Consumers Energy
Count on Us

40 CFR 63 Subpart ZZZZ Annual Compliance Demonstration

EUENGINE2-2 & EUENGINE2-3

St. Clair Compressor Station
10021 Marine City Highway
Ira Township, Michigan 48023

Test Date: September 9, 2015

Report Submitted:
October 29, 2015

Work Order No. 24148566
Revision 0

Test Performed by the Consumers Energy Company
Regulatory Compliance Testing Section – Air Emissions Testing Body
Engineering Services Department
Compiled by G. A. Koteskey, Technical Analyst

TABLE OF CONTENTS

TABLES

FIGURES

ATTACHMENTS

1.0 INTRODUCTION

Identification, location and dates of tests

This report summarizes the results of testing, conducted on September 9, 2015, at Consumers Energy Company's (CEC) St. Clair Compressor Station. CEC's Regulatory Compliance Testing Section (RCTS) performed carbon monoxide (CO) reduction efficiency testing on EUENGINE2-2 and EUENGINE2-3, installed and operating at CEC's St. Clair Compressor Station, located in Ira Township, Michigan. A third identical unit, identified as EUENGINE2-4, was scheduled to be tested; however, mechanical constraints prohibited it from operating. This unit will be tested at a later date.

Please note this document follows the MDEQ format described in the December, 2013, *Format for Submittal of Source Emission Test Plans and Reports* and reproducing only a portion may omit critical substantiating documentation or cause information to be taken out of context. If any portion of this report is reproduced, please exercise due care in this regard.

Purpose of testing

The purpose of the testing was to demonstrate compliance with the 40 CFR Part 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) and to comply with the facility Renewable Operating Permit (ROP), No. MI-ROP-B6637-2015. The engines are categorized as existing, non-emergency, 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year. As defined, the RICE must be capable of reducing CO emissions by 93 percent or greater, or by verifying average exhaust CO concentrations are less than or equal to 47 ppm by volume on a dry basis, corrected to 15% oxygen (O_2).

Brief description of source

The St. Clair Compressor Station is a natural gas compressor station. The purpose of the facility is to maintain pressure of natural gas in order to move it in and out of storage reservoirs and along the pipeline system. The units tested consisted of two (2) identical Delaval HVC-16C 4,000 horsepower, natural gas-fired, 4-Stroke, Lean Burn (4SLB) RICE engines (EUENGINE2-2 and EUENGINE2-3). Each of the engines is equipped with oxidation catalysts to reduce CO emissions (per §63.6603(a) and Table 2d).

Contact names, addresses, and telephone numbers for information regarding the test and the test report, and personnel names and affiliations of those involved in conducting the testing

A test notification containing a sampling protocol describing the test program sampling, calibration, and quality assurance procedures specified in U.S. EPA Reference Methods (RM) 7E with specific applications, as necessary, from Method 10, dated January 20, 2015, was submitted to the Michigan Department of Environmental Quality – Air Quality Division (MDEQ-AQD). The protocol was subsequently approved by Mr. Mark Dziadosz in his letter dated February 19, 2015. This test was performed by RCTS Technical Analysts Gregg Koteskey, Joe Mason, and Dillon King. Mr. Brian Mauzy, St. Clair Compressor Station Field Leader, coordinated the emission test in conjunction with CEC Senior Engineer Ms. Amy Kapuga, whom also coordinated engine operating data collection, which was assembled by compressor station operators and is contained in Attachment 1 of this report. MDEQ representative Mark Dziadosz witnessed a portion of this test event.

