

ZERO-EMISSIONS™

UNIT: CleanAir02

The Safe Way to Load Fluids

Patent Pending

PERFORMANCE

Purge Gas Generation	36 m ³ per hour @ 1206 kPa
Purge Gas Purity	99.5% Nitrogen
Capacity – Hours per Truck (purge and load 50 m ³)	2 hours (nominal)
Capacity – Trucks per Day (50m ³)	8 – 12
H ₂ S Removal	100 %
LEL Removal	97 to 99%
Mercaptan / Benzene Removal	97 to 99%

CASE STUDY –TRUCK LOADING (per 50m³ Super-B)*

	Conventional Scrubber	Zero-Emissions
Purge Phase		
Time	N/A	2 – 10 minutes
H ₂ S Vented	N/A	0 m ³
LEL / Mercapt. / Benzene. Vented	N/A	0 - 2 m ³
Load Phase (displacement + offgass)		
Time	45 - 90 minutes	45 – 90 minutes
H ₂ S Vented	50 - 800 m ³	0 m ³
LEL / Mercaptan / Benzene. Vented	50 - 800 m ³	0 m ³
Total Vented Gasses	50 - 800 m³	0 - 2 m³

*Assumed conditions: 15 - 20% air content in truck, 55° API condensate, 0 – 600 kPa tank pressure

MAJOR EQUIPMENT

Nitrogen Generator	On-Skid
Nitrogen Accumulator	On-Skid
Oxygen Analyzer	On-Skid
H ₂ S Scavenger	On-Skid
Instrument Air Compressor	On-Skid
Breathing Air	On-Skid
Chemical/Product Storage	On-Skid



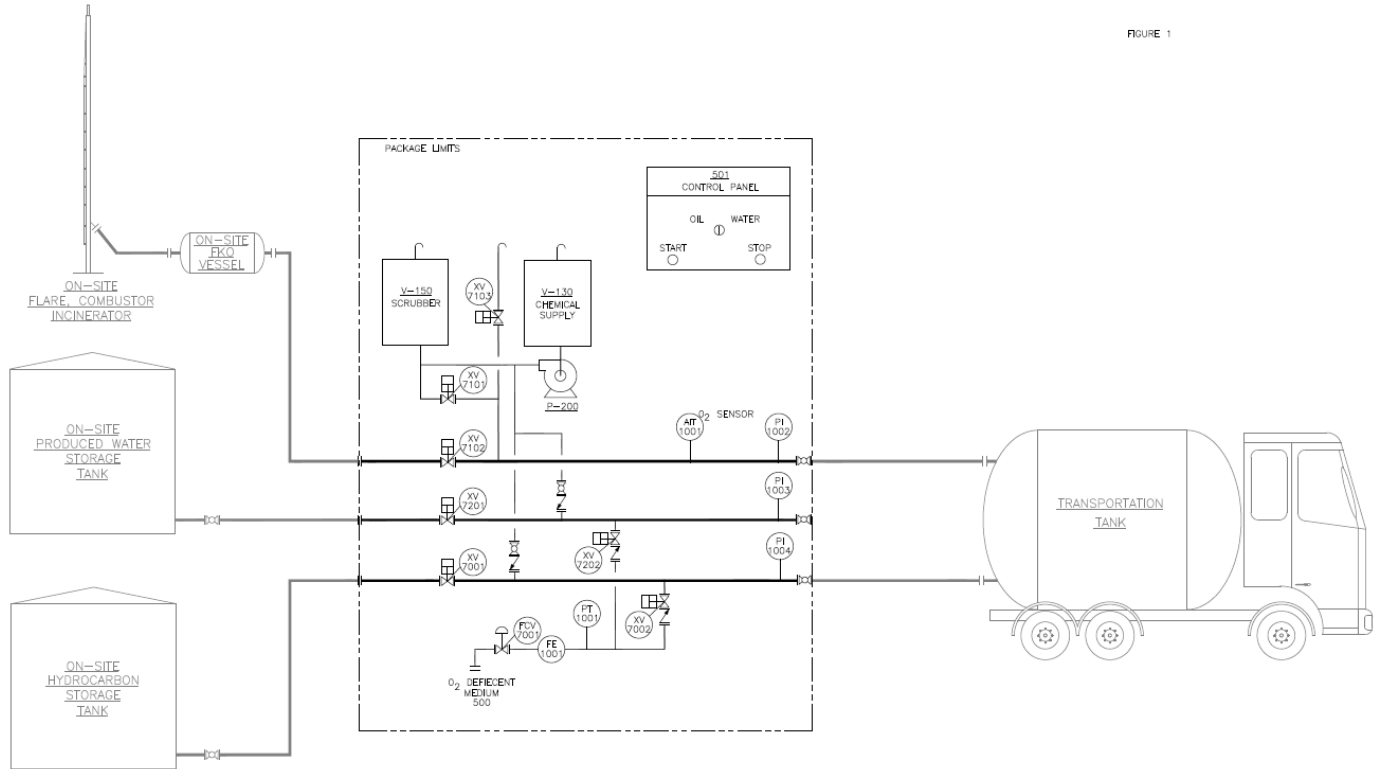
CERTIFICATION

Vessels	ASME Sec. VIII
Piping	ASME B31.3
Structural	CWB
Electrical	CSA
Province(s) of Registration	AB, BC, SK
Area Classification	Non-Classified General Purpose
Sour	Yes



PROCESS FLOW

FIGURE 1



SKID CONNECTIONS

Load Lines	3" cl150 RF	Aux. (Facility) Purge	1" NPT (100' of hose)
Flare Outlet	3" cl150 RF		

SHIPPING

Width	8'-6" (2.59 m)
Length	48'-0" (14.6 m)
Height	12'-0" (3.66 m)
Weight Estimate (dry)	48,000 lbs (21,800 kg)

POWER REQUIREMENTS

	480 Volt
	25 kVa
	60 Amp