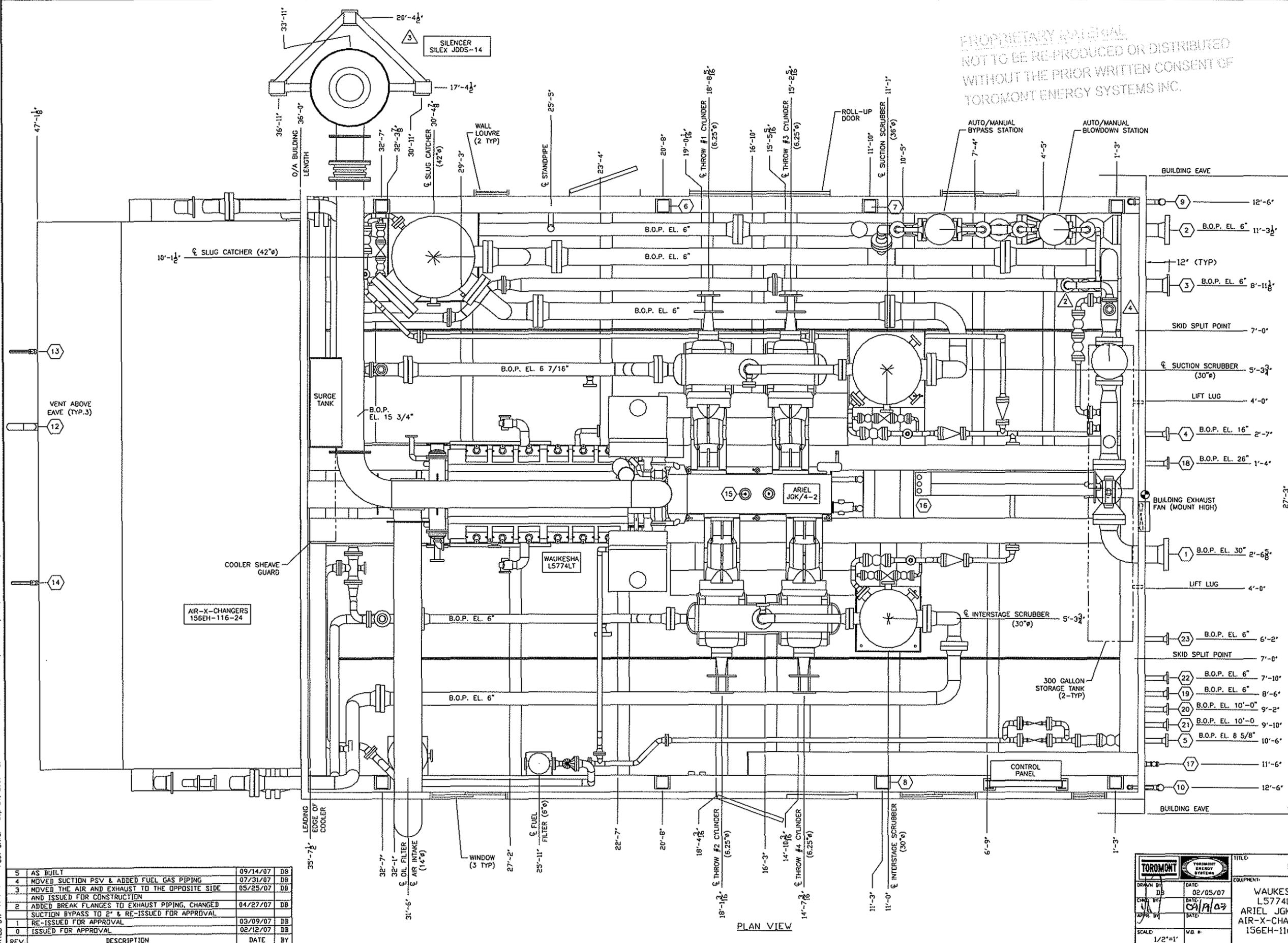


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NOZZLE SCHEDULE				
MARK	SERVICE	SIZE	RATING	TYPE
1	INITIAL SUCTION	8"	600#	RFWN
2	FINAL DISCHARGE	4"	900#	RTJ
3	HIGH PRESSURE VENT HEADER	4"	150#	RFWN
4	SCRUBBER DRAIN HEADER	2"	600#	RFWN
5	FUEL GAS SUPPLY	2"	600#	RFWN
6	GLYCOL FILL	3/4"	-	HOSE
7	CYLINDER OIL DAYTANK FILL	1"	3000#	FNPT
8	ENGINE/COMPR. OIL DAYTANK FILL	1"	3000#	FNPT
9	GLYCOL TANK DRAIN	2"	3000#	MNPT
10	WASTE OIL TANK DRAIN	2"	3000#	MNPT
11	GLYCOL STAND PIPE	2"	3000#	MNPT
12	START GAS VENT	-	-	PIPE
13	LOW PRESSURE VENT HEADER	1"	-	PIPE
14	LOW PRESSURE PUMP VENT HEADER	1"	-	PIPE
15	LOCAL COMPRESSOR OIL FILL	2"	3000#	MNPT
16	SEAL POT FILL	2"	3000#	MNPT
17	SOUR WASTE OIL TANK DRAIN	1"	3000#	MNPT
18	LOW PRESSURE SOUR GAS FLARE	2"	150#	RFWN
19	INSTRUMENT AIR HEADER	2"	150#	RFWN
20	GLYCOL HEATER SUPPLY	2"	150#	RFWN
21	GLYCOL HEATER RETURN	2"	150#	RFWN
22	OFFSKID FUEL GAS SUPPLY	2"	150#	RF SCR'D
23	PURGE GAS	2"	150#	RFWN

GENERAL SPECIFICATIONS	
OVERALL PACKAGE LENGTH	47'-9 1/8"
OVERALL PACKAGE WIDTH (c/w BLDG.)	27'-3"
OVERALL PACKAGE HEIGHT (w/STACK)	32'-10 1/4"
BUILDING RIDGE VENT HEIGHT	21'-6 3/4"
OVERALL PACKAGE WEIGHT (LBS)	249,922
