

H2K

## 1. Equipment Description Scope

### Dual Phase Extraction System

(1) SVE inlet manifold

- 6" header with (3) 4" takeoffs, schedule 80 PVC piping & fittings
- (3) Knife gate valves on each leg, PVC with ss knife gate
- (3) Sample ports, vertically mounted
- (3) Vacuum gages, 0-60" wc vacuum, vertically mounted
- (3) 4" pipe stubs through wall

(1) Moisture separator, *H2K* model VLS 100

- Tangential inlet and demister for 99% + moisture removal
- Carbon steel construction, industrial enamel finish
- 17" Hg vacuum design rating
- 6" 125 lb Pattern flanged inlet and outlet
- Polypropylene demister element
- 110 gallon total capacity, 50 gallon holding capacity
- PVC site glass w/ ss high/high-high-low pump out level switches, mounted with union for easy removal
- 3" bleed valve with filter/silencer between separator and blower
- Vacuum gage, on separator inlet, 0-60" wc vacuum
- Clean out port, 6"
- 1" manual drain valve

(1) Vacuum Blower, New York Bower model 2606 centrifugal pressure blower

- 900 cfm @ 50" wc vacuum at blower inlet with no discharge pressure at 2326' elevation
- 15 hp, 230/460VAC 3 ph, EXP motor
- Steel blower housing with aluminum wheel
- Direct drive arrangement for blower
- 6" Blower discharge silencer
- Flexible connectors on blower inlet and outlet
- Vacuum relief valve on blower inlet
- Vacuum gage on inlet, 0-60" wc vacuum
- Vibration pads on floor
- Sample port on blower discharge
- Pressure gage on blower discharge, ss
- Temperature gage on blower discharge
- (1) Blower exhaust stack with rain cap discharge 15' above roof line with guy wires

(1) DP/Vacuum transmitter, Foxboro IDP10

- NEMA 4/7 enclosure, local LCD display, 4-20 mADC output

(1) Air flow meter/transmitter, Venturi, 6" with DP transmitter Foxboro IDP10

- Local LCD display, NEMA 4/7 enclosure, 4-20 mADC output
- mounted on blower discharge

(1) Condensate pump, Meyers model CT-05 centrifugal pump

- 10 gpm @ 72' TDH
- Cast iron bronze fitted
- 3/4 HP, 230/460VAC, 3Ø, EXP motor
- Check valve, on pump discharge
- Isolation ball valve on pump inlet
- Flexible braided steel connector on pump inlet
- Throttle valve, ss liquid filled pressure gage and sample port on pump discharge
- Unions on pump inlet & outlet
- Flexible connector on pump inlet
- Camlock fitting on pump discharge

*36 psi deadhead  
20-30 psi to get flow  
recommend 15 psi*

(1) 1" x 10' PVC reinforced hose with camlocks on both ends (sewer connection)

(1) High DP switch across LGAC piping

*2 psi =*

(1) Water flow totalizer, Kent C-700 turbine meter

(1) Siphon break on system discharge

#### **Enclosed Trailer**

(1) Trailer enclosure system, 6' wide x 12' long x 7' high inside dimension

**Includes equipment installation and wiring**

6" steel I beam frame

¾" Green treated plywood floor decking, aluminum & fiberglass exterior, white finish

R-5 fiberglass wall and ceiling insulation with plywood interior

Single axle, 5,000lb GVWR, 5,000 lb axle, radial tires

2" ball hitch, with jack stand

Electric brakes, ICC lighting

(4) Leveling scissor jacks at corners

(1) Wall mounted explosion proof electric convection heater with thermostat

(1) Ceiling mounted explosion proof incandescent lights with vapor globe with wall switch

