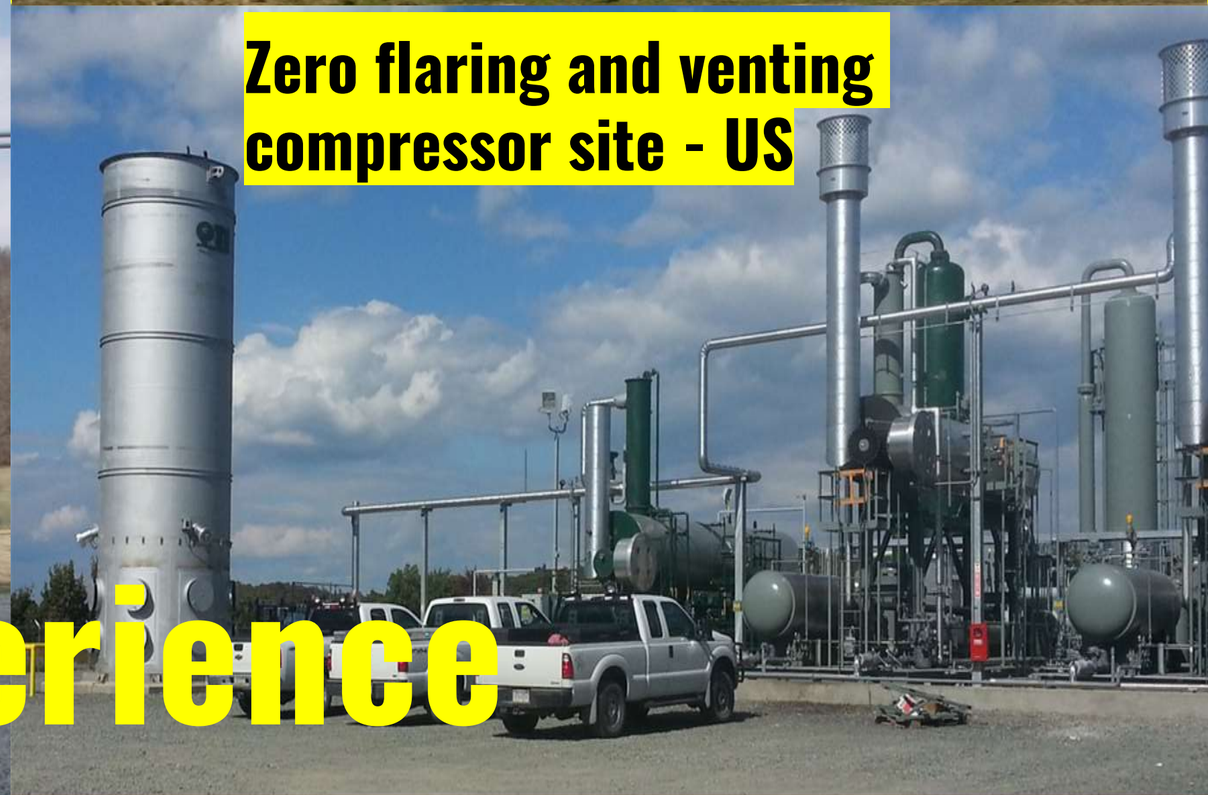
25 YEARS PROVIDING CLEAN COMBUSTION SOLUTIONS

GLOBAL RECOGNITION

Questor

Clear Solutions Clean Skies

Ms. Audrey Mascarenhas BASc, M.Eng, FCAE
President and CEO



Global Experience

Who We Are

Leaders in clean combustion and waste heat to power technology

Permanent installation

Portable unit

PUBLIC COMPANY

- Founded in 1995
- Public in 1998 on the TSX-V QST
- Patented clean air technology

SUPERIOR TECHNOLOGY

- ISO certified 14034 > 99.99% combustion efficiency
- Safe and quiet = community acceptance
- Reliable equipment requiring minimal maintenance

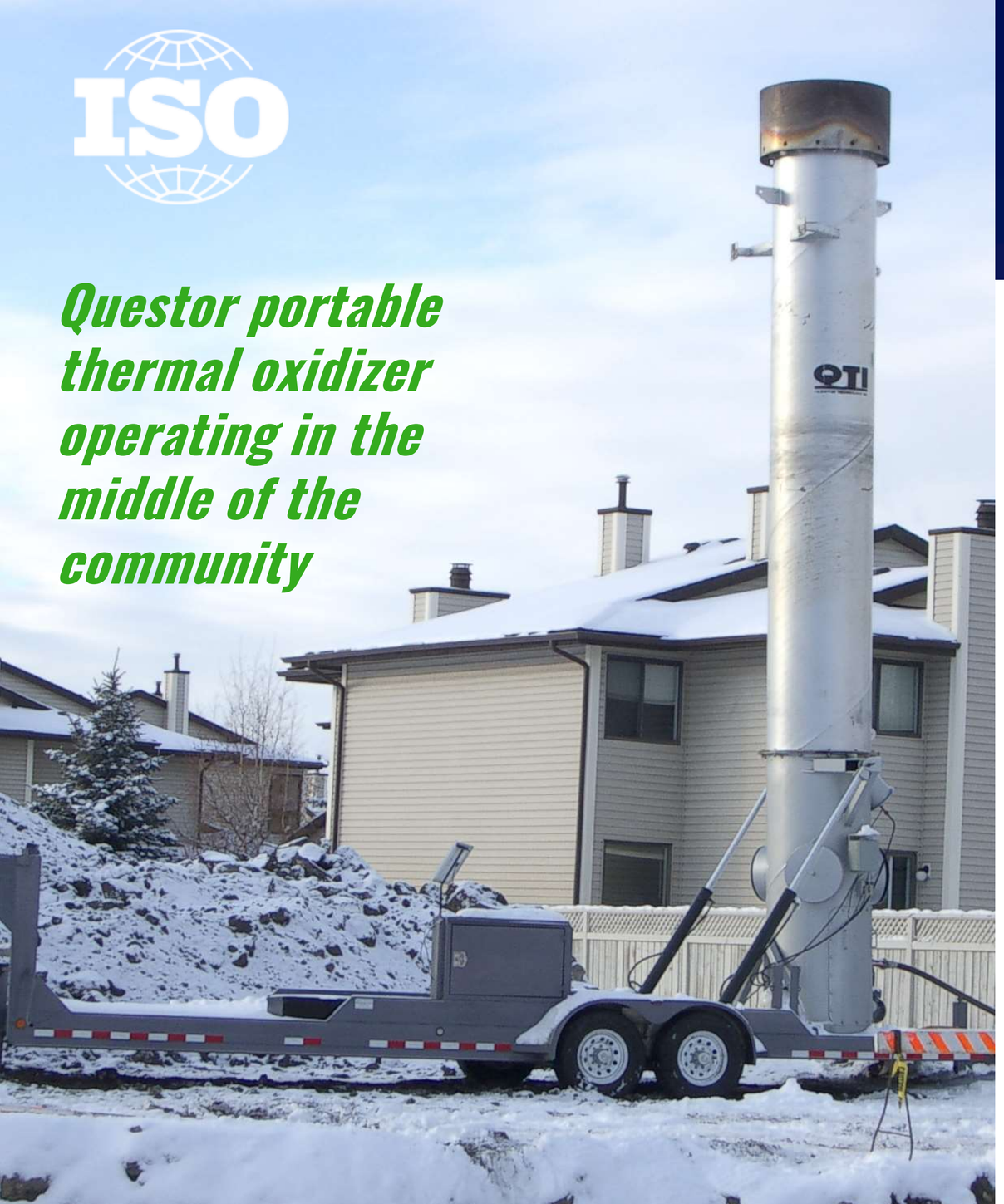
PROVEN TRACK RECORD

- 25-years of providing global clean combustion solutions
- Performance recognized by regulators
- Global leader considered best in class - BACT
- Strong technical team with deep understanding of our clients

25+ YEARS OF EXPERIENCE

1000+ Q – SERIES PLACED WORLDWIDE

>99.99% Q – SERIES COMBUSTION EFFICIENCY



Questor portable thermal oxidizer operating in the middle of the community

What We Do

Questor's Clean Combustion Units

Cleanly combust all types of waste gas at 99.99% efficiency

Waste Heat to Clean Power

Convert low-grade waste heat to power from clean combustion of flared and vented gas, industrial processes, engine exhaust, etc.

