICATION	7/16/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Title V Permit Renewal			
546364				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546365				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546366				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546367				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546368				Basic	I C E (>500 HP) NAT & DIGESTER GAS	1/8/2013	PERMIT TO CONSTRUCT GRANTED	Yes	Alteration / Modification	Pending		
546363				Basic	Title V Permit Revision	1/8/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	De Minimis Significant Permit Revision			
545004				Basic	BOILER (5-20 MMBTU/HR) NAT-PROC GAS C/G	11/27/2012	APPLICATION CHANGED FROM CLASS I - III	Yes	Alteration / Modification	Pending		
545005				Basic	BOILER (5-20 MMBTU/HR) NAT-PROC GAS C/G	11/27/2012	APPLICATION CHANGED FROM CLASS I - III	Yes	Alteration / Modification	Pending		
545003				Control	ODOR CONTROL UNIT	11/27/2012	APPLICATION CHANGED FROM CLASS I - III	No	Emission Control Technology			
545002				Basic	Title V Permit Revision	11/27/2012	BANKING/ PLAN GRANTED, NON BILLABLE	Yes	Minor Permit Revision	Pending		

Notes:
All permit applications dated 7/18/2012 and before were analyzed in the previous cumulative source analysis.

Facility Name: Fabrica								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 3201 S. Susan Street, Santa Ana, CA 92704												
FIND Date: 1/15/2016												
Control #: 84580												
Miles from HBEP: < 6 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
575706				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	6/4/2015	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
574840				Control	DUST COLLECTOR/HEPA, OTHER R-1401 TOXICS	5/6/2015	APPLICATION CHANGED FROM CLASS I - III	No	Emission Control Technology			
572753				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	2/25/2015	ASSIGNED TO ENGINEER - CLASS III	No	Administrative Action			
572751				Basic	PLASMA ARC CUTTING	2/25/2015	ASSIGNED TO ENGINEER - CLASS III	Yes	Permit to Operate	Pending		
570136				Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	11/14/2014	APPLICATION CHANGED FROM CLASS I - III	Yes	Alteration / Modification	Pending		
570342				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	11/14/2014	APPLICATION CANCELLED	No	Application Cancelled			
567048				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	7/25/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
566167				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	7/1/2014	APPLICATION CHANGED FROM CLASS I - III	Yes	Permit to Construct	Pending		
547916				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	3/5/2013	APPLICATION CANCELLED	No	Application Cancelled			
547915				Control	BAGHOUSE	3/5/2013	APPLICATION CANCELLED	No	Application Cancelled			
455683			ACTIVE	Basic	CARPET PROCESSING SYSTEM	4/13/2006	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
455682			ACTIVE	Basic	CARPET PROCESSING SYSTEM	4/13/2006	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
455681				Basic	RECLAIM AMEND-NO ENGR EVAL	4/13/2006	APPLICATION CANCELLED	No	Prior to 01/01/2009			
390708				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	9/6/2001	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			
390198			INACTIVE	Basic	CARPET PROCESSING SYSTEM	8/17/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
383614			ACTIVE	Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	3/15/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
383114			ACTIVE	Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	2/28/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
381792			ACTIVE	Basic	MINERALS MISC BLENDING	2/21/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
381785			ACTIVE	Basic	MINERALS MISC BLENDING	2/21/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
381784			ACTIVE	Basic	STORAGE SILO MINERALS MISC	2/21/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
381782			ACTIVE	Control	BAGHOUSE, AMBIENT TEMP (<=100 SQ FT)	2/21/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
381778			ACTIVE	Control	BAGHOUSE, AMBIENT TEMP (>100-500 SQ FT)	2/21/2001	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
372996			INACTIVE	Basic	CARPET PROCESSING SYSTEM	8/15/2000	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
361865				Basic	CARPET PROCESSING SYSTEM	11/9/1999	APPLICATION CANCELLED	No	Prior to 01/01/2009			
349307				Basic	INITIAL TITLE V PERMIT APPLICATION	1/6/1999	APPLICATION CANCELLED	No	Prior to 01/01/2009			
345762			INACTIVE	Basic	OVEN, DRYING	10/2/1998	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
342506			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) COMB GAS-LPG	6/23/1998	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
340804			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	5/29/1998	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
341562			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) COMB GAS-LPG	5/27/1998	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
297120			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	9/28/1994	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277566			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) COMB GAS-LPG	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277568			INACTIVE	Basic	BOILER (>20-50 MMBTU/HR) NAT GAS ONLY	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277629			ACTIVE	Basic	CARPET PROCESSING SYSTEM	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277569			INACTIVE	Basic	CARPET PROCESSING SYSTEM	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277571			INACTIVE	Basic	CARPET PROCESSING SYSTEM	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277573			INACTIVE	Basic	CARPET PROCESSING SYSTEM	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277567			INACTIVE	Basic	OVEN, DRYING	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277577			INACTIVE	Basic	SERV STAT STORAGE & DISPENSING GASOLINE	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277629			ACTIVE	Control	BAGHOUSE	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277571			INACTIVE	Control	BAGHOUSE	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277569			INACTIVE	Control	DRY FILTER (>500 SQ FT)	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277573			INACTIVE	Control	DRY FILTER (>500 SQ FT)	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
277566			INACTIVE	Control	FLUE GAS RECIRCULATION	1/27/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			

Notes:
All applications were evaluated for this facility since it was not evaluated as part of our previous modeling efforts.

