3805 Unit "A"
SCG Industries Limited
Process Specifications & Technical Information

Vacuum Pump

1 Manufacturer: Sutorbilt
2 Model: 8 MP
3 Pump Speed (% of Max): 1450 RPM (80%)
4 Motor Rating: Class 1 Division II, 460 volt 3 phase
5 Motor Manufacturer: Teco Westinghouse
6 Motor Horsepower: 50
7 Motor Speed: 1800 rpm
8 Rated Flowrate (12"Hg max): 1300 ACFM @ 10 Hg
9 Safeties & Control: Vacuum Relief Valve, Vacuum switch, Pressure Switch, Temp switch set below flash point of Gasoline, Thermal overload on motor.
10 Temperature Switch Manufacturer: Burling
11 Temperature Switch Model: B-IC-53-CSA
12 Demisting Knock out canister: SCG model located between HVLS and pump for secondary protection
13 Inlet Particulate filter Solberg
14 Electrical Classification of Temperature Switch cl 1 div 2
15 Vacuum gauges Before and after throttle valve, filter and demister
16 Pressure Gauges after pump
17 Inlet plumbing Air dilution c/w muffler, throttle valve, and check valve

Phase Separation Vessel (HVLS)

1 Type of Separator: HVLS-1300
2 Manufacturer: SCG Industries Limited
3 Flow rate: 1300scfm, 20 gpm
4 Material of Construction: Vessel(s) Steel
5 Reservoir Volume: 30 Gallons (Lower Tank)
6 Type of Level Switch(es): Side-Mounted Level Switch H/H (upper tank), Top Mounted Level Switch (Bottom Tank)
7 Level Switch(es) Manufacturer: W.E.Anderson
8 Level Switch(es) Model: F7 SS2
9 Characteristics: No emulsion, no motors, no scaling. Liquid and sediment transferability. Air over water transfer without the use of any moving parts.
10 Water Demisting Percentage: Recovery 99.9
11 Sight Glass (Both Tanks)
12 Control System: PLC driven cycling controller c/w electric solenoids

Air Compressor

1 Type: 60 gal Vertical Compressor
2 Manufacturer: Ingersoll-Rand
3 Model: 2340L5
4 Flow Rate: 14.7 CFM @ 175 psi
5 Hydraulic Flow Rate (HVLS): 25 Gallons/Minute
6 Motor Rating: general purpose, within electrical room
7 Motor Manufacturer: Teco Westinghouse
8 Motor Horsepower: 5
9 PLC controlled continuous operation Alarm program (1 hr)
10 Voltage: 460 volt, 3 phase

Flow Stabilization Tank

1 Type: HDPE
2 Size: 175 gal
3 Features: Bottom clean out, High /High Float, Discharge flow valve.
4 Level switch-W.E. Anderson F7-SS2

Oil Water Separator

1 Model: B-25
2 Flow rate: 25 gpm
3 Material of Construction: Vessel(s) Steel Epoxy lined internal
4 Dimension: 6.5 long, 2 wide, 5.5 high
5 Type of Level Switch(es): Side-Mounted Level Switch H/H water, H/H Product
6 Level Switch(es) Manufacturer: W.E Anderson
7 Level Switch(es) Model: F7-SS2
8 characteristics: Coalescing, sediment settling, Oil Pumping option
9 Oil Sight Glass

Effluent Transfer Pumps

1 Type: Centrifugal
2 Manufacturer: Jacuzzi
3 Model: .5 hp 5DA1B 230 volt 3 ph
4 Flow Rate: 20 gpm @ 25 psi
5 Electrical Classification: Class 1 Division II
6 Control: PLC Programmable
7 Flow Meter: 1" T-10
8 Material of Construction: Vessel Steel