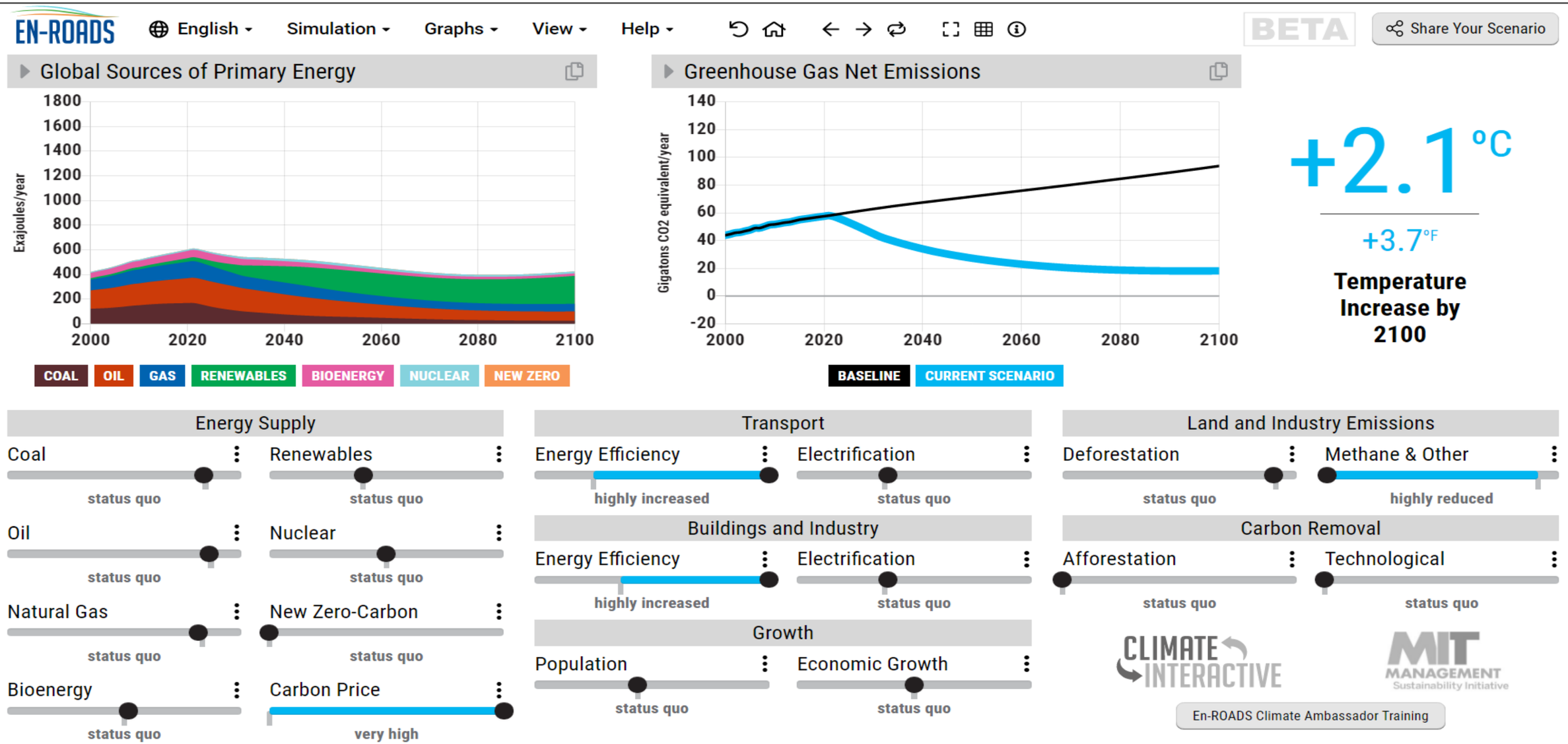
Site Emission Quantification

Verifies our solutions deliver regulatory compliance eliminating GHG, HAP's, VOC's, NOx, H_2S, and methane emissions

H_2S expertise recognized globally

STOPPING THE TEMPERATURE RISE

IT'S ELIMINATING METHANE AND ENERGY EFFICIENCY



HOW WE SERVE

EMISSION REGULATION

VOCs, HAPs, Methane, GHG emissions

Methane is 86x worse than CO_2 from a GHG warming perspective

COMMUNITY & ESG INITIATIVES

Community acceptance, ESG initiatives

COST REDUCTION

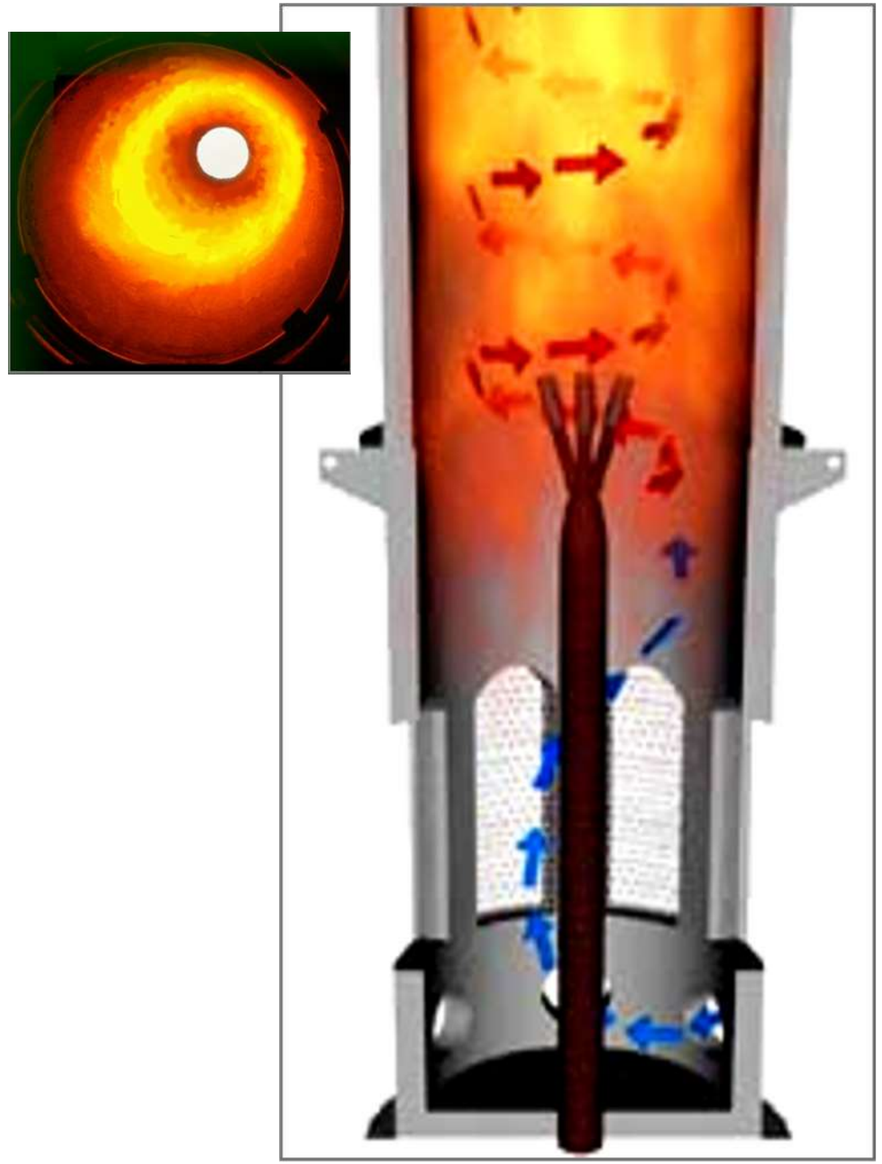
Reduced operational, safety and capital costs

ENERGY EFFICIENCY

Power generation from waste heat, reduce op costs, reduced diesel usage

OUR PATENTED PROCESS

- Natural draft system; no fans, blowers, or costly and/or noisy generators needed
- No external power required; BMS runs on solar
- Air naturally induced without the use of blowers
- Induces all other low-pressure streams (e.g. tank vapors without the need for a VRU) with minimal back pressure
- A single unit handles both Low-pressure and High-pressure streams



ADVANTAGES OF THE ENCLOSED CLEAN COMBUSTION TECHNOLOGY

HEAT EASILY TRANSFERRED

- ✓ Directly with an internal heating coil
- ✓ Slip stream of flue gas

POWER, PROCESS OR WATER EVAPORATION

Opportunity to utilize the Heat;

- ✓ Process heat
- ✓ Break the oil/water emulsion
- ✓ Produced water evaporation
- ✓ Power generation

Post combustion gas capture for Carbon Capture, Utilization or Storage (CCUS)