Facility Name: So Cal Holding, LLC								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 20101 Goldenwest Street, Huntington Beach, CA 92648												
FIND Date: 1/15/2016												
Control #: 84573												
Miles from HBEP: < 3 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
572641				Basic	TIERED (1-20 DEVICES) INITIAL TITLE V PERMIT APPLICATION	2/24/2015	ASSIGNED TO ENGINEER - CLASS III	Yes	Initial Title V Application	Pending		
570166				Basic	NATURAL GAS STABILIZATION UNIT	12/2/2014	APPLICATION CHANGED FROM CLASS I - III	No	Source does not emit applicable emissions			
570167				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	12/2/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
569440			ACTIVE	Basic	BULK LOAD TERMINAL REC PIPELINE CRUDE	10/23/2014	PERMIT TO OPERATE GRANTED	No	Source does not emit applicable emissions			
567799				Basic	RULE 1415.1 PLAN NOTIFICATIONS	8/26/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
567798				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	8/26/2014	APPLICATION CANCELLED	No	Application Cancelled			
567796				Basic	NATURAL GAS STABILIZATION UNIT	8/26/2014	APPLICATION CANCELLED	No	Application Cancelled			
560467				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	2/4/2014	APPLICATION CANCELLED	No	Application Cancelled			
560466				Basic	BOILER (>20=50 MMBTU/HR) NG/PG & LPG	2/4/2014	APPLICATION CANCELLED	No	Application Cancelled			
557681				Basic	RULE 1415 PLAN NOTIFICATIONS	10/29/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
556388				Basic	PLAN RULE 1166 (CONTAMINATED SOIL HAND.)	9/20/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
555370			ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	8/20/2013	PERMIT TO OPERATE GRANTED	Yes	Permit to Construct	Pending		
555402				Basic	FACILITY PERMIT AMEND- RECLAIM ONLY	8/20/2013	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			

Notes:
All permit applications dated 6/19/2012 and before were analyzed in the previous cumulative source analysis.

Facility Name: Huntington Beach City, Water Dept.								Step 2 - Source Applicability (FIND Data)	
Address: 16192 Sher Lane, Huntington Beach, CA 92647									
FIND Date: 1/15/2016									
Control #: N/A									
Miles from HBEP: < 6 miles									
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type
564823	G36446	7/7/2015	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	6/3/2014	PERMIT TO OPERATE GRANTED	No	Change of Conditions / Administrative Action
485837				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	7/30/2008	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009
448572	F78006	9/21/2005	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	9/9/2005	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009
407533				Basic	TITLE V R-3008 FAC CAP EXEMPT	10/8/2002	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009
407534				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	10/8/2002	APPLICATION CANCELLED	No	Prior to 01/01/2009
280999	D74299	6/16/1993	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009
280999	D74299	6/16/1993	INACTIVE	Control	NON SELECTIVE CATALYTIC REDUCTION	4/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009
278624				Basic	RULE 1110.2 EMISSION CONTROL PLAN	2/22/1993	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009
221332	D50989	4/9/1992	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	1/24/1990	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009
140506				Basic	I.C.ENGINE NOX & CO CONTROL	1/15/1986	APPLICATION CANCELLED	No	Prior to 01/01/2009

Notes:
All applications were evaluated for this facility since it was not evaluated as part of our previous modeling efforts.

Facility Name: Mesa Water District								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 3596 Cadillac Avenue, Costa Mesa, CA 92626												
FIND Date: 1/15/2016												
Control #: 84579												
Miles from HBEP: < 5 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
561626				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	3/6/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
499283	G3918	7/24/2009	ACTIVE	Basic	I C E (>500 HP) N-EM STAT NAT GAS ONLY	6/2/2009	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Application is for a change in air-to-fuel ratio controllers with no change in emissions.
486378				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	8/1/2008	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			
280194	D91047	5/31/1995	INACTIVE	Basic	I C E (>500 HP) N-EM STAT NAT GAS ONLY	4/12/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
276794				Basic	RULE 1110.2 EMISSION CONTROL PLAN	12/30/1992	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			

Notes:
All applications were evaluated for this facility since it was not evaluated as part of our previous modeling efforts.