(1) Explosion proof Exhaust fan with inlet and outlet louvers and thermostat

(1) 32" side door with cam lock, driver side

Floor sump with high level switch

Double rear doors with cam lock

(1) 10 lb ABC fire extinguisher

(1) Mounting bracket for (2) K-size O2 tanks

1 ½" Deep containment with polyurea liner inside trailer

## 2. Controls

### (1) Control System

*120/240 volt, 3-phase, 4-wire*

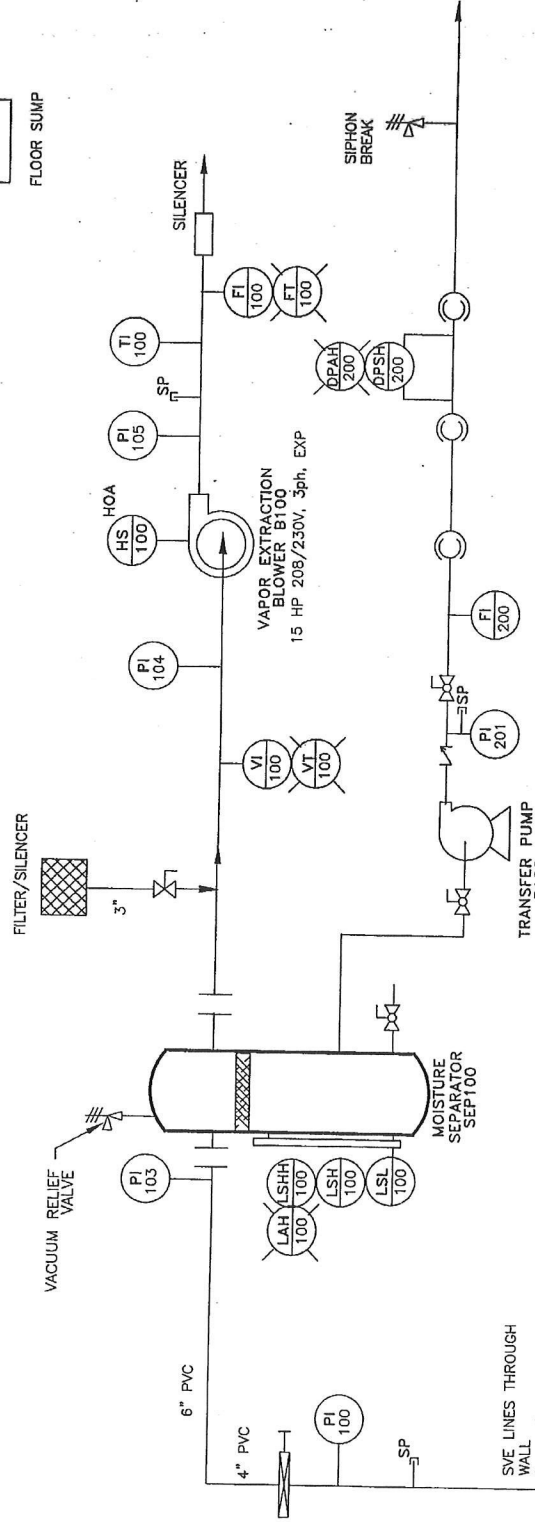
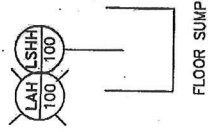
For operation on ~~208 or 230 volt, 3Ø, 3-wire~~ incoming electrical service. To control (1) 15 HP SVE blower and (1) 3/4 hp condensate pump. Furnished wired and mounted on building/trailer exterior in a non-classified area. To include:

#### QTY DESCRIPTION

- 1 Enclosure, NEMA 4, 30"h, 24"w, 12"d with inner door for switches and indicators
- 1 Fused main disconnect switch with lockable handle
- 1 Power distribution terminal block (65-335A) 3 pole; L1, L2, N
- 1 Power distribution terminal block, 1 pole; Neutral
- 1 Lightning /surge protector
- 1 Motor starter: Contactor 23A FLA/Overload relay 1-6.0A, 3 Ø; pump
- 1 Motor starter: Contactor 43A FLA/Overload relay 14-45A, 3Ø; SVE blower
- 1 Circuit breaker 230V 1P10A 10K; control power
- 2 Circuit breaker 230V 1P15A 10K; vent fan, lighting
- 1 Circuit breaker 230V 1P20A 10K; receptacle(s)
- 1 Circuit breaker 230V 3P10A 10K; pump
- 1 Circuit breaker 230V 3P15A 10K; heater
- 1 Circuit breaker 230V 3P60A 10K; SVE blower
- 2 Switch; three position; Hand-Off-Auto with integral Run (green/LED) indication
- 2 Light (red/LED); alarms
- 1 Pushbutton (red/NO); alarm Reset
- 1 Intrinsically safe level control
- 2 Intrinsically safe barrier, two channel; alarms
- 2 Intrinsically safe barrier, analog single channel
- 1 EOS Research ProControl Series 2+, Type B2 programmable controller/telemetry unit with 8 A/DI, 12 DI, 14 RO and ProView software. Programmed for manual reset after power failure.
- 2 Hour meters, non-resettable
- Phone line surge protector
- Engraved laminated legends for all door mounted devices
- Terminal blocks for external connections and fusing as required
- Color-coded wiring with wire markers at all terminations
- Fully documented, assembled, wired, programmed and pre-shipment test
- 1 UL 698A serialized label
- 1 Panel heater, 120VAC, 250Watt with thermostat
- 1 GFCI outlet mounted outside of enclosure
- ~~1 Removable wood panel access platform, green treated wood construction.~~