TABLE 1
St. Clair Compressor Station RICE Test Program Participants

Responsible Party	Address	Contact
Test Facility	St. Clair Compressor Station 10021 Marine City Highway Ira Township, Michigan 48023	Mr. Brian Mauzy Compression Field Leader 586-716-3331 brian.mauzy@cmsenergy.com
Corporate Air Quality Contact	Consumers Energy Company Environmental Services Department 1945 West Parnall Road Jackson, Michigan 49201	Ms. Amy Kapuga Senior Engineer 517-788-2201 amy.kapuga@cmsenergy.com
Emission Test Representative	Consumers Energy Company RCTS - AETB 17010 Croswell Street West Olive, Michigan 49460	Mr. Joe Mason, QSTI Senior Technical Analyst 616-738-3385 joe.mason@cmsenergy.com
Regulatory Agency Representative	Michigan Department of Environmental Quality Air Quality Division Southeast Michigan District 27700 Donald Court Warren, MI 48092-2793	Mr. Mark Dziadosz Environmental Quality Analyst 586-753-3745 dziadoszm@michigan.gov

2.0 SUMMARY AND DISCUSSION

Operating Data

The facility is equipped with continuous parameter monitoring systems (CPMS) which are designed to continuously monitor and record the RICE exhaust gas temperature at the catalyst inlet point. Prior to the performance tests, the catalyst inlet temperature CPMS were calibrated according the manufacturer recommendations. Unit operating data, including engine speed (RPM), horsepower, fuel flow (scf/hr), suction and discharge pressures (psi), catalyst inlet temperature (degrees Fahrenheit), pressure drop across the catalyst, ambient temperature (degrees Fahrenheit), barometric pressure (inches of mercury), and fuel BTU value, were recorded during the test events and are included in Attachment 1.

Applicable Permit Number

The St. Clair Compressor Station is currently operating pursuant to the terms and conditions of ROP No. MI-ROP-B6637-2015. Performance tests were conducted, as required, on two (2), identical Delaval HVC-16C 4,000 horsepower, natural gas-fired, 4-Stroke, Lean Burn (4SLB) RICE engines identified as EUENGINE2-2 and EUENGINE2-3 (collectively identified as FGENGINES-P2).

Results

Based on the measured percent reduction and/or CO exhaust concentrations, the individual engines are operating within the applicable ROP CO emissions limits. The test result summaries are presented below.

TABLE 2
Summary of 40 CFR 63 Subpart ZZZZ Results

Source	CO Reduction Efficiency (%) [ZZZZ Limit = ≥93%]	CO Exhaust Concentration (ppmvd) [ZZZZ Limit = ≤47 ppmvd]	Catalyst Inlet Temperature (°F) [ZZZZ Limit = ≥450°F and ≤1350°F]
EUENGINE2-2	97	4.8	861
EUENGINE2-3	90	12.6	801

Please note that the CO compliance demonstration criteria in 40 CFR Part 63, Subpart ZZZZ, Table 5 allows the source to meet either 93 percent reduction efficiency or ≤ 47 ppmvd at 15% O_2 criteria. EUENGINE2-2 met the established reduction efficiency criteria with an average CO reduction of 97 percent. EUENGINE2-3 did not meet the CO reduction efficiency criteria, but met the ≤ 47 ppmvd at 15% O_2 criteria with an average CO concentration of 12.6 ppmvd corrected to 15% O_2.

3.0 SOURCE DESCRIPTION

Description of Process

The St. Clair Compressor Station is a natural gas compressor station. The purpose of the facility is to maintain pressure of natural gas in order to move it in and out of storage reservoirs and along the pipeline system. The units tested consisted of two (2) identical Delaval HVC-16C 4,000 horsepower, natural gas-fired, 4-Stroke, Lean Burn (4SLB) RICE engines (EUENGINE2-2 and EUENGINE2-3). Each of the engines is equipped with Dresser Rand oxidation catalysts comprised of eight (8) modular elements. A low-NO_2 coating was specially formulated to promote the oxidation of CO and Volatile Organic Compounds (VOCs) while suppressing the conversion of Nitric Oxides (NO) to Nitrogen Dioxide (NO_2). The catalyst vendor has guaranteed a CO emission concentration of ≤47 ppmvd @ 15% O_2.

Process Flow Sheet or Diagram

N/A

Type and Quantity of Raw Material Processed During the Tests

N/A

Maximum and Normal Rated Capacity of the Process

EUENGINE2-2 and EUENGINE2-3 are limited to a maximum output of approximately 4,000 horsepower each. At this achievable output, the heat input rating of each engine is approximately 27 million Btu/hr.