Proven Performance ISO Certified

NORTH DAKOTA FIELD TESTING

Combustor	Parameter	Test Result				
		Test 1	Test 2	Test 3	Test 4	Average
SITE 1 Q5000-17-164 (west)	VOC DRE %	99.997%	99.998%	100%	100%	100%
	NOx (lb/MMBtu)	0.158	0.200	0.233	0.232	0.206
	CO (lb/MMBtu)	0.110	0.074	0.017	0.067	0.067
	Stack Temperature (˚F)	1125	1412	1649	1823	1502
SITE 1 Q5000-17-173 (west)	VOC DRE %	100%	100%	100%	100%	100%
	NOx (lb/MMBtu)	0.140	0.182	0.220	0.287	0.207
	CO (lb/MMBtu)	0.049	0.008	0.002	0.011	0.018
	Stack Temperature (˚F)	1046	1348	1522	1852	1442

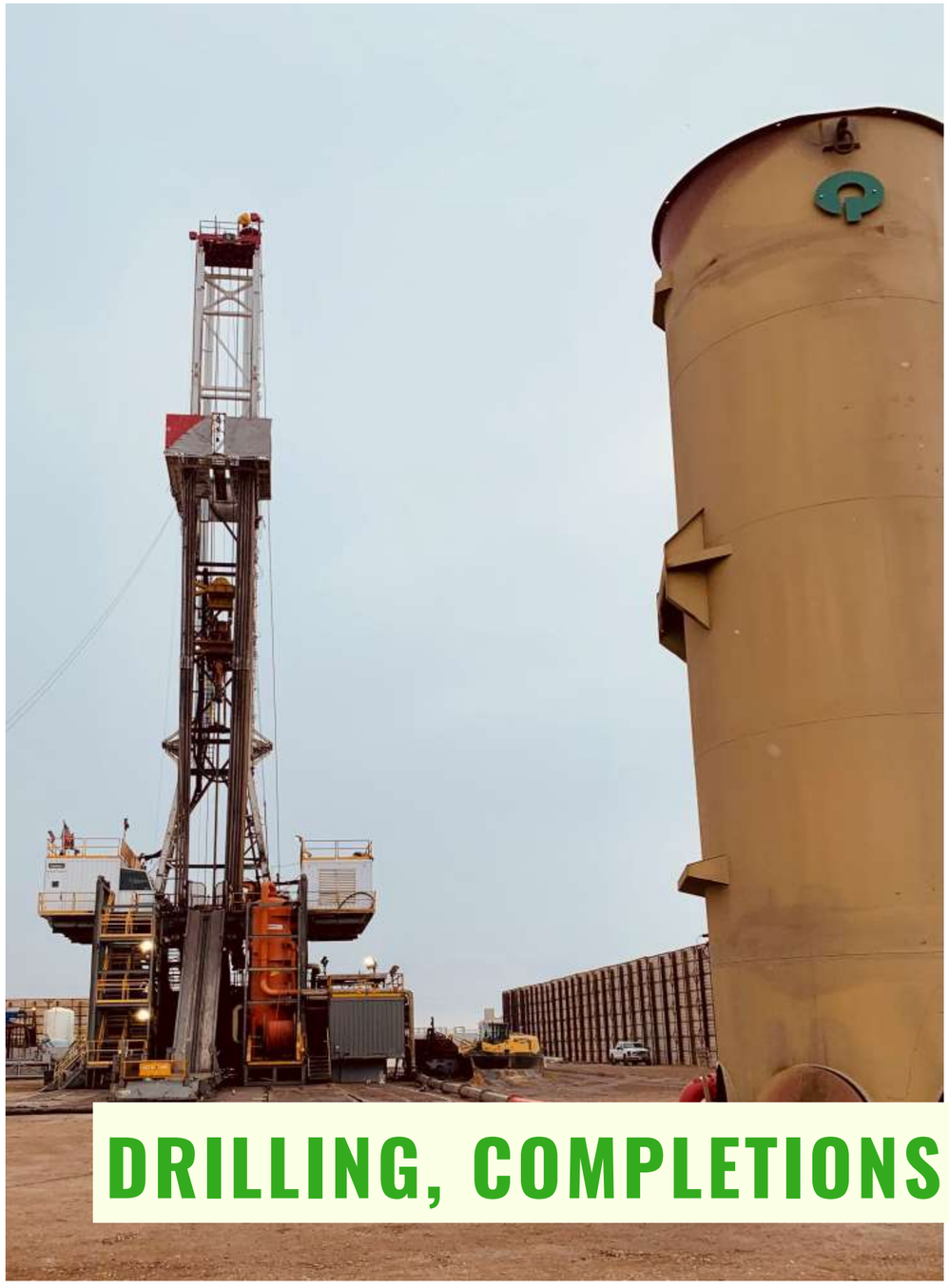
		Test 1	Test 2		Average
SITE 2 Q5000-17-183 (east)	VOC DRE %	100%	100%		100%
	NOx (lb/MMBtu)	0.279	0.258		0.263
	CO (lb/MMBtu)	0.001	0.002		0.001
	Stack Temperature (˚F)	1758	1860		1792
SITE 2 Q5000-17-173 (west)	VOC DRE %	100%	100%	100%	100%
	NOx (lb/MMBtu)	0.244	0.279	0.281	0.268
	CO (lb/MMBtu)	0.002	0.004	0.002	0.003
	Stack Temperature (˚F)	1743	1763	1775	1760

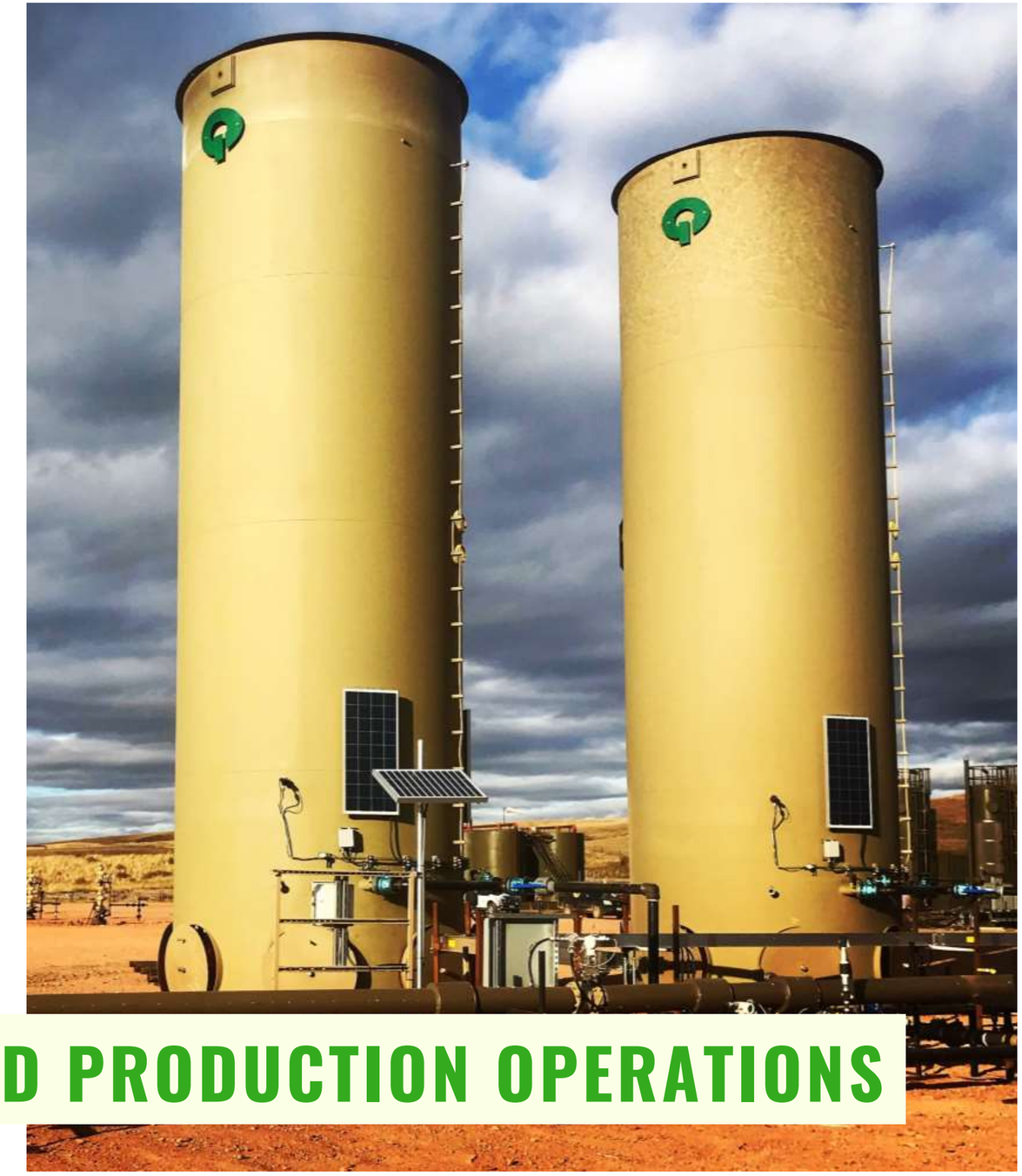
		Test 1	Test 2	Test 3	Average
SITE 3 Q5000-17-123 (east)	VOC DRE %	100%	100%	100%	100%
	NOx (lb/MMBtu)	0.178	0.173	0.202	0.184
	CO (lb/MMBtu)	0.092	0.013	0.005	0.037
	Stack Temperature (˚F)	1737	1706	1688	1710
SITE 3 Q5000-17-164 (west)	VOC DRE %	100%	100%	100%	100%
	NOx (lb/MMBtu)	0.205	0.198	0.204	0.202
	CO (lb/MMBtu)	0.046	0.049	0.042	0.046
	Stack Temperature (˚F)	1735	1754.000	1745	1745