Facility Name: Mesa Water District								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: 2340 Orange Avenue, Costa Mesa, CA 92627												
FIND Date: 1/15/2016												
Control #: 84581												
Miles from HBEP: < 5 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
561625				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	3/6/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Administrative Action			
499279	G4002	8/5/2009	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	6/2/2009	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Application is for a change in air-to-fuel ratio controllers with no change in emissions.
499280	G4003	8/5/2009	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	6/2/2009	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Application is for a change in air-to-fuel ratio controllers with no change in emissions.
499281	G4004	8/5/2009	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	6/2/2009	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Application is for a change in air-to-fuel ratio controllers with no change in emissions.
499282	G4005	8/5/2009	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	6/2/2009	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Application is for a change in air-to-fuel ratio controllers with no change in emissions.
486376				Basic	PLAN RULE 1110.2- Inspection & Monitoring Plan	8/1/2008	BANKING/ PLAN GRANTED, NON BILLABLE	No	Prior to 01/01/2009			
485752	G1148	12/23/2008	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	7/29/2008	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
485754	G1149	12/30/2008	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	7/29/2008	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
485755	G1150	12/30/2008	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	7/29/2008	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
466597	F90137	5/29/2007	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	3/9/2007	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
292782	D99418	5/24/1996	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	5/18/1994	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
292781	D99431	5/24/1996	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	5/18/1994	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
292785	D99419	5/24/1996	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	5/17/1994	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
292784	D99432	5/24/1996	INACTIVE	Basic	I C E (50-500 HP) N-EM STAT GAS-LPG	5/17/1994	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
283807	D79206	12/20/1993	ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-NAT GAS	7/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
283807	D79206	12/20/1993	ACTIVE	Control	NON SELECTIVE CATALYTIC REDUCTION	7/30/1993	PERMIT TO OPERATE GRANTED	No	Prior to 01/01/2009			
283800				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	7/30/1993	APPLICATION DENIED	No	Prior to 01/01/2009			
283802				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	7/30/1993	APPLICATION DENIED	No	Prior to 01/01/2009			
283804				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	7/30/1993	APPLICATION DENIED	No	Prior to 01/01/2009			
283805				Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	7/30/1993	APPLICATION DENIED	No	Prior to 01/01/2009			

Notes:
All applications were evaluated for this facility since it was not evaluated as part of our previous modeling efforts.

Facility Name: Beta Offshore								Step 2 - Source Applicability (FIND Data)		Step 3 - Source Applicability (PRR Data)		
Address: OCS Lease Parcels P300/P301, Huntington Beach, CA 92648												
FIND Date: 01/15/2016												
Control #: 84582												
Miles from HBEP: > 6 miles												
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status	Source Included? (Yes or No)	Application Type	PRR Data Received	Source Included? (Yes or No)	Reference of Data for Analysis / Reason for Exclusion from Analysis
568343				Basic	TITLE V PERMIT RENEWAL APPLICATION	9/12/2014	BANKING/ PLAN GRANTED, NON BILLABLE	No	Title V Permit Renewal			
533629			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533630			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533631			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533632			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533634			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533635			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.
533636			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	3/8/2012	PERMIT TO OPERATE GRANTED	Yes	Change of Conditions	Yes	No	Emission source located > 6 miles from HBEP; further evaluation not warranted.

Notes:
All permit applications dated 5/1/2012 and before (aside from the ICE applications from 3/8/2012 above) were analyzed in the previous cumulative source analysis.

Attachment A5-2
Proposed Emission Rates and Exhaust Parameters
for the Cumulative Air Quality Impacts Analysis

Huntington Beach Energy Project
Attachment A5-2 Table 1
Cumulative Modeling Parameters - Stack Parameters
February 2016