Description of Process Instrumentation Monitored During the Test

Station operators entered engine operating data into a spreadsheet from control room displays during each run. The following operating parameters were recorded: engine speed (rpm), horsepower, fuel flow (scf/hr), suction and discharge pressures (psi), catalyst inlet temperature (degrees Fahrenheit), pressure drop across the catalyst, ambient temperature (degrees Fahrenheit), barometric pressure (inches of mercury), and fuel BTU value. This data was provided to RCTS to assist with emissions rate calculations and is included in Attachment 1.

4.0 SAMPLING AND ANALYTICAL PROCEDURES

Description of sampling train(s) and field procedures

All testing, sampling, analytical, and calibration procedures used for this test program were performed in accordance with 40 CFR Part 60, Appendix A, Methods 3A (O_2/CO_2 – Instrumental), 7E (NO_x – Instrumental), and 10 (Carbon Monoxide – Instrumental). Although Method 7E is generally associated with NO_x concentration measurements, it is being listed as a test method due to the fact that several sections of Method 7E are incorporated into Methods 3A and 10 via reference. Although Table 4 of 40 CFR Part 63, Subpart ZZZZ allows the use of a portable analyzer and ASTM Method D6522-00 (2005) for purposes of determining the CO and O_2 concentrations, Consumers Energy RCTS did not use a portable analyzer for this testing program.

All testing was conducted with the engines operating within ±10% of rated capacity (i.e. 90 to 110% of engine load). Per §63.6640(c), each test run duration was at least 15 minutes. Please note that O_2 was the diluent gas used to correct CO concentrations to 15% O_2 when determining percent CO reduction. CO_2 was measured as well since Subpart ZZZZ allows for CO_2 correction factors based on O_2 to CO_2 fuel factor ratios described in §63.6620 (e)(2)(ii)(Eq.3). In the event O_2 diluent measurements were not possible, CO concentrations could be corrected to 15% O_2 based on dry basis CO_2 concentrations as described in Equation 4, §63.6620(e)(2)(iii).

During each test, the engine brake horsepower was documented (along with other required operating parameters) and subsequently divided by the vendor supplied engine rating to ensure that the engines operate within ±10 percent of capacity (100 percent load). As required by 40 CFR §63.6620(i), information regarding the method used to determine the engine percent load, including a description of any associated measurement devices during the test is presented in this report.

4.1 Traverse Points

On February 27, 2014, the US EPA promulgated revisions to various sections of 40 CFR Parts 51, 60, 61 and 63 in order to change specific testing requirements and Federal Reference Methods. Among these changes was a revision to Table 4 of 40 CFR Part 63, Subpart ZZZZ which allowed CO and diluent testing to be conducted at sampling points located at 16.7%, 50.0% and 83.3% of the measurement line if the following criteria are met: 1) duct is greater than 12 inches in diameter and 2) the test ports are located at least 2 duct diameters downstream and ½ duct diameter upstream from the nearest flow disturbances. The outlet test locations of Units 2-2 and 2-3 met the preceding criteria, and RCTS conducted sampling along the allowed 3-point measurement and determined stratification of the gas stream using the criteria per Section 8.1.2 of Method 7E.

The test locations at the oxidation catalyst inlet are a-typical (relative to U.S. EPA Method 1 *"Sample and Velocity Traverses for Stationary Sources"* criteria), due to the proprietary nature and design of that abatement equipment. The design and dimension of inlet ducts preclude the use of more than 2 traverse points. Therefore, RCTS conducted sampling from a single traverse point of the catalyst inlet locations and did not conduct stratification testing according to the criteria of Section 8.1.2 of Method 7E. Figure 1 shows the exhaust stack configuration.