VERIFIED ISO 14034

WHERE QUESTOR CAN HELP

- Oil and Gas production, Gas processing, Oil processing, Refining and Petrochemical, Pipelines and Utility distribution
- Tank vapours, Valves, Pneumatics and Compressor seals
- Process units – dehydration, amine, etc.
- Well unloading, Flow backs, well testing and workovers
- Compressor, Facility and Pipeline maintenance
- Truck, Rail and Ship loading
- Emergency Shut Downs - ESD’s, PSV’s
- Abandoned and Suspended wells





DRILLING, COMPLETIONS AND PRODUCTION OPERATIONS

SHELL TESTING 2000

- Shell 29 Limestone 14-2-33-10 W5M
- 11% H_2S
- 99.99% Combustion efficiency at 2.5 and 4.8MMscf/d with 100% excess air
- Plume rise of over 400 meters
- SO_2 dispersion from 40ft combustion stack equivalent to a 110ft flare operating at 98% efficiency.
- No ground level violations of SO_2 or H_2S

Shell Canada Limited
400-4th Avenue S.W.
P.O. Box 100, Station M
Calgary, Alberta, T2P 2H5

Mr. Kim Eastlick
Facilities Division
Environment Safety & Technical Services
Alberta Energy and Utilities Board

20 March, 2000

Regarding: Portable Incinerator Test
Shell 29 Limestone 14-2-33-10W5m
Jan 25, 2000/03/04

Attached are the findings of the Portable incinerator test conducted by Shell Canada Limited in conjunction with Norward Energy Services, the owner of the incinerator, and Questor Technologies, the manufacturer of the incinerator.

Yours truly,

R.L. Nelson
Drilling and Production Engineering Advisor

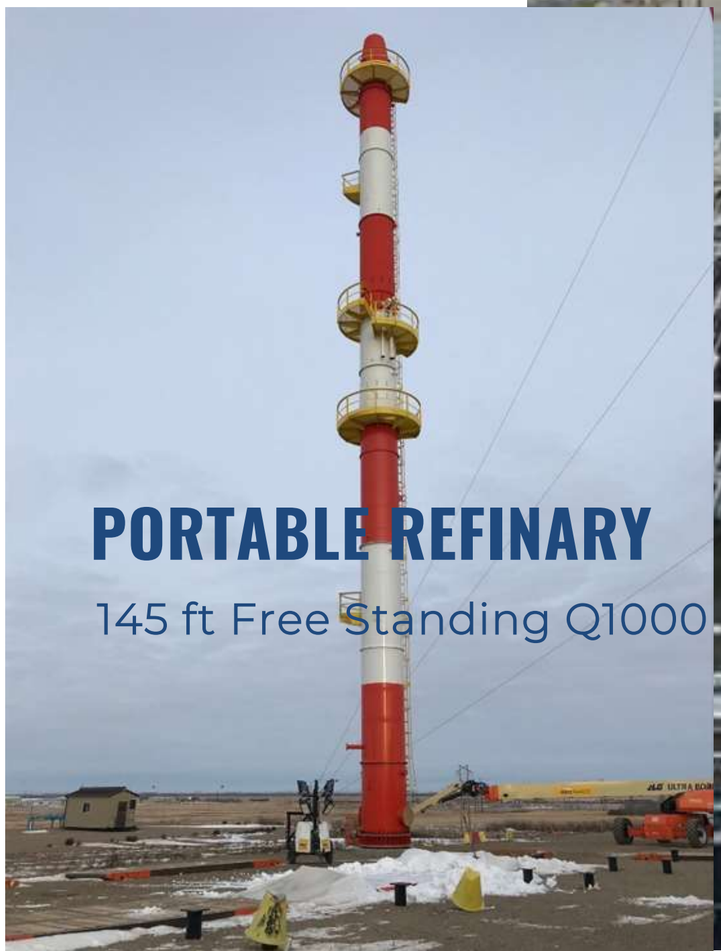
TRS DESTRUCTION EFFICIENCIES (as Sulphur) @126 E3m3/day				
(total in – ppmv as Sulphur)	105100	106900	99800	103900
(total out – ppmv as Sulphur)	<4.0	<4.0	<4.0	<4.0
(% efficiency)	>99.9962	>99.9963	>99.9960	>99.9962
Taking into account intake air dilution	99.9	99.9	99.9	

GASEOUS ORGANICS DESTRUCTION EFFICIENCIES (as CH_4) @ 126 E3m3/day				
(total in – ppmv as Methane)	828102	821376	818214	822564
(total out – ppmv as Methane)	<36.4	<38.4	<185.8	<86.9
(% efficiency)	>99.9956	>99.9953	>99.9773	>99.9894

TALL STACKS FOR SO_2

EXTENSIVE GLOBAL SOUR GAS EXPERTISE

- 50% lower capital cost
- 50% Reduction in fuel gas
- No blower
- Minimal maintenance
- Simplicity of operation
- Superior SO_2 dispersion
- 40ft – 335ft