Enclosure

1 Type: SCG two room enclosed Trailer
2 Dimensions: 26'L x 8.5'W x 8.5'H
3 Entrance(s): Rear Double Doors, Electrical Room Man door
4 Noise Emissions: 75 dba
5 Thermal Rating: Walls and cieling R-6 styrofoam, Floor R-8 Poly Urethane Spray foam.
6 Heater Electrical rating: Cl. 1, Div. 1
7 Heater Manufacturer: Ruffneck
8 Heater Model: FX 412480360-5
9 HeÀÀÀ HeÀÀÀÀÀÀÀÀÀFÀÀÀÀÀFÀÀÀÀFater Output: 5000 watts
10 Cooling Provision: 1/3 hp Exhaust Fan Cl. 1/ div. 1, div. 2
11 Fan Manufacturer: Leader Fan Industries
12 Fan Model: X-12
13 Thermostat Manufacturer: Roughneck
14 Thermostat Electrical Classification: cl 1 div 2
15 Material of Construction, Skid: Aluminum (checker plate floor)
16 Material of Construction, Walls: 24 Gauge Anodized Aluminum interior and exterior
17 Sump with Level Switch: No
18 Wall thickness: 1.5"
19 Material: Non Combustible
20 Weather proof
21 Exterior color: White
22 Interior color: White
23 Low Temp Alarm Switch
24 Equipment location Positioned for ease of repair
25 Fire extinguishers: 1 in each room adjacent to man doors
26 Lighting: 4 incandescent Process room, 1 Flourescent in electrical room
27 Roof Construction: 24 gauge Aluminum interior and exterior
28 Suspension: 3 only 5200 lbs axils for added stability and reduced tongue weight
29 Structural: Reinforced structure at manufacture
30 Manufacturers: Warranty 3 years structural 2 years corrosion

Two Way Telemetry

1 Control capable of modification of all I/O functions remotely
2 Connection: 56 K modem at Electrical control room
3 Logging: Capable of storage and retrieve of data
4 Alarm Auto Dialer 4 channel

System Controls

1 PLC Type: Micro
2 PLC Manufacturer: Toshiba
3 PLC Model: T1S
4 Shop-Programmed
5 Emergency Shut-Down
6 Spare Inputs/outputs
7 Status Lights (on PLC)
8 Control Panel Mounting: Interior Electrical Room
9 Transformer: Control and receptacle
10 Main Fused Disconnect: 120 amps, 460 volt Time Delay fuses
11 Distribution: Block
12 Protection: Time delay fuses for all motors and transformers
13 Outputs Fused, labeled, and c/w Terminal blocks
14 Inputs Labeled and c/w terminal blocks
15 115 volt receptacle duplex GFI
16 Motor starters c/w thermal overloads and aux. contacts for all motors
17 Switches and sensor supply power Non -Incendiary

Electrical

1 Classification of Controls Built to Standards (as per NEC)
2 System Electrical Requirements 460 Volt/120 Amp/3 Phase

Air Sparge Blower

1 Type: Rotary Lobe
2 Model: Sutorbilt 4MP
3 Motor Horsepower: 15
4 Motor Speed (% of Max): 2200 rpm (71%)
5 Exhaust Temp Rise: 90 F
6 Capacity: (Max start- up pressure) 310 cfm (10 psi)
7 Safety Features: Pressure switch, Pressure relief valve
8 Accessories: Throttle, Dilution, Silencer, Pressure gauges
9 Controls: Pilot switch, Lockout feature to MPVE
10 Electrical Classification: Class 1 Div 2

Heat Exchanger

1 Type: Air to Air
2 Model: SCGAA500
3 Core dimensions: 24"wX30"hX2"depth
4 3" flanged pipe connection
5 Rating: 350cfm
6 Cooling to within 20 degrees F of ambient temp

3805 Unit "B"
SCG Industries Limited
Process Specifications & Technical Information

Vacuum Pump

1 Manufacturer: Sutorbilt
2 Model: 8 MP
3 Pump Speed (% of Max): 1450 RPM (80%)
4 Motor Rating: Class 1 Division II, 460 volt 3 phase
5 Motor Manufacturer: Teco Westinghouse
6 Motor Horsepower: 50
7 Motor Speed: 1800 rpm
8 Rated Flowrate (12"Hg max): 1300 ACFM @ 10 Hg
9 Safeties & Control: Vacuum Relief Valve, Vacuum switch, Pressure Switch, Temp switch set below flash point of Gasoline, Thermal overload on motor.
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11 Sight Glass (Both Tanks)
12 Control System: PLC driven cycling controller c/w electric solenoids

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3 Model: 2340L5
4 Flow Rate: 14.7 CFM @ 175 psi
5 Hydraulic Flow Rate (HVLS): 25 Gallons/Minute
6 Motor Rating: general purpose, within electrical room
7 Motor Manufacturer: Teco Westinghouse
8 Motor Horsepower: 5
9 PLC controlled continuous operation Alarm program (1 hr)
10 Voltage: 460 volt, 3 phase