4.2 Diluent / Molecular Weight

O_2/CO_2 diluent concentrations were monitored using a non-dispersive infrared (NDIR) Thermo Model 410i analyzer equipped with paramagnetic O_2 analysis capacity following the guidelines of U.S. EPA Method 3A, *Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from a Stationary Source (Instrumental Analyzer Procedure).*

4.3 Carbon Monoxide

The CO concentrations were measured using an NDIR Thermo Model 58i gas filter correlation analyzer following the guidelines of U.S. EPA Reference Method 10, *Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure).*

Quality Assurance Procedures

Each U.S. EPA reference method performed during this test contains specific language stating that to obtain reliable results, persons using these methods should have a thorough knowledge of the techniques associated with each method. To that end, CEC RCTS minimized factors which could cause sampling errors by implementing a quality assurance (QA) program into every component of field testing, including the following information.

U.S. EPA Protocol gas standards certified according to the U.S. EPA Traceability Protocol for Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997 and certified to have a total relative uncertainty of ±1 percent were used to calibrate the analyzers during the test program. Although not required in the context of this test program, the vendors providing the calibration gases also participate in the Protocol Gas Verification Program (PGVP), an EPA audited program recently developed for 40 CFR Part 75.

The extractive sample system instruments were calibrated and operated following the appropriate method guidelines, based on specifications contained in Method 7E (as referenced in Methods 3A and 10). Before daily testing began, an analyzer calibration error (ACE) test was conducted by introducing the calibration gases directly into each analyzer. Prior to beginning the first run, an initial system bias was conducted by introducing the low and upscale calibration gases into the sampling system at the probe outlet and drawing it through the sample conditioning system in the same manner as the exhaust gas sample, while measuring the instrument response. Each instrument response met the specification of ≤ 5.0 percent of instrument span.

Low and upscale bias calibrations were performed after each run thereafter to quantify system calibration drift and bias. During the initial system bias tests, system response time was measured and the sample flow rate throughout the remainder of the test was monitored to maintain the sample rate within 10 percent of the average flow rate observed during the response time test. Sampling for each run began after twice the system response time had elapsed.

All testing, sampling, analytical, and calibration procedures used for this test program were performed in accordance with 40 CFR, Part 60, Appendix A. The CO concentrations from the engines were determined in accordance with EPA Reference Method 7E, using specific applications, as necessary from Method 10. The oxygen (O_2) and carbon dioxide (CO_2) concentrations from the engines were determined in accordance with EPA Reference Method 3A.

The exhaust gases were extracted from the catalyst inlets and stacks (as applicable) with a non-heated Type 316 stainless steel probe (due to the high exhaust gas temperatures) into a heated Teflon sample line which prevented moisture from condensing until the exhaust gases were run through an electronic chiller unit which removed the moisture prior to being distributed from a gas manifold into the respective analyzers (CO and O_2 / CO_2). The output signal from each analyzer was connected to a computerized data acquisition system (DAS). The data measured from the pollutant and diluent analyzers were averaged for each run and corrected for drift and bias. A diagram of the extractive sampling system is presented as Figure 2.

A stratification test was performed at the catalyst outlet of each unit, as described in section 4.1 above, to determine the appropriate number of traverse points. The concentrations measured at each of the three individual traverse points on Unit 2-2 differed by more than 5%, but less than 10%, of the mean concentration of all the traverse points, indicating the gas stream was minimally stratified. Subsequent sampling on Unit 2-2 was conducted at three points spaced at 16.7, 50.0, and 83.3% of the measurement line across the stack. The concentrations measured at each of the three individual traverse points on Unit 2-3 differed less than 5% of the mean concentration of all the traverse points, allowing the sampling to be performed from a single point in the centroid of the stack. This stratification data is provided in Attachment 3.

The associated gas analyzer calibration error, system bias, zero and calibration drift data, and the Certificates of Analysis (COA) of the calibration gases used during this performance demonstration are included in Attachment 4.

Description of recovery and analytical procedures
N/A

Dimensioned sketch showing all sampling ports in relation to breeching and to upstream and downstream disturbances or obstructions of gas flow and a sketch of cross-sectional view of stack indicating traverse point locations and exact stack dimensions
Figure 2 shows the engine exhaust stack arrangement and location of test ports (same for each of Units 2-2 and 2-3).