Point Sources

Facility	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
HBEP (CO, 1-hour NO ₂ [state], 1-hour SO ₂)	GE 7FA.05-01 Scenario 3	409449	3723146	3.66	45.7	350	12.2	6.10
	GE 7FA.05-02 Scenario 3	409474	3723182	3.66	45.7	350	12.2	6.10
HBEP (1-hour NO ₂ [federal], Annual NO ₂ , 3-hour SO ₂ , 24- hour SO ₂ , PM ₁₀ , PM _{2.5})	GE 7FA.05-01 Scenario 7	409449	3723146	3.66	45.7	350	11.8	6.10
	GE 7FA.05-02 Scenario 7	409474	3723182	3.66	45.7	350	11.8	6.10
HBEP (1-hour SO ₂)	GE LMS 100PB-01 Scenario 1	409149	3723193	3.66	24.4	694	33.3	4.11
	GE LMS 100PB-02 Scenario 1	409185	3723168	3.66	24.4	694	33.3	4.11
HBEP (CO, 1-hour NO ₂ [state])	GE LMS 100PB-01 Scenario 3	409149	3723193	3.66	24.4	748	23.8	4.11
	GE LMS 100PB-02 Scenario 3	409185	3723168	3.66	24.4	748	23.8	4.11
HBEP (3-hour SO ₂ , 24-hour SO ₂)	GE LMS 100PB-01 Scenario 4	409149	3723193	3.66	24.4	697	33.1	4.11
	GE LMS 100PB-02 Scenario 4	409185	3723168	3.66	24.4	697	33.1	4.11
HBEP (Annual NO ₂)	GE LMS 100PB-01 Scenario 6	409149	3723193	3.66	24.4	709	28.4	4.11
	GE LMS 100PB-02 Scenario 6	409185	3723168	3.66	24.4	709	28.4	4.11
HBEP (1-hour NO ₂ [federal], PM ₁₀ , PM _{2.5})	GE LMS 100PB-01 Scenario 7	409149	3723193	3.66	24.4	748	23.6	4.11
	GE LMS 100PB-02 Scenario 7	409185	3723168	3.66	24.4	748	23.6	4.11
HBEP (All Pollutants)	Auxiliary Boiler	409438	3723236	3.66	24.4	432	21.2	0.91
OC Sanitation 1	OC11	412725	3728250	7.7	18.9	533	17.9	0.76
	OC12	412725	3728250	7.7	12.8	455	9.3	0.46
OC Sanitation 2	OC22	411100	3722400	1.6	8.5	587	33.9	0.39
Arlon Graphics	AG	414875	3730325	13.5	7.6	364	24.5	1.32

Huntington Beach Energy Project
Attachment A5-2 Table 2
Cumulative Modeling Parameters - Emission Rates
February 2016

Emission Rates for 1-hour, 3-hour, 8-hour, and 24-hour Modeling

Source ID	State 1-hour NO ₂		Federal 1-hour NO ₂		1-hour CO		8-hour CO		1-hour SO ₂		3-hour SO ₂		24-hour SO ₂		24-hour PM ₁₀		24-hour PM _{2.5}	
	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(lb/hr)
GE 7FA.05-01	7.69	61.0	7.18	57.0	41.0	325	12.0	95.2	0.37	2.95	0.35	2.79	0.35	2.79	1.07	8.50	1.07	8.50
GE 7FA.05-02	7.69	61.0	7.18	57.0	41.0	325	12.0	95.2	0.37	2.95	0.35	2.79	0.35	2.79	1.07	8.50	1.07	8.50
GE LMS 100PB-01	2.67	21.2	2.67	21.2	5.66	44.9	1.89	15.0	0.20	1.63	0.21	1.64	0.21	1.64	0.79	6.24	0.79	6.24
GE LMS 100PB-02	2.67	21.2	2.67	21.2	5.66	44.9	1.89	15.0	0.20	1.63	0.21	1.64	0.21	1.64	0.79	6.24	0.79	6.24
Auxiliary Boiler	0.054	0.42	0.054	0.42	0.36	2.83	0.30	2.37	0.018	0.14	0.018	0.14	0.009	0.075	0.020	0.16	0.020	0.16
OC11	2.90	23.0	2.90	23.0	6.94	55.1	6.94	55.1	0.28	2.25	0.28	2.25	0.28	2.25	0.28	2.25	0.28	2.25
OC12	0.03	0.22	0.03	0.22	0.11	0.90	0.11	0.90	0.016	0.13	0.016	0.13	0.016	0.13	0.007	0.056	0.0071	0.056
OC22	-	-	-	-	-	-	2.60	20.6	-	-	0.15	1.19	0.019	0.15	0.041	0.32	0.041	0.32
AG	-	-	-	-	0.042	0.34	0.042	0.34	0.00026	0.0021	0.00026	0.0021	0.00026	0.0021	0.0021	0.017	0.0021	0.017

Emission Rates for Annual Modeling

Source ID	Annual NO ₂		Annual PM ₁₀		Annual PM _{2.5}	
	(g/s)	(tpy)	(g/s)	(tpy)	(g/s)	(tpy)
GE 7FA.05-01	1.02	8.12	0.81	6.42	0.81	6.42
GE 7FA.05-02	1.02	8.12	0.81	6.42	0.81	6.42
GE LMS 100PB-01	0.27	2.11	0.18	1.43	0.18	1.43
GE LMS 100PB-02	0.27	2.11	0.18	1.43	0.18	1.43
Auxiliary Boiler	0.030	0.23	0.019	0.15	0.019	0.15
OC11	1.93	67.2	0.19	6.57	0.19	6.57
OC12	0.046	1.60	0.017	0.60	0.017	0.60
OC22	0.15	5.38	0.0049	0.17	0.0049	0.17
AG	-	-	0.0021	0.073	0.0021	0.073