

Friday, December 08, 2017

One, 2' OD x 30' tall Incinerator

Combustion and Emissions Division
Quote# 1217-090Comb

11-12-049-17 W5M BTEX

Prepared For: Lorie Nechka
Cenovus Energy Inc.



Client: Cenovus Energy Inc.
Subject: CVE17-0042 Incinerator unit.
Site Location LSD: 11-12-049-17 W5M BTEX

This Quotation is based on the information provided by email and telephone with Mark McKay from Cenovus Energy Inc. This quotation is for one, CDN Controls – 2' OD x 30' tall Incinerator for combustion of the vent gas emissions stream from a dehydrator unit. Our Incinerator is specifically designed for close spacing to process equipment as it comes standard with air inlet flame arrestors as well as a inline flame arrestor for the waste gas stream.

General:

- Combustion and Emissions crew will consist of one Combustion Tech c/w truck and Apprentice
- Commissioning work shift will be 10 hours including travel
- CDN will follow Cenovus Energy Inc. policies and or OH&S, whichever is a greater standard
- QAQC documentation for all of the work CDN has completed.

Process Assumptions:

The 2' OD x 30' tall incinerator design selected is suitable for the emissions streams at the flow rate and gas composition described. The normal volume of the vent gas emission to be sent to the incinerator will be approximately 1.17 e3m3 per day. The maximum volume of the vent gas emission to be sent to the incinerator will be approximately 2.34 e3m3 per day. The fuel gas available onsite is natural gas (~1,000 Btu/ft³). The mole fraction composition of the vent gas emissions waste stream gas is as follows:

H2O	0.596100
H2	0.000100
HE	
N2	0.000800
CO2	0.011400
H2S	
C1	0.279000
C2	0.038800
C3	0.017200
nC4	0.004500
iC4	0.010200
nC5	0.001600
iC5	0.006700
C6	0.000300
C7+	0.033300
TOTAL	1.00000

Incinerator Inclusions:

Overall dimensions: 2' outside diameter x 30' tall

- Burner Section
 - 2' OD x 10' tall air induction / burner section
 - Adjustable air intakes, complete with manual air flow doors and flash arrested openings
 - stainless steel fuel / burner gas manifold
 - Proprietary HE burner design
 - 3" waste gas inlet
 - Waste Gas inlet ball valve with proximity switch
 - Fixed air pilot complete with flash arrested housing
 - Sight glass
 - Base flange with bolt holes, suitable for connecting to anchor bolts on suitable foundation
 - Self-supporting design based on suitable foundation or prepared surface, provided by others

- Stack Section
 - 2' OD x 20' tall stack section
 - 3" Castable refractory
 - Lifting lugs
 - Temperature/sampling port
 - Stack top thermocouple probe and thermowell

- CSA Fuel Train
 - CSA B149.3 compliant
 - CCS pressure switches
 - Pilot solenoid
 - Dual ESD fail-safe solenoids
 - Fisher 627 1" regulator
 - SST internal gauges
 - SST ball valves

- Burner Management System
 - CSA approved
 - Ionization flame detection
 - Integrated pilot and ignition system
 - Stack Top Temperature control
 - Local display and controls
 - Remote monitoring, Startup and shutdown controls

- Base Section
 - 5' x 6' base, incinerator burner section pre-mounted on
 - Easily mounted to your pilings

- All fuel train and BMS components pre-mounted and wired to skid
- Paint Specifications
 - Incinerator
 - Surface preparation: *SSPC – SP 5 White Metal Blast Cleaning*
 - Paint: *Clovatherm Hi-Heat Resistant Enamel - 83225 Black*
- Electrical Specifications
 - 24 Volt DC
 - Class 1 Division 2 area classification
- Supply and install materials to be easily removed for maintenance purposes.

Exclusions:

- Foundation / pilings suitable for supporting the incinerator base to be provided by others.
- Welding and welding materials required for on site E&I supports.
- Hold ups due to Client, third party, and or weather.
- Trenching by means of hydrovacating, heavy equipment, and or pick and shovel.
- Portable toilets.

Discussion:

The proposed incinerator has a total heat capacity of approximately 4.2 MMBtu/hr.
The maximum design amount of vent gas alone is approximately 2.3 MMBtu/hr.

Cost Breakdown:

Each Requested Unit: **As per design, 2 foot Outside Diameter x 30 feet Tall Incinerator**

Complete Incinerator Ex-works: Grande Prairie, AB (plus applicable taxes) **\$ 99,800.00 each**
CSA Fuel Train field inspection and compliancy Certification (third Party) **\$ 2,400.00 each**

Terms:

- 35% deposit is due prior to order commencement
- 55% payment, prior to shipment, but no longer than 10 weeks after order commencement
- 10% hold-back, until project completion, but no longer than 6 months after order commencement if the incinerator is not yet installed by Cenovus Energy Inc.

Delivery: 6-8 weeks after Receipt of Deposit (dependant on shop load at time of order)

Startup Commissioning Rates:

Consists of a Combustion Tech and Truck based out of Grande Prairie, AB.