5.0 TEST RESULTS AND DISCUSSION

Detailed tabulation of results, including process operating conditions and exhaust gas conditions

Table 2 contains a summary of the individual engine CO emission rates from the September 9, 2015 performance tests. Operational data, individual run concentrations and emissions, calculation spreadsheets, field data sheets, calibration information and equations used to calculate results are contained in Attachments 1 - 5.

Discussion of significance of results relative to operating parameters and emission regulations

The comprehensive test results demonstrate that Units 2-2 and 2-3 are operating within compliance of the CO emissions requirements established in 40 CFR Part 63, Subpart ZZZZ and the facility ROP.

Discussion of any variations from normal sampling procedures or operating conditions, which could have affected the results

N/A

Documentation of any process or control equipment upset condition which occurred during the testing

N/A

Description of any major maintenance performed on the air pollution control device(s) during the three month period prior to testing

N/A

In the event of a re-test, a description of any changes made to the process or air pollution control device(s)

N/A

Results of any quality assurance audit sample analyses required by the reference method

N/A

Calibration sheets for the dry gas meter, orifice meter, pitot tube, and any other equipment or analytical procedures which require calibration
Attachment 4 contains the analyzer calibration data, response time test results, and calibration gas Certificates of Analysis.

Sample calculations of all the formulas used to calculate the results
Sample calculations for all formulas used in the test report are contained in Attachment 5.

Copies of all field data sheets, including any pre-testing, aborted tests, and/or repeat attempts
Please refer to Attachment 1 for process data collected during the test runs; Attachment 2 for calculation spreadsheets for each of the test runs; and Attachment 3 for data sheets with the measured concentrations for each test run.