PORTABLE REFINARY

145 ft Free Standing Q1000

100MMSCF/D SOUR GAS PROCESSING PLANT

Questor tall stack for H_2S destruction and SO_2 dispersion

INNOVATIVE SOLUTIONS

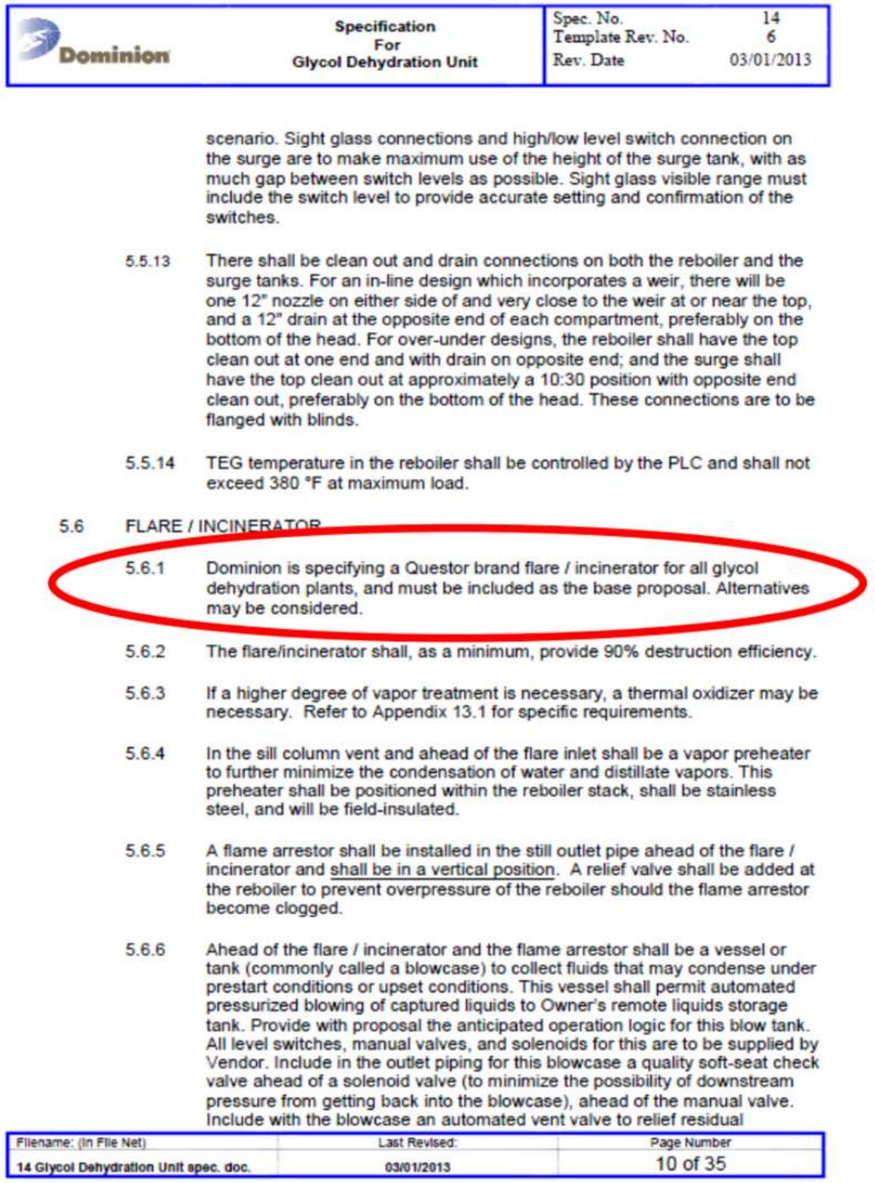
GLYCOL DEHYDRATION

- Still column vapors directly piped in
- Close spacing enables a small footprint and significant cost reductions
- Eliminates condensing, storage, transportation and disposal of water
- Minimal fuel gas usage
- Guaranteed zero BTEX emissions

BEST PRACTICES

Best available combustion technology (BACT)

5.6.1 Dominion is specifying a Questor brand flare/incinerator for all glycol dehydration plants and must be included as the base proposal.



Dominion | Specification For Glycol Dehydration Unit | Spec. No. 14 | Template Rev. No. 6 | Rev. Date 03/01/2013

scenario. Sight glass connections and high/low level switch connection on the surge are to make maximum use of the height of the surge tank, with as much gap between switch levels as possible. Sight glass visible range must include the switch level to provide accurate setting and confirmation of the switches.

5.5.13 There shall be clean out and drain connections on both the reboiler and the surge tanks. For an in-line design which incorporates a weir, there will be one 12" nozzle on either side of and very close to the weir at or near the top, and a 12" drain at the opposite end of each compartment, preferably on the bottom of the head. For over-under designs, the reboiler shall have the top clean out at one end and with drain on opposite end; and the surge shall have the top clean out at approximately a 10:30 position with opposite end clean out, preferably on the bottom of the head. These connections are to be flanged with blinds.

5.5.14 TEG temperature in the reboiler shall be controlled by the PLC and shall not exceed 380 °F at maximum load.

5.6 FLARE / INCINERATOR

5.6.1 Dominion is specifying a Questor brand flare / incinerator for all glycol dehydration plants, and must be included as the base proposal. Alternatives may be considered.

5.6.2 The flare/incinerator shall, as a minimum, provide 90% destruction efficiency.

5.6.3 If a higher degree of vapor treatment is necessary, a thermal oxidizer may be necessary. Refer to Appendix 13.1 for specific requirements.

5.6.4 In the sill column vent and ahead of the flare inlet shall be a vapor preheater to further minimize the condensation of water and distillate vapors. This preheater shall be positioned within the reboiler stack, shall be stainless steel, and will be field-insulated.

5.6.5 A flame arrestor shall be installed in the still outlet pipe ahead of the flare / incinerator and shall be in a vertical position. A relief valve shall be added at the reboiler to prevent overpressure of the reboiler should the flame arrestor become clogged.

5.6.6 Ahead of the flare / incinerator and the flame arrestor shall be a vessel or tank (commonly called a blowcase) to collect fluids that may condense under prestart conditions or upset conditions. This vessel shall permit automated pressurized blowing of captured liquids to Owner's remote liquids storage tank. Provide with proposal the anticipated operation logic for this blow tank. All level switches, manual valves, and solenoids for this are to be supplied by Vendor. Include in the outlet piping for this blowcase a quality soft-seat check valve ahead of a solenoid valve (to minimize the possibility of downstream pressure from getting back into the blowcase), ahead of the manual valve. Include with the blowcase an automated vent valve to relief residual

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PIPELINE AND PLANT MAINTENANCE - VENTED BLOWDOWNS

Incineration of Methane Emissions

Research and Development

Incineration of Methane Emissions

TransCanada has twice successfully tested a methane incinerator further increasing our ability to minimize the greenhouse gas (GHG) impacts of blowdowns. A blowdown is when methane is emptied from pipelines for construction and maintenance. Using a portable incinerator allows TransCanada to burn off residual methane left in pipelines after the use of air-powered expellers. Combustion converts methane to carbon dioxide, reducing its GHG impact by roughly 80 per cent. Methane is 21 times more potent than carbon dioxide over a 100 year time period in the atmosphere. Approximately 24 per cent of TransCanada's methane emissions are from blowdowns. Combusting methane reduces TransCanada's greenhouse gas emissions.

Caron Compressor Station November, 2002

In the test Compressor Station 13, near Moose Jaw, Saskatchewan, portable transfer compressors were used to pulldown natural gas in the pipeline. In normal circumstances, the remaining gas would have been released into the atmosphere. In this case an incinerator was used to combust the remaining gas.

Herbert Compressor Station May, 2003

The second incineration trial took place at Herbert Compressor Station, near Swift Current, Saskatchewan. Maintenance was required to install a new pig receiver at a mainline pipe section. Incineration of residual methane gas was carried out after the completion of transfer compression.

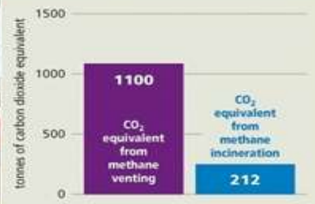
In both pilot tests Questor technology's portable incinerator was used. In each case approximately 75 per cent of the remaining gas was incinerated. Questor incinerators use a vortex combustion system to achieve 99 per cent combustion efficiency.

Each Incineration:

- Reduced emissions by approximately 1100 tonnes of carbon dioxide equivalent
- Produced approximately 212 tonnes of carbon dioxide emissions from combustion
- Incinerated approximately 2.93 million cubic feet of gas
- Approximately 3.11 million cubic feet of gas remained in the lines after transfer compression

Methane Incineration for both tests was equivalent to:

GHG Emission Comparison with and without Incineration after Transfer Compression



Community, Safety and Environment
Climate Change Group

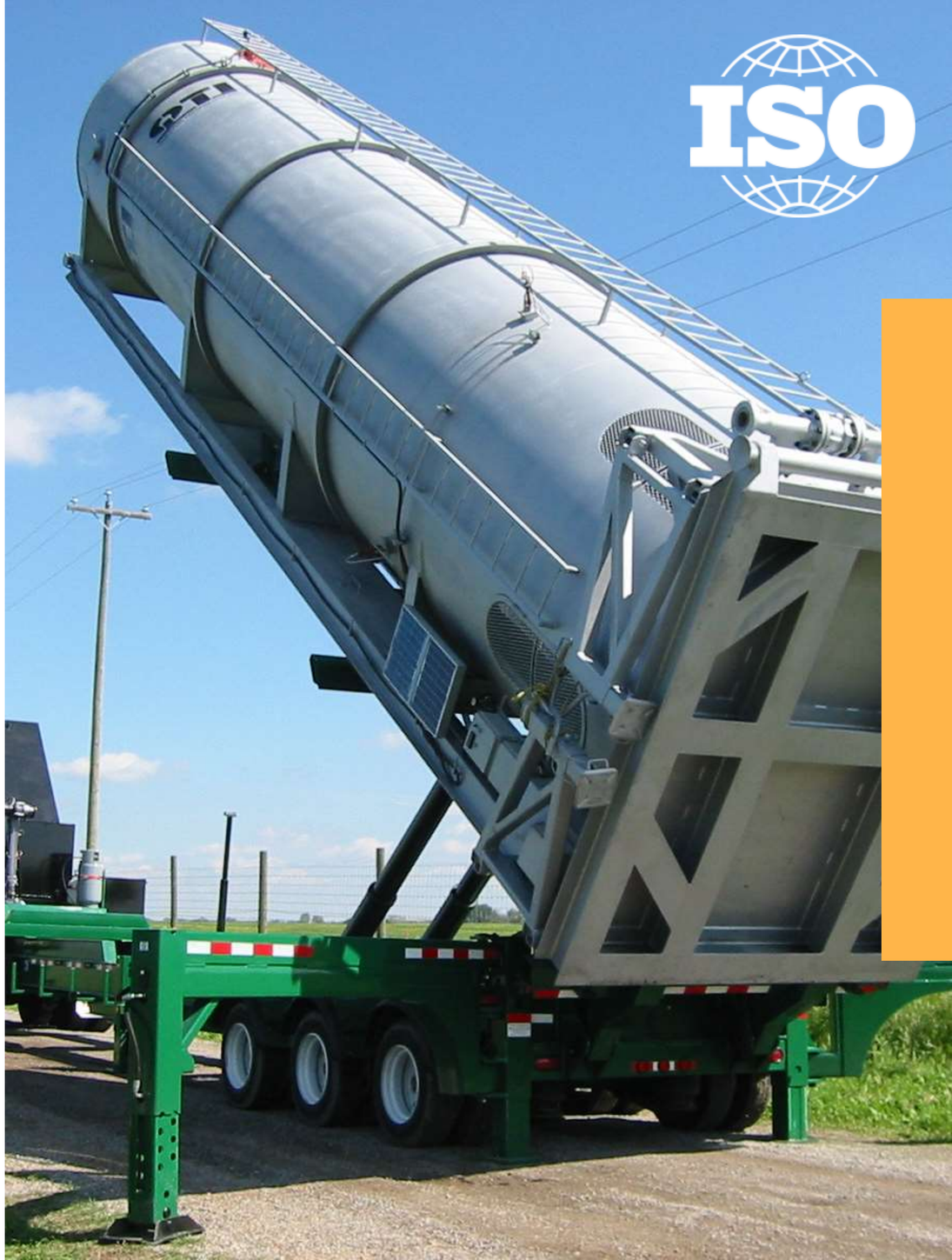
Contact: Hasan Imran phone: 403.920.7270
email: hasan_imran@transcanada.com