- | | |
|------------------------------------|-------------------|
| 1. Senior Combustion Tech | |
| a. Regular time | \$70.00 per hour |
| b. Overtime after 10 hours | \$105.00 per hour |
| 2. Combustion Truck | \$30.00 Per hour |
| 3. Subsistence (per man / per day) | \$250.00 |

- **Quoted price valid for 60 days**
- **Payment Terms: net 30 days.**
- **Taxes not included.**

I trust the information provided exceeds your expectations. Please do not hesitate to contact me if any questions arise after reviewing the enclosed proposal. We can be reached at any time by e-mail: Brent.willey@cdncontrols.ca, or by telephone (please see below).

Sincerely,



Brent Willey
Combustion and Emissions Manager
CDN Controls Ltd.
10306-118th Street
Grande Prairie, AB, T8V 3X9
Tel: 780-532-8151

CDN Terms & Conditions

1. Warranty

- 1.1. Warranty shall be applicable for 1 (one) calendar year from the date of Substantial Completion for all work installed by CDN Controls Ltd., under the Contract(s) agreed upon.
- 1.2. CDN Controls Ltd. must be notified of all required warranty work.
- 1.3. CDN Controls Ltd. reserves the right to repair all warranty work that may arise throughout the warranty period.
- 1.4. CDN Controls Ltd. will not be held accountable for warranty work done by other Contractors during the warranty period.
- 1.5. All modifications, alterations, additions, demolitions, or any tampering with the installation unless completed by CDN Controls Ltd. under the Contract(s) shall void the Warranty.
- 1.6. All modifications, alterations, additions, demolitions completed by CDN Controls Ltd. under the Contract(s) shall have a 1 (one) calendar year warranty on the Warranty modifications only. This Warranty shall not apply to the original installation.

2. Payment Terms

- 2.1. Payment Terms for all work shall be net 30 (thirty) days from the date of invoice, unless otherwise agreed to and noted in the Contract(s). In the event, that the Owner fails to pay within 30 days, CDN Controls Ltd. reserves the right to stop work on all Contract(s) with the Owner until all outstanding invoice(s) are paid in full.
- 2.2. All payments shall be in Canadian Dollars.
- 2.3. CDN Controls Ltd. is required to charge applicable federal, provincial and local taxes and levies on every item for which a sales tax exemption certificate or appropriate number has not been provided. All quoted costs exclude the applicable taxes or levies as per the quotation letter.
- 2.4. All payments shall be made out to: CDN Controls Ltd.
- 2.5. All holdbacks shall be paid in full within 45 (forty five) calendar days from the date of the Project Substantial Completion Sign-Off, delivery of QA / QC Documentation, delivery of As-Built Drawings and Final Contract(s) Invoicing.

3. Invoicing Terms

- 3.1. All Invoicing shall be dated, addressed and sent as per the invoicing procedures in the Contract documents.
- 3.2. CDN Controls Ltd. reserves the right to progress bill weekly, bi-weekly, monthly, or upon completion on all installations unless otherwise agreed to and noted in the Contract(s).

4. Quotation Validity

- 4.1. All quotes shall be valid for a period of 30 (thirty) calendar days from the date the quotation was submitted. CDN Controls Ltd. reserves the right to withdraw or re-quote the installation after 30 (thirty) calendar days.
- 4.2. All quotes that are based on "Issued for Bid (IFB)" drawing package(s) shall be subject to cost impacts after a careful review of the "Issued for Construction (IFC)" drawing package(s). CDN Controls Ltd. shall revise its quotation based on all changes from the IFB drawing package(s) to the IFC drawing package(s). In the event that there are no changes from the IFB drawings to the IFC drawings, then there will be no cost adjustment.
- 4.3. All quotations are strictly confidential and are intended for the person and company as per the quotation letter.
- 4.4. Any alterations or changes to CDN Controls Ltd.'s quotation made by anyone other than an authorized CDN Controls Ltd. Representative shall void the quotation.

5. Confidentiality Agreement

- 5.1. Any information, documentation, or correspondence between CDN Controls Ltd. and the EPCM or the Owner shall be held in the strictest of confidence and shall not be distributed without CDN Controls Ltd. written consent.

6. Force Majeure

- 6.1. CDN Controls Ltd. shall not be liable for any delay in, or impairment of performance resulting in whole or in part from fires; floods; accidents; riots; acts of God; war invasion; sabotage; governmental interference; strikes; labour difficulties; labour, fuel, power, materials or supplies shortages; or any other causes beyond reasonable control of CDN Controls Ltd. in the conduct of its business.

7. General

- 7.1. All Contract(s) set forth with CDN Controls Ltd. shall bear the signature of an authorized CDN Controls Ltd. Representative and an authorized Representative of the Owner.
- 7.2. CDN Controls Ltd. shall require a valid Purchase Order bearing the signature of an authorized representative of the Owner for all Contract(s), master service agreement(s) and project award(s).
- 7.3. Any Cancellation of Contract(s) set forth with CDN Controls Ltd. shall have the approval of CDN Controls Ltd. and may be subject to restocking and other charges incurred during the course of work performed for the Contract(s).

These Terms and Conditions shall be supplementary to the Contract(s). Any discrepancies from the Contract(s) to the Terms and Conditions, the Contract(s) shall govern. In the event, that there are any discrepancies between the Contract(s) and the project clarifications, the clarifications shall govern. Signing into a Contract(s) with CDN Controls Ltd. acknowledges that you have reviewed and agree to these Terms & Conditions.