Copies of all laboratory data including QA/QC
N/A

TABLE 3

SUMMARY OF RICE EFFICIENCY AND EMISSIONS

ST CLAIR COMPRESSOR STATION

EUENGINE2-2

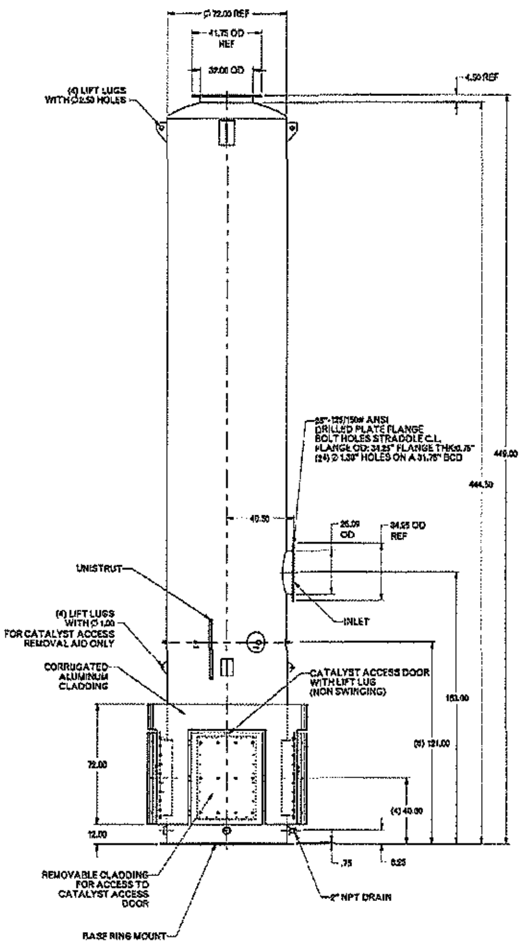
September 9, 2015

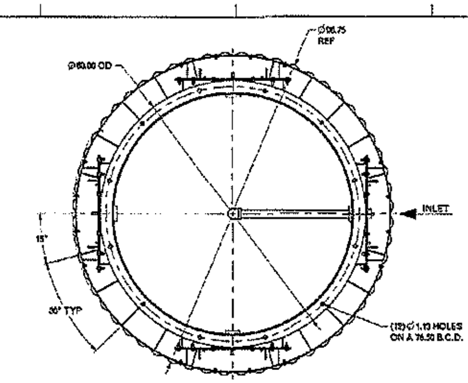
Time Period	Run 1 1331-1351	Run 2 1403-1423	Run 3 1432-1452	Averages
Process Conditions				
Engine Speed, Revolutions Per Minute:	475	475	475	**475**
Engine Torque, Percent	95	95	95	**95**
Engine Brake Horsepower:	3017	3017	3013	**3016**
Fuel Flow, SCFH	24.9	24.8	24.7	**24.8**
Catalyst Inlet Temperature, degrees F:	842	868	872	**861**
Inlet Gas Conditions				
Oxygen Concentration, percent:	8.98	8.81	8.82	**8.87**
Drift Corrected Carbon Monoxide Concentration (ppmdv):	267.19	284.73	284.04	**278.65**
Corrected Carbon Monoxide Concentration (ppmdv @ 15% O2):	132.26	138.97	138.77	**136.67**
Outlet Gas Conditions				
Oxygen Concentration, percent:	8.98	8.78	8.88	**8.88**
Drift Corrected Carbon Monoxide Concentration (ppmdv):	10.45	9.30	9.60	**9.78**
Corrected Carbon Monoxide Concentration (ppmdv @ 15% O2):	5.17	4.53	4.71	**4.80**
Percent Reduction Efficiency:	96	97	97	**97**

TABLE 4
SUMMARY OF RICE EFFICIENCY AND EMISSIONS
ST CLAIR COMPRESSOR STATION
EUENGINE2-3
September 9, 2015

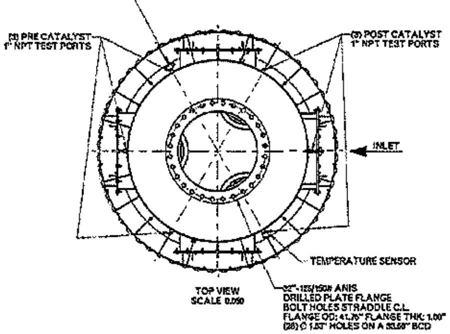
Time Period	Run 1 0922- 0942	Run 2 0952- 1012	Run 3 1022- 1042	Averages
Process Conditions				
Engine Speed, Revolutions Per Minute:	450	450	450	**450**
Engine Torque, Percent	96	96	96	**96**
Engine Brake Horsepower:	2875	2870	2873	**2873**
Fuel Flow, SCFH	21.7	21.7	21.7	**21.7**
Catalyst Inlet Temperature, degrees F:	798	802	803	**801**
Inlet Gas Conditions				
Oxygen Concentration, percent:	10.12	10.05	10.04	**10.05**
Drift Corrected Carbon Monoxide Concentration (ppmdv):	223.96	225.57	226.56	**225.36**
Corrected Carbon Monoxide Concentration (ppmdv @ 15% O2):	122.61	122.66	123.13	**122.80**
Outlet Gas Conditions				
Oxygen Concentration, percent:	10.11	10.07	10.03	**10.07**
Drift Corrected Carbon Monoxide Concentration (ppmdv):	22.96	23.02	23.53	**23.17**
Corrected Carbon Monoxide Concentration (ppmdv @ 15% O2):	12.55	12.54	12.75	**12.62**
Percent Reduction Efficiency:	90	90	90	**90**

FIGURES

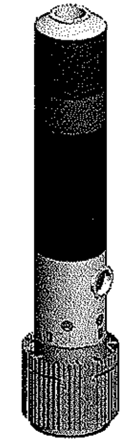




BOTTOM VIEW
SCALE 0.067



TOP VIEW
SCALE 0.050



PICTORIAL VIEW
SCALE 0.020

REVISION RECORD

TABLE 1 - LOAD TABLE (1997 UNIFORM BUILDING CODE)								
SUPPORT	DEAD LOAD	FORCE DIRECTION	WIND LOAD			SEISMIC LOAD		
			X	Y	Z	X	Y	Z
ALL BOLTS	-1.0	X	.9	--	12.0	-.2	--	1.8
		Y	--	.9	12.0	--	-.2	1.8