TransCanada
In business to deliver

PORTABLE AND EASY SETUP

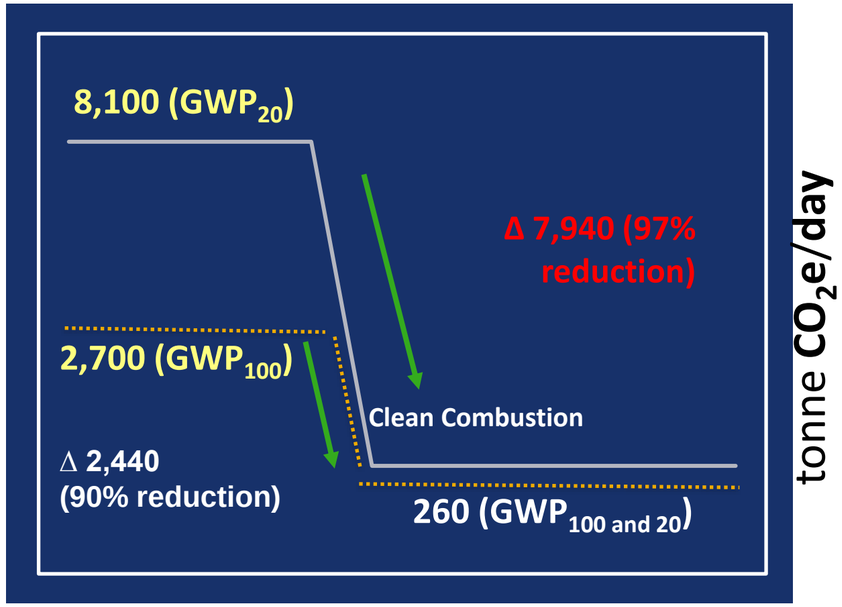
SET IT AND FORGET IT

- Patented Hydraulic trailer
- Setup and takedown in less than 10 minutes
- Detachable trailer
- Eliminates crane and pickup costs
- Improved safety
- Over 120-unit rental fleet



Eliminating Methane Emissions 100%

Questor unit eliminating the venting of 5MMSCF/D Methane



Methane:

GWP_{20} = 84 tonne CO_{2e}

GWP_{100} = 28 tonne CO_{2e}

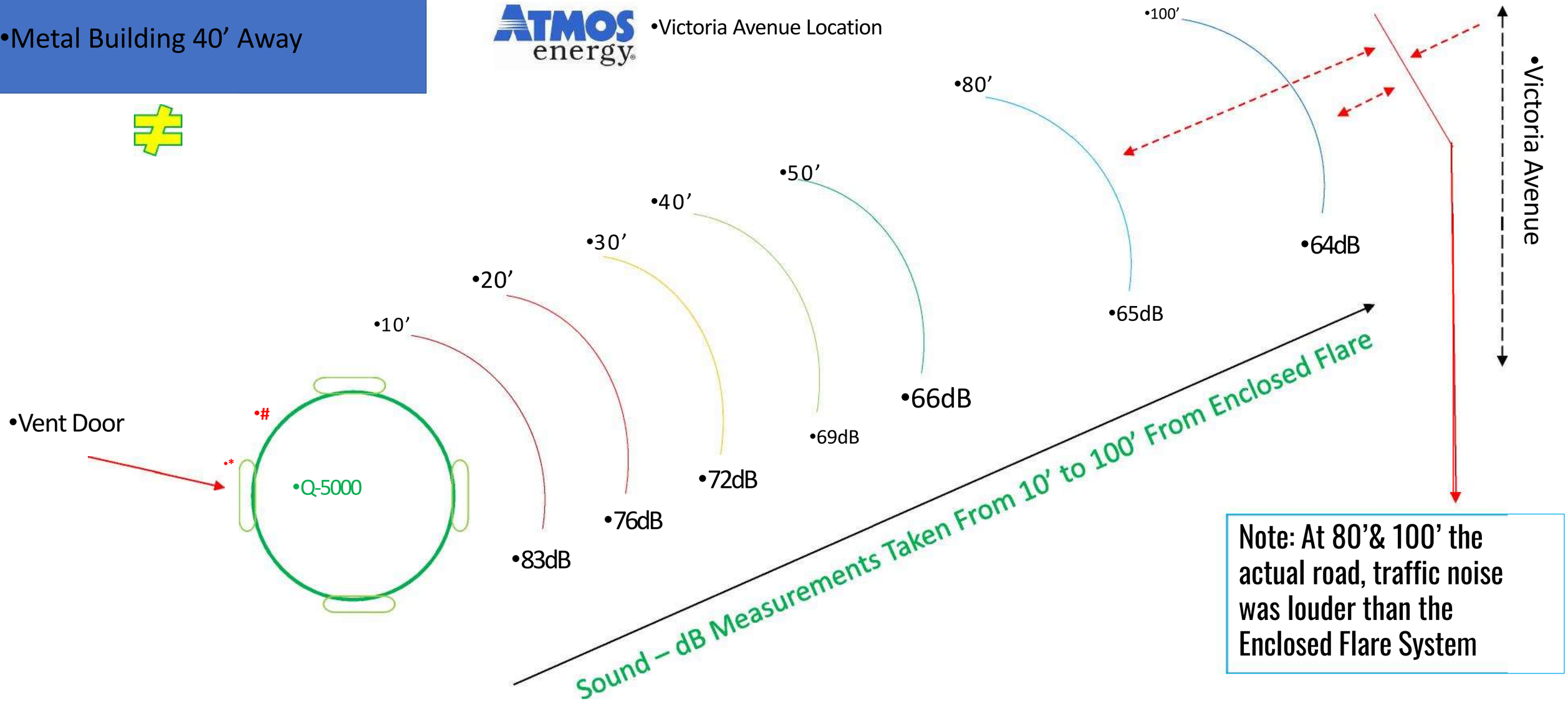
Ref: (IPCC-AR5)

PIPELINE BLOWDOWN – COLLEGE STATION, TX. 5MMSCF/D

•Metal Building 40’ Away

≠

ATMOS energy •Victoria Avenue Location



Note: At 80’& 100’ the actual road, traffic noise was louder than the Enclosed Flare System

Temperature Readings:
#Side of Q5000 – **182F Deg.**
*Vent Door on Q5000 – **565F Deg.**

≠ Side of Building, @ 40’ away was **10F Deg. Above Ambient**

EXPRO
MIDSTREAM – PIPELINE SERVICES

LOW GROUND HEAT RADIATION

SAFETY

- Facility integration
- Personnel safety
- No harmful pollutions emitted
- H_2S safety

MINIMAL GROUND LEVEL HEAT RADIATION

- Low forest fire risk
- Permafrost protection
- Air intakes can be flash arrested
- No water curtain need

COMMUNITY IMPACT

> We used Questor because of the quality of the units. They're the most effective with almost 100 percent efficiency in burning all the gas off. It's a proven unit
>
> - Seredynski, Nexen

N E W S A N D

Silently sour

Extensive planning helped Nexen comp … or sour gas well workover on Calgary's outskirts virt… noticed

With the recent gas leaks west of Edmonton, the idea of sour gas makes many people very anxious. So when it comes to a sour gas well workover, no news is good news.