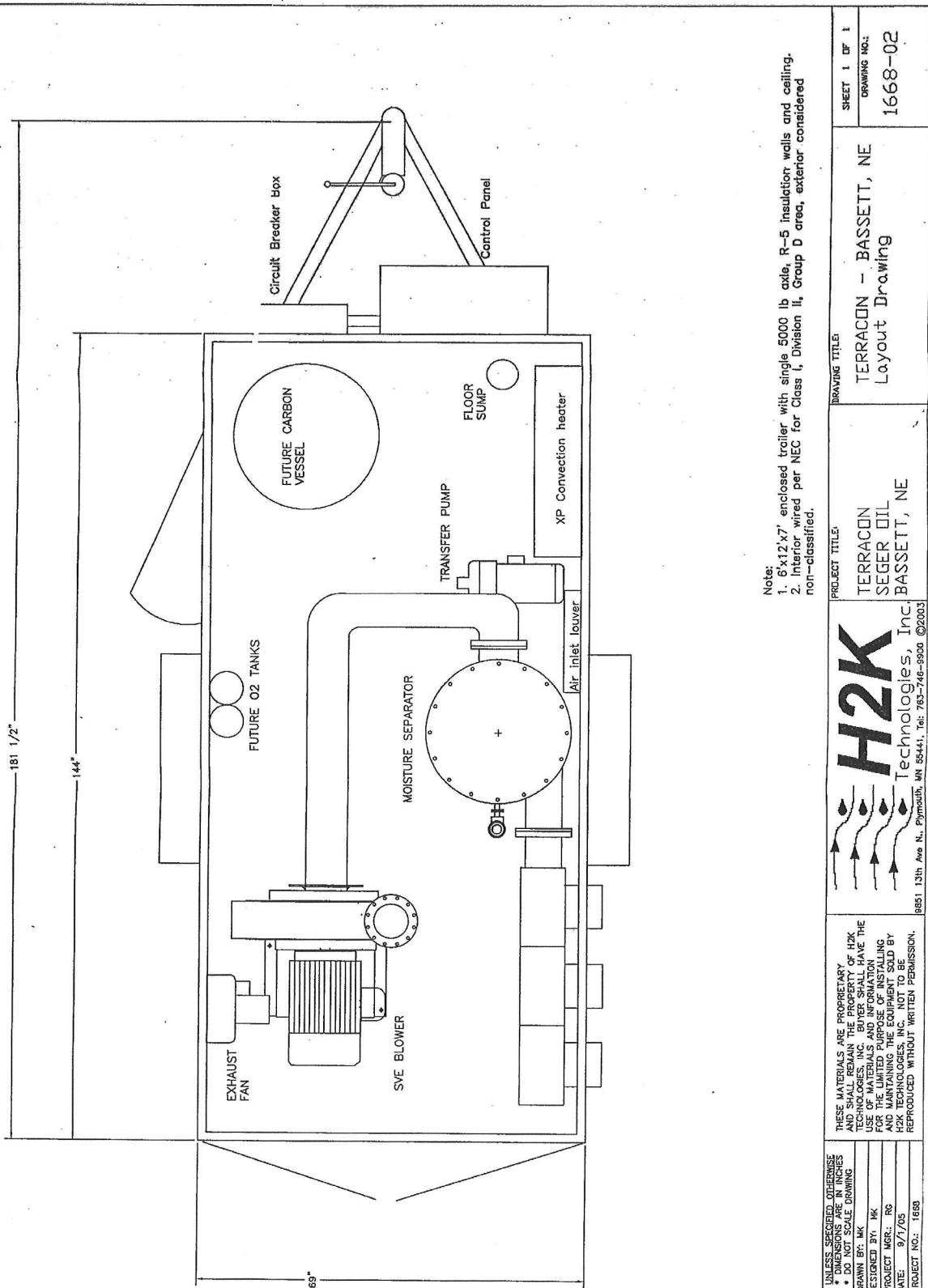
SVE will be installed, piped and wired inside trailer, wiring will be per NEC for a Class I, Division II, Group D area. Piping will be schedule 80 PVC. Control panel will be mounted outside of enclosure and will be wired per NEC for a non-classified area.

Entire Trailer System UL Electrical Certification at manufacturers plant per UL standards  
(Note control panel carries a separate UL certification on its own)



NOTE: DIFFERENTIAL PRESSURE SWITCH MOUNTED FOR USE WITH FUTURE CARBON VESSEL

REVISIONS		UNLESS SPECIFIED OTHERWISE		DRAWING TITLE:		SHEET 1 OF 1	
REV	DESCRIPTION	DATE	DWN	PROJECT TITLE:		DRAWING NO.:	
				TERRACON		1668-01	
				SEGER OIL/			
				TRI-COUNTY BANK			
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- Notes:
1. 6'x12'x7' enclosed trailer with single 5000 lb axle, R-5 insulation walls and ceiling.
  2. Interior wired per NEC for Class I, Division II, Group D area, exterior considered non-classified.

REVISIONS		UNLESS SPECIFIED OTHERWISE DIMENSIONS ARE IN INCHES DO NOT SCALE DRAWING		PROJECT TITLE:		DRAWING NO.:	
DATE	DWN	DESCRIPTION	DESIGNED BY:	PROJECT MGR.:	TERRACON - BASSETT, NE	1668-02	
			HK	RS	Layout Drawing		
			RS	RS	TERRACON SEGER OIL BASSETT, NE		
			9/7/05		PROJECT TITLE: TERRACON - BASSETT, NE Layout Drawing		
			1668		DRAWING NO.:		
					1668-02		



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