NOTES:
1. ALL FORCES ARE IN KIPS (1,000 LBS)
2. UNLESS OTHERWISE NOTED FORCES ARE ±
3. MAX OVERTURNING MOMENT: MOMENT:220.85 kip-ft
4. MAX HORIZONTAL SHEAR: SHEAR:10.70 kip
5. MAX WIND SPEED 100 MPH
WIND EXPOSURE D
SEISMIC ZONE 4, SOURCE TYPE A
SEISMIC SOURCE DISTANCE 10 km
SOIL TYPE SD
OCCUPANCY CATEGORY 1

Contact for all issues: Purchased from:
Pollution Control Associates, Inc. Crystal Lake IL
PH 815-356-7499
email: dennisk@pcaincorporated.com

REPLACEMENT PARTS	
CATALYST	PCACO - 172135
CATALYST GASKET	PCAGS - 2201 TYPE 2 - 3.8750 AW X 78 CIRC. CONTINUOUS
DOOR GASKET	UNIVERSAL P/N 312016
32" FLANGE / GASKET / BOLT KIT	UNIVERSAL P/N 83-1847

NOTES:

1. SENSOR COMPONENTS TO BE MOUNTED IN THE FIELD TO UNIT.

2. THE LOAD TABLE INCLUDES PROVISIONS FOR AN OUTLET STACK TO BE ADDED TO THE TOP FLANGE (BY OTHERS). THIS STACK IS DESIGNED TO BE Ø 32" X 120" LONG AT A WEIGHT OF 856 LBS.

3. (4) CATALYST ACCESS DOOR(S) 35" WIDE X 50" HIGH, 124 LBS EACH. 1/2" STAINLESS STEEL INC HARDWARE.

4. CATALYSTS: (8) 17 X 21 X 3.50, WEIGHT 45 LBS EACH.

5. FINISH(EXTERNAL): SURFACE PREP.-NEAR WHITE BLAST CLEAN PER SSPC-SP10,1-3 MILS BLAST PROFILE.
PRIME- (1) COAT CARBOLINE CARBOZINC 11, 2-3 MILS DFT, COLOR-GREEN PER UNIVERSAL SPEC 86-0109.
TOPCOAT-(1) COAT CARBOLINE THERMALINE 4700, 1.25-1.75 MIL DFT. COLOR-ALUMINUM PER UNIVERSAL SPEC 86-0146.
CURE TO DRY TO HANDLE PER CARBOLINE CURING SCHEDULE.

6. INTERNAL BAFFLES TO HAVE VENT HOLES TO PREVENT BUILD UP OF NATURAL GAS.

DIMENSIONS CERTIFIED FOR:
Consumers Energy - St Clair
P.O. NO. 4600025474
U.S. S.O. NO.
BY
DATE October 22, 2012