In late October 2004, Nexen Canada Ltd. moved a service rig on to its sour gas wellsite facility, located on the east side of 84 Street NE just north of 16 Avenue NE, to complete maintenance on the well.

Nexen had suspended and isolated the wellsite in October 2003 following a routine inspection that identified a maintenance requirement. The workover entailed inspecting the casing, running new production tubing and sub-surface safety landing nipple and valve to ensure the continued safe operation of

weather … ions. Using current … ather conditions, we knew where the H2S or SO2 plume would travel."

The use of the Questor Incinerator for combusting the sour gases (35 per cent H2S) vented from the well and the inclusive method that Nexen used when planning the project allowed for smooth passage of the workover with the EUB, the City of Calgary, the Municipal District of Rockyview and the many residential stakeholders.

"We used Questor because of the quality of the units. They're the most effective with almost 100 per cent efficiency in burning all the gas off. It's a proven unit," said Seredynski.

Although no sour gas was released during the workover,

Nexen in Calgary - 34% H_2S

> I live one kilometer downwind of a natural gas plant owned by Compton Petroleum. When this company wanted to expand their operations and applied for a permit to incinerate sour gas I was concerned about air quality and bad smells that may result. Not after several months of operations can say that I have never detected any smalls from the plant where I live
>
> - Nelson Ferris, Hines Creek, Alberta

Compton Petroleum Corporation
Suite 3100, 150-6 Avenue SW
Petro Canada Centre, West Tower
Calgary, Alberta
T2P 3Y7

June 13, 2001

To Whom It May Concern:

I live one kilometer downwind of a natural gas plant owned by Compton Petroleum. When this company wanted to expand their operations and applied for a permit to incinerate sour gas I was concerned about air quality and bad smells that may result. Now after several months of operations, I can say that I have never detected any smells from the plant from where I live.

The noise level coming from the plant is such that I can hear it while outside at night if I listen for it, but it is not at a level that would bother anything. I am unable to hear the plant while in the house. The noise might be comparable to that of a large farm tractor working the same distance away – one-kilometer.

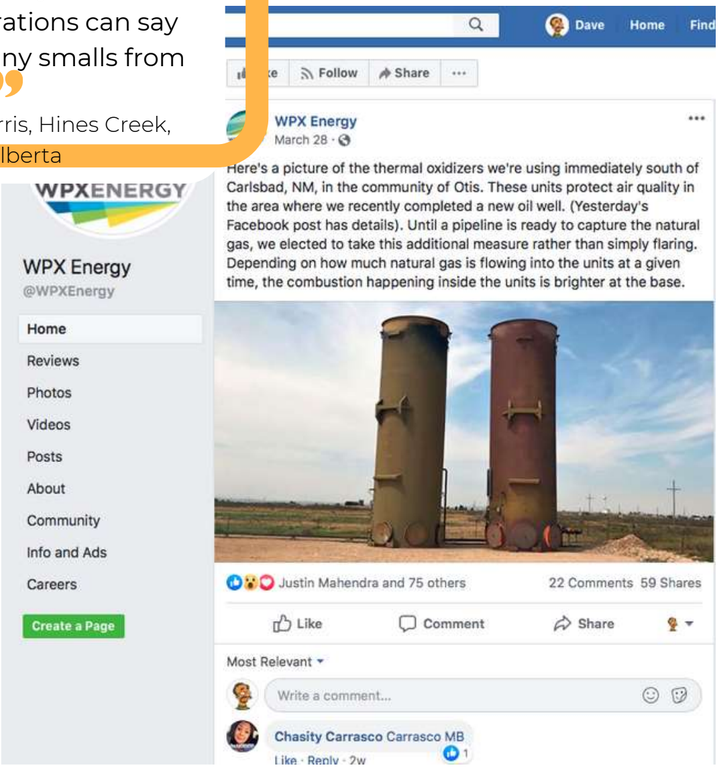
Compton is monitoring air quality in the area on an ongoing basis.

Thank you,

Nelson Ferris

Nelson Ferris
Hines Creek, Alberta

Compton in Northern Alberta



WPX New Mexico

ZERO FLARING AND VENTING FACILITIES

One unit can handle multiple streams of varying pressures

COMPRESSOR STATION - NEW YORK STATE

Non-Routine and Maintenance

- Maintenance – pipeline, engines,
- Pipeline blowdowns and pigging
- Soft starts
- Equipment failure

Routine Process

Dehy Still Column, Tank, Amine, Process Units, PSV's, etc.

Questor Technology Inc

DRILLING, COMPLETIONS AND PRODUCTION

EARLY PRODUCTION FACILITY
DENVER, COLORADO

ALL GAS TIED IN

- High capacity - 5MMscf/d methane eq. per unit
- 99.99% guaranteed combustion efficiency
- No black smoke, odors, or visible flame
- Low noise

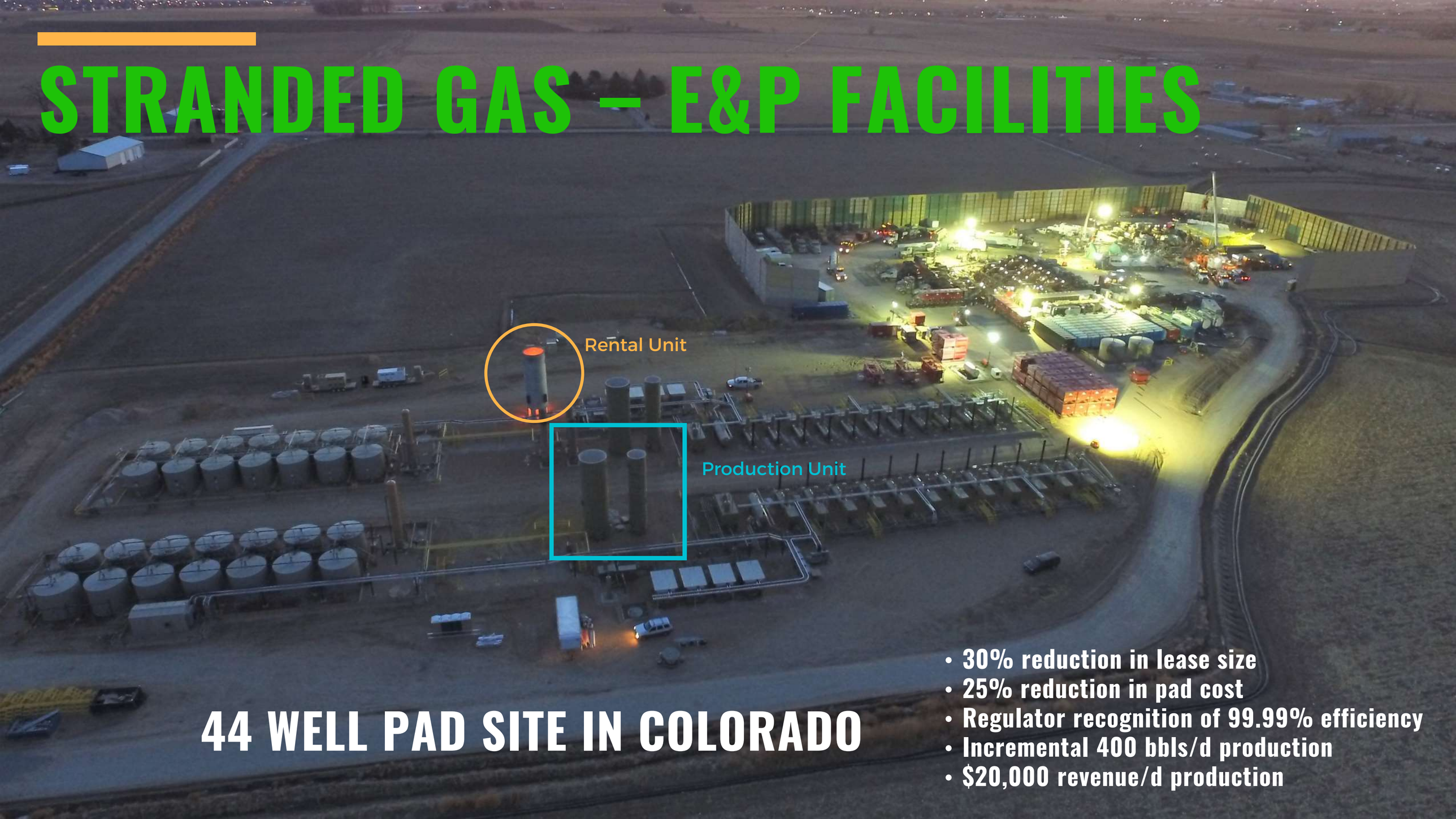
TYPICAL GAS SOURCE TIED IN

- Wellbore gases from HP and LP separation
- Liquid storage tanks
- Truck-out vapors
- The single unit handles multiple streams with varying pressures and flowrates