Flow Stabilization Tank

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6 Heater Electrical rating: Cl. 1, Div. 1
7 Heater Manufacturer: Ruffneck
8 Heater Model: FX 412480360-5
9 Heater Output: 5000 wattsc0 HeÀÀÀÀÀÀÀF
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12 Fan Model: X-12
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14 Thermostat Electrical Classification: cl 1 div 2
15 Material of Construction, Skid: Aluminum (checker plate floor)
16 Material of Construction, Walls: 24 Gauge Anodized Aluminum interior and exterior
17 Sump with Level Switch: No
18 Wall thickness: 1.5"
19 Material: Non Combustible
20 Weather proof
21 Exterior color: White
22 Interior color: White
23 Low Temp Alarm Switch
24 Equipment location Positioned for ease of repair
25 Fire extinguishers: 1 in each room adjacent to man doors
26 Lighting: 4 incandescent Process room, 1 Flourescent in electrical room
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11 Distribution: Block
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14 Inputs Labeled and c/w terminal blocks
15 115 volt receptacle duplex GFI
16 Motor starters c/w thermal overloads and aux. contacts for all motors
17 Switches and sensor supply power Non -Incendiary

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2 System Electrical Requirements 460 Volt/120 Amp/3 Phase

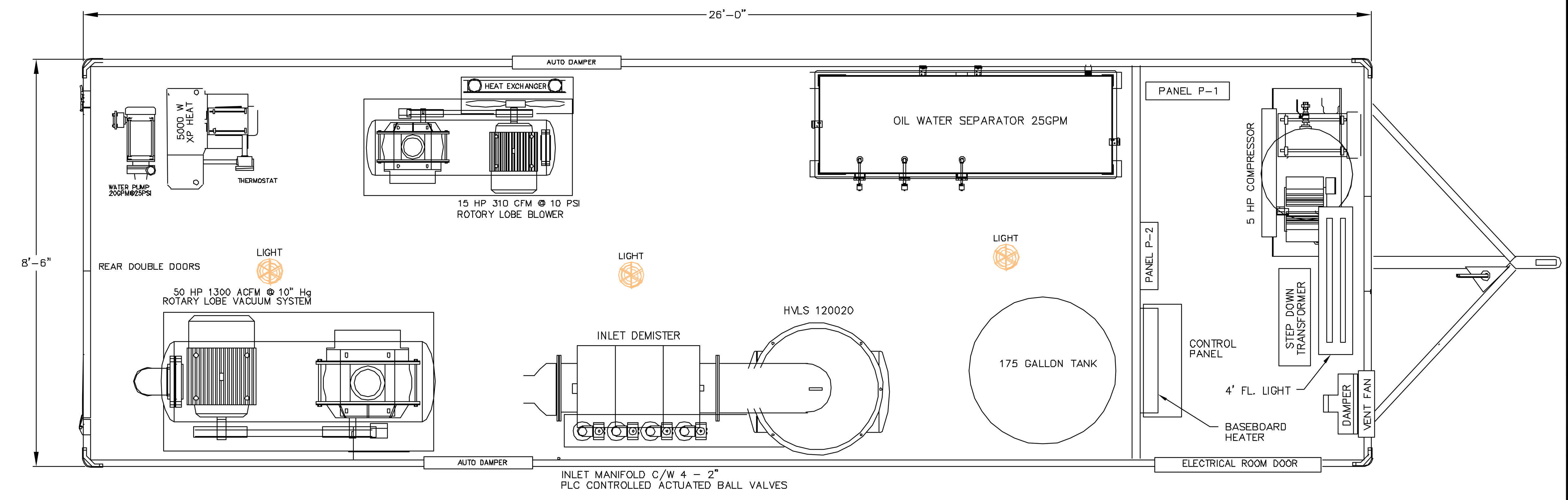
Air Sparge Blower

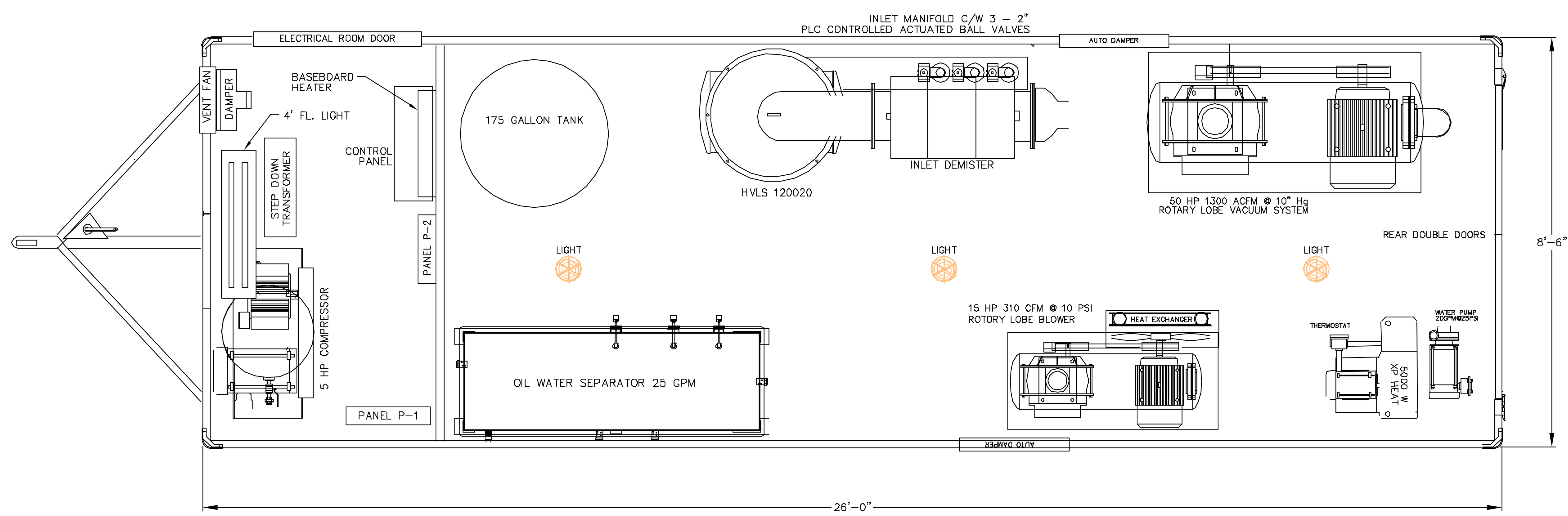
1 Type: Rotary Lobe
2 Model: Sutorbilt 5MP
3 Motor Horsepower: 15
4 Motor Speed (% of Max): 1800 rpm (64%)
5 Exhaust Temp Rise: 90 F
6 Capacity: (Max start- up pressure) 170 cfm (10 psi)
7 Safety Features: Pressure switch, Pressure relief valve