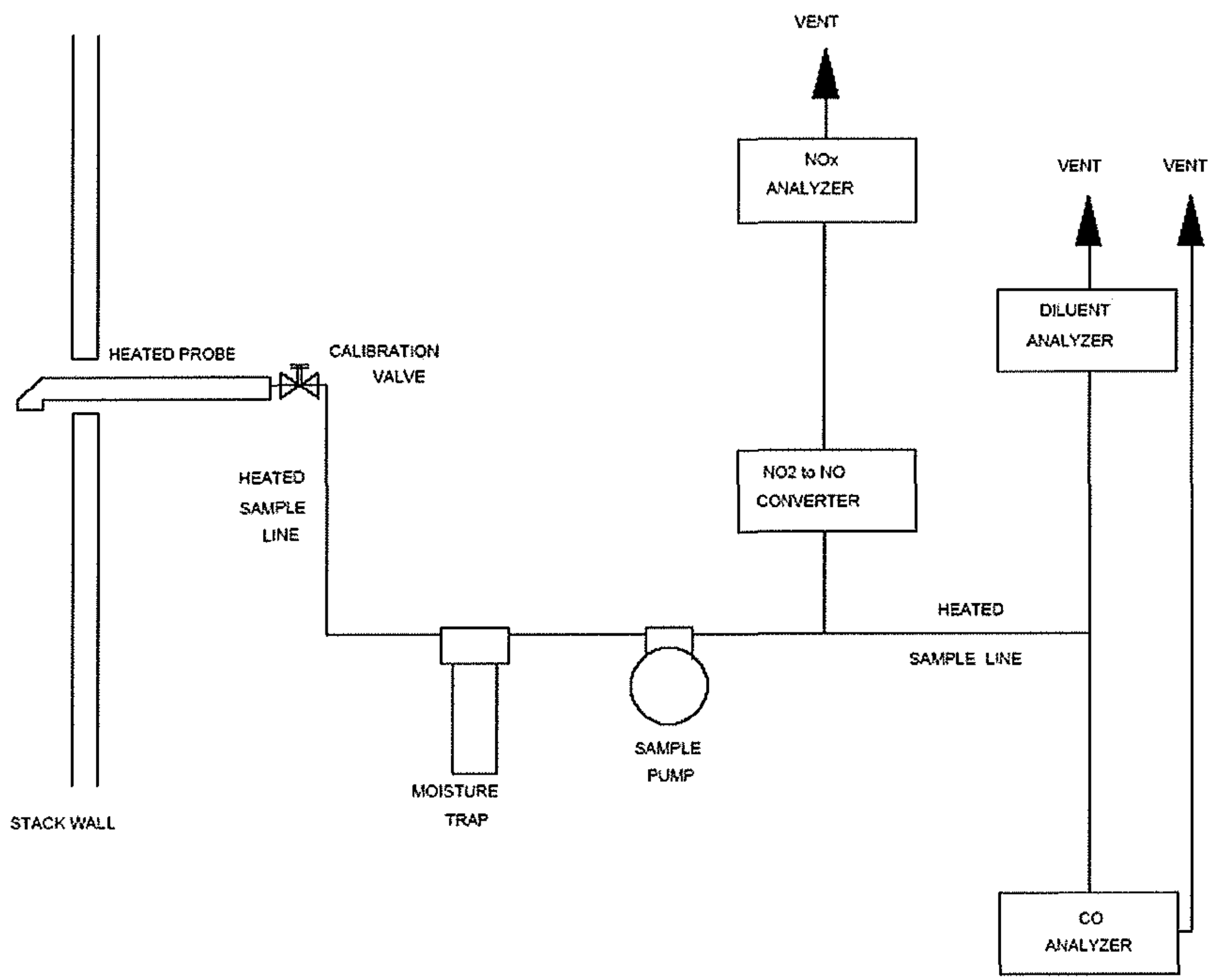
TOLERANCES UNLESS STATED - SEE FULL SPEC 05-6013			
(mm)	US customary (")	(mm)	US customary (")
0-300	0-12	±1.6	±1/16
>300-600	>12-24	±3	±1/8
>600-900	>24-36	±5	±3/16
>900-6000	>36-240	±6	±1/4
>6000	>240	±12	±1/2
ANGULAR TOL		±2°	
APPROX. WT.	11,000 LBS	MATERIAL	CARBON STEEL
FINISH	SEE NOTE		

NAME		DATE
DRAWN	ALV	11-JUL-12
CHECKED	TOR	13-JUL-12

UNIVERSAL
Acoustic & Emission Technologies

DESIGN CONTROL: STOUGHTON
SCALE: DO NOT SCALE
DESCRIPTION: SPECIAL CATALYST SILENCER
THIRD ANGLE PROJECTION
DIMENSIONAL DWG NO. 18-510875
SHEET 1 OF 1
REV. 3

RECEIVED
OCT 3 0 2015
AIR QUALITY DIV.



ATTACHMENT 1
Process Data