DESIGN AND TESTING

- Sturdy portable design; Hydraulic trailer
- TX, CO, PA, CA, NM Basin tested and proven
- Sales and rental units available

STRANDED GAS – E&P FACILITIES



44 WELL PAD SITE IN COLORADO

- 30% reduction in lease size
- 25% reduction in pad cost
- Regulator recognition of 99.99% efficiency
- Incremental 400 bbls/d production
- $20,000 revenue/d production

GREEN CLEAN POWER FROM WASTE GAS

HARNESS HEAT

- Harness the heat from our combustion unit
- Heat from boilers and engine flue gas
- Other process streams
- Large quantity of low-grade heat currently wasted

SUPERIOR TECHNOLOGY

- Zero emissions green power
- Consistent operation (Available 24/7)
- Small footprint
- Simple battery (hot water tank)
- No rare earth minerals needed

CPS ORC TECHNICAL SPECIFICATIONS

CPS MODEL	50-100	200	500	1000	1500
Thermal Input kW	650	1200	2600	5200	7400
Thermal input MBtu/hr	2210	4100	8890	17700	25200
Gross Electrical Power Output (kW)	50-100	200	500	1000	1500
Gross Thermal Input Required from incinerator (MBtu/hr)*	3200	6500	15000	30000	42000
NG Flow Rate to provide thermal input (MCF/D)**	60	125	250	500	800
Working Fluid	ENVIRONMENTALLY FRIENDLY ORGANIC FLUID				

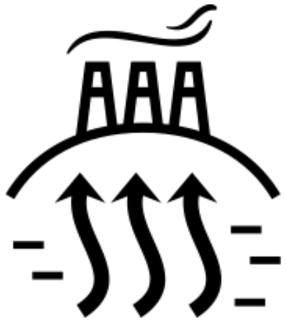
* Assumes 60% of thermal energy from the incinerator is transferred to the ORC system

** Assumes heating value of the gas = 1000 BTU/SCF and flue gas exit temperature is 200C at the heat recovery exchanger

SOURCES OF LOW-GRADE WASTE HEAT

Industrial Waste Heat

Biomass

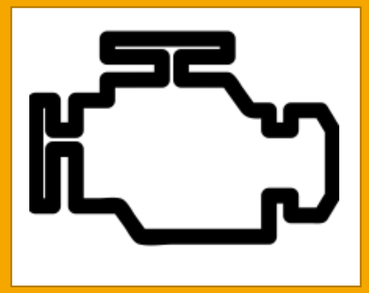


Geothermal

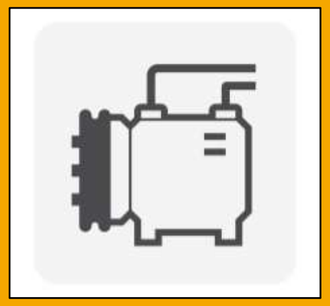
Solar

Landfill Waste

Questor Clean Waste Gas Combustion Technology

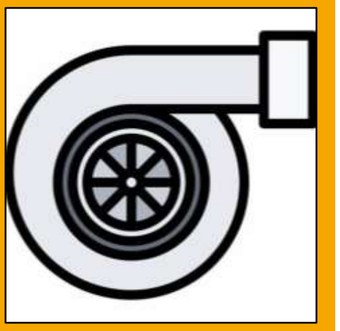


Reciprocating Engines



Boilers

Process Fluids



Gas Turbine

CONTINUOUS EMISSIONS MONITORING

Detection with Drones, Satellite, Handheld and fixed monitors

GAS EMISSION DETECTION

- BTEX
- HAP's
- VOC's
- Methane
- Hydrogen Sulphide

QUESTOR

Questor Unit Sensors monitor

Pressure
Flow
Temperature
BMS
Pilot Status

Predictive Emissions monitoring

Transmitting on 30-sec intervals

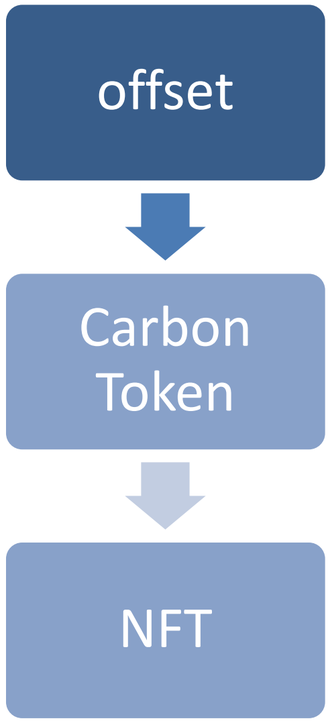
Continuous monitoring for zero emissions using detection tech

Emissions Excellence Center

Quantification of Carbon offsets for trading

DIGITAL CARBON MARKET TOKEN CREDITS

Where transparent data proves real monetizable emission reductions



PATH TO NET ZERO

1. Vented Methane

2700
CH_4
$215,000

5 MMSCFD

2. CH_4 to CO_2

264 (90% Reduction)
$0.11 | 5 Day Payout
$CO_2 + H_2O + N_2$ + Heat
$20,000

Electricity Generation
4500 kW

3. Heat to Power

187
-$205 | 1 Year payout
$CO_2 + N_2$
$15,000

H_2O

$N_2 + CO_2$

N_2

CO_2

Agriculture

Vent/Industry

Products

Carbon Capture

4. Zero Emissions

0
$0
NET ZERO
$0

Legend

CO2e GHG Emissions/d
$ Cost per tCO2e
Emissions
$ Carbon Tax / day

Assumptions:
CH4 GWP_{100} = 28 tCO2e; Carbon Tax: $80/tCO2e ; Heat to power: USEPA eGrid2018 emission factors for power generation; Generation capacity of 4.5 MW; Carbon capture cost $30/tCO2e; Cost of electricity: $0.16/kWh (AESO average pool cost 2022); $/tCO2e for purchase option excludes carbon credits, includes power savings; Payout time includes carbon credits

NET ZERO AT AN OIL BATTERY

- 300 mscf/d flared at 95% efficiency
- Cleanly combusting the gas at 100% efficiency reduces GHG emissions 2190 tCO_2e/yr.
- Generate 200kW from the waste heat reduces GHG emissions 1000 t CO_2e/yr. At $0.08/kWh this generates a revenue of $140k/yr.
- Assuming a 10-year project life
  - Capital $1MM
  - Revenue $1.4MM
  - 31,900 t CO2e reduced at 0 to -$13/t
- Assuming a carbon offset is worth $50/t – $1.6MM or >100% ROI

Assumptions:

- Gas composition: C_1: 80%, (based on a real case)
- GWP of methane: 28
- Electricity Grid Displacement Factor: 0.57 tCO_{2e}/MWH (ref: AEP, Carbon Offset Emissions Factor Handbook-2019)

Stranded Associated Gas

14.5 billion SCF is flared and vented everyday

- Air Quality Impact
- Harmful emissions
- Greenhouse gas emissions
- Significant waste of energy
- Community impacts
- Quality of life

SUSTAINABLE DEVELOPMENT GOALS

$3.6 BILLION WILL REDUCE 1GtCO_2e/YR

Methane global warming potential is 84x higher than CO_2 over 20 years.

Forms toxic compounds, VOC's and Ozone and ultimately CO_2

14.5 billion cubic feet of gas is flared and vented daily [1]

4,833 Questor Q5000 units could handle this volume

Cleanly combusting these streams instead of flaring and venting

Cost $3.63B ➡ 2.6MMt CO_2e/d or 1Gt CO_2e /yr.

Over a 10-year project life < $0.50 / t CO_2e

Assumptions

- 65% flared and 35% vented - 80% methane in the stream
- Flare combustion efficiency is 80%
- 3MMscf/d can be cleanly combusted in a Questor Q5000 at 99.99%
- GWP of 25 over a 100 year period

1. Global Gas Flaring Tracker Report, GGFR, The World Bank, July 2020

Clear Solutions. Clean Skies

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