8 Accessories: Throttle, Dilution, Silencer, Pressure gauges
9 Controls: Pilot switch, Lockout feature to MPVE
10 Electrical Classification: Class 1 Div 2

Heat Exchanger

1 Type: Air to Air
2 Model: SCGAA300
3 Core dimensions: 24"wX30"hX2"depth
4 2" flanged pipe connection
5 Rating: 250cfm
6 Cooling to within 20 degrees F of ambient temp

SYSTEM 3805 A





SYSTEM 3805 B

3805A

PANEL P-1

1 3 5	PD BLOWER (100)	CATOX (30)	2 4 6
7 9 11	SPARGE (30)	TRANSFORMER (30)	8 10 12
13 15 17	TRANSFER PUMP (15)	PROCESS RM. HEATER (15)	14 16 18
19 21 23	COMPRESSOR (15)	OPEN (40)	20 22 24

PANEL P-2

1	PLC CONTROLS (15)	ELEC .RM. LIGHTS (15)	2
3	ELEC. RM. RECEPTACLES (15)	ELEC .RM. FAN (15)	4
5 7	ELEC. RM HEAT (15/15)	PROCESS RM. LIGHTS (15)	6
		HEAT TRACE (20/20/20)	8 10 12

3805B

PANEL P-1

1 3 5	PD BLOWER (100)	AIR STRIPPER (40)	2 4 6
7 9 11	SPARGE (40)	TRANSFORMER (30)	8 10 12
13 15 17	TRANSFER PUMP (15)	PROCESS RM. HEATER (15)	14 16 18
19 21 23	COMPRESSOR (15)	CATOX (30)	20 22 24

PANEL P-2

1	PLC, OUTPUTS, LEL, CONTROLS (15)	ELEC .RM. FAN (15)	2
3	PROCESS RM. LIGHTS (15)	ELEC .RM. LIGHTS (15)	4
5 7	ELEC. RM HEAT (15/15)	HEAT TRACE (20)	6 8
9	ELEC. RM. RECEPTACLES (15)	HEAT TRACE (20)	10

FINAL AS-BUILT

US Army Corps of Engineers

U.S. ARMY ENGINEER DISTRICT, BALTIMORE
CORPS OF ENGINEERS
BALTIMORE, MARYLAND

SOURCE AREA REMEDIAL SYSTEM
GASOLINE ALLEY AREAS 3805 & 1995
FORT DRUM, NEW YORK

AREA 3805
SYSTEMS A & B EQUIPMENT
LAYOUT AND SCHEDULE

EA ENGINEERING, P.C.

DRAWING NUMBER N/A	PLATE M-2	
SCALE: AS NOTED	DATE: SEPT. 2004	SHEET 2

FILE: Syracuse_fp/Syracuse/Working Projects\Fort Drum Projects\MARC\Design\drawings from loveton\final design drawings\M-2.dwg [Layout1]