



B.2 Equipment Description

Vapor Liquid Separator Module:

MLEE custom model **VLW-90**, 90 G vapor liquid separator with:

- Exterior to be primed and painted with a two component chemically-cured urethane gloss enamel (MLEE Blue)
- 6" clean out on bottom with steel NPT plug
- Sight glass with borosilicate glass
- Flotec SS high level alarm switch
- Flotec SS high level pump control switch
- Flotec SS low level pump control switch
- Manual drain with ball valve (SS) plumbed to exterior of enclosure

Liquid discharge piping from vapor liquid separator to contain:

- Ball valve (SS)
- Moyno model 333 progressive cavity transfer pump with 1 HP 230/460V/3P motor:
 - Performance: 2.5 GPM at 100' TDH
 - Motor: TEFC (Suitable for CL 1 DIV 2)
- Pressure gauge (SS)
- Sample port (SS)
- Check valve (SS)
- Steel piping

Water recirculation line to contain:

- Gate valve (SS)
- Steel piping

Dual Phase Extraction Blower Module:

Busch model **MM 1252 AV** rotary claw vacuum pump with 10 HP 230/460V/3P motor:

- Motor: TEFC (Suitable for CL 1 DIV 2)
- Performance at inlet of blower: 150 ACFM at 22" Hg (35 SCFM)
- Expected inlet pressure losses through MLEE system: 15" WC
- Discharge temperature: 250 F at an inlet of 68 F
- Noise rating: 82 dBA
- Integral vacuum relief valve
- Auto-oiler

Inlet piping to blower to contain:

- Vacuum gauge
- Solberg inlet filter/silencer
- Vacuum gauge
- Sample port
- Dilution line to contain:
 - Solberg filter/silencer
 - Ball valve
- Vacuum gauge
- PVC piping

Discharge piping from blower to contain:

- Sample port



- Pressure gauge
- Temperature gauge
- Steel piping to be terminated outside of enclosure

Oil Water Separator Module:

MLEE model OWS-2, 2.5 GPM oil water separator with:

- Dimensions – 64”L x 30”H x 16”W
- Designed for oils with a specific gravity of less than 0.90
- 25 micron removal size
- Carbon steel construction
- Exterior to be painted with a urethane gloss enamel (MLEE Blue)
- Interior to be sandblasted with an epoxy coating
- Removable, gasket sealed, hinged lid
- Sacrificial anode to prevent corrosion of tank
- Adjustable rotary skimmer
- Easily removable coalescing media
- 2’ stand
- Ventilation stack
- 23 G water effluent chamber
 - Effluent chamber high level alarm switch
 - Effluent chamber pump control switch
- Manual drains

Goolds NPE model 1ST centrifugal transfer pump with 1 HP 230/460V/3P motor:

- Performance: 2.5 GPM at 100’ TDH
- Motor: TEFC (Suitable for CL 1 DIV 2)

Water inlet piping to pump to contain the following components:

- Ball valve

Water discharge piping to contain the following components:

- Pressure gauge
- Sample port
- Gate valve
- Check valve
- PVC piping

Bag Filtration Module:

Krystil Klear model L88302NAC10 number two size bag filter housing with:

- 8” x 36” carbon steel construction
- Filter bag
- Pressure gauge
- Two (2) isolation ball valves
- PVC piping

Air Stripper Module:

QED model EZ Stacker 2.4P plastic air stripper package c/w New York Blower with 3 HP 230/460/3P motor:

- Motor: TEFC (Suitable for CL 1 DIV 2)
- Operational flow rate: 2.5 GPM
- Max water flow rate: 25 GPM
- Air flow rate: 140 SCFM



Air stripper tower to contain:

- Sight glass
- High level alarm switch
- Pump control switch
- Differential pressure gauge
- Manual drain plumbed to exterior of enclosure

Goolds NPE model **1ST** centrifugal transfer pump with 1 HP 230/460V/3P motor:

- Performance: 2.5 GPM at 100' TDH
- Motor: TEFC (Suitable for CL 1 DIV 2)

Water inlet piping to pump to contain the following components:

- Ball valve

Cleaning circulation piping to contain the following components:

- Ball valve

Water discharge piping to contain the following components:

- Pressure gauge
- Sample port
- Gate valve
- Check valve
- Anti-siphon safety valve
- Totalizing water flow meter
- PVC piping to be terminated outside of enclosure

Air supply piping to stripper to contain:

- Inlet screen
- Pressure gauge
- Throttling valve
- Low pressure alarm switch
- PVC piping

Air discharge piping from air stripper to contain:

- Sample port
- PVC piping to be terminated outside of enclosure

Project: Former Food Bank

Units: English

Altitude: 1200 ft

Air Temp: 45 F

Flow: 2.5 gpm

Water Temp: 45 F

Stripper: EZ-Stacker 2.xp - [Click](#) Stripper Air Flow: 140 cfm
for details

Stripper Max Flow: 25 gpm

WATER RESULTS						
Contaminant	Initial Conc (ppb)	Target (ppb)	1st Tray Results (ppb)	4th Tray Removal	6th Tray Results (ppb)	6th Tray Removal
benzene	5480	0	< 1	100.000	< 1	100.000
TPH (as benzene)	9700	0	< 1	100.000	< 1	100.000

AIR RESULTS				
Contaminant	1st Tray	4th Tray	6th Tray	6th Tray

	(ppmv)	(ppb/air)	(ppmv)	(ppb/air)
benzene	3.8525	0.00686	3.8528	0.00686
TPH (as benzene)	6.8192	0.01214	6.8197	0.01214

Remediation Enclosure:

MET US certified, built to NEC Class 1 Div 2 standards, all wiring intrinsically safe and all equipment pre-piped factory tested and mounted in enclosure

8' x 14' enclosed cargo trailer with the following standard features:

- 8' standard interior height
- Tandem 5,200 lbs axles
- 6,000 lbs payload capacity
- Aluminum siding (white)
- Independent suspension
- Electric brakes
- Break away kit
- Safety chain
- Four (4) Jack stands
- Interior painted plywood floor
- Insulated walls and ceiling
- Tie down tabs on corners
- Barn-style rear double doors
- One man door located on passenger side of trailer
- Control panel mounted to exterior

Interior to contain the following:

- Vacuum extraction system
- Groundwater treatment system
- Lighting
- Ventilation fan with thermostat and hood
- Heater with thermostat
- Passive vent louvers with hood
- Sump with high level alarm switch
- All influent, effluent, and drain lines plumbed to outside of building

Control System Module:

RELAY Series Relay Logic based control panel with the following standard features:

- UL certification
- AIC rating of 5000
- NEMA 4 lockable panel enclosure
- Inner swing panel
- Primary circuit protection using fused main disconnect
- Surge and lightning protection for control system
- Main power block
- Branch circuit protection with circuit breakers for motors
- Motor starters with overload protection
- 120V/1P power transformer
- Branch circuit protection with circuit breakers for powered devices
- Direct Logic PLC control system
- 24 VDC IS power supply