GLYCOL STORAGE CAPACITY (US GAL)	475
WASTE OIL STORAGE CAPACITY (US GAL)	475
SOUR WASTE OIL STORAGE CAPACITY (US GAL)	283
ENGINE/COMPR. LUBE OIL DAYTANK (US GAL)	430
CYLINDER LUBE OIL DAYTANK (TOTAL US GAL)	930
BRIDGE CRANE RATING	3 TON
SEAL PAN	<input checked="" type="checkbox"/> FLAT <input type="checkbox"/> NONE <input type="checkbox"/> SLOPED
LOADING METHOD	<input type="checkbox"/> LIVE ROLL <input type="checkbox"/> CRANE <input checked="" type="checkbox"/> JACK & ROLL

NOTES:
1. ALL (Z) DIMENSIONS TAKEN FROM BOTTOM OF SKID.
2. ALL OTHER NOTES FOUND ON DWG. #LEGEND.
3. ALL SKID EDGE CONNECTIONS ±1/8" TOLERANCE.
4. Ⓢ ALL TAIL DIMENSIONS FROM REFERENCE POINT.

TOROMONT ENERGY SYSTEMS
SEP 21 2007
AS BUILT
PER _____

FILE NAME: P:\300000 Projects\31644\Drafting\31644MODEL-5.dwg
PLOT DATE: Sep 21, 2007 8:45am
PLOT BY: dbrown

REV.	DESCRIPTION	DATE	BY
5	AS BUILT	09/14/07	DB
4	MOVED SUCTION PSV & ADDED FUEL GAS PIPING	07/31/07	DB
3	MOVED THE AIR AND EXHAUST TO THE OPPOSITE SIDE AND ISSUED FOR CONSTRUCTION	05/25/07	DB
2	ADDED BREAK FLANGES TO EXHAUST PIPING, CHANGED SUCTION BYPASS TO 2" & RE-ISSUED FOR APPROVAL	04/27/07	DB
1	RE-ISSUED FOR APPROVAL	03/09/07	DB
0	ISSUED FOR APPROVAL	02/12/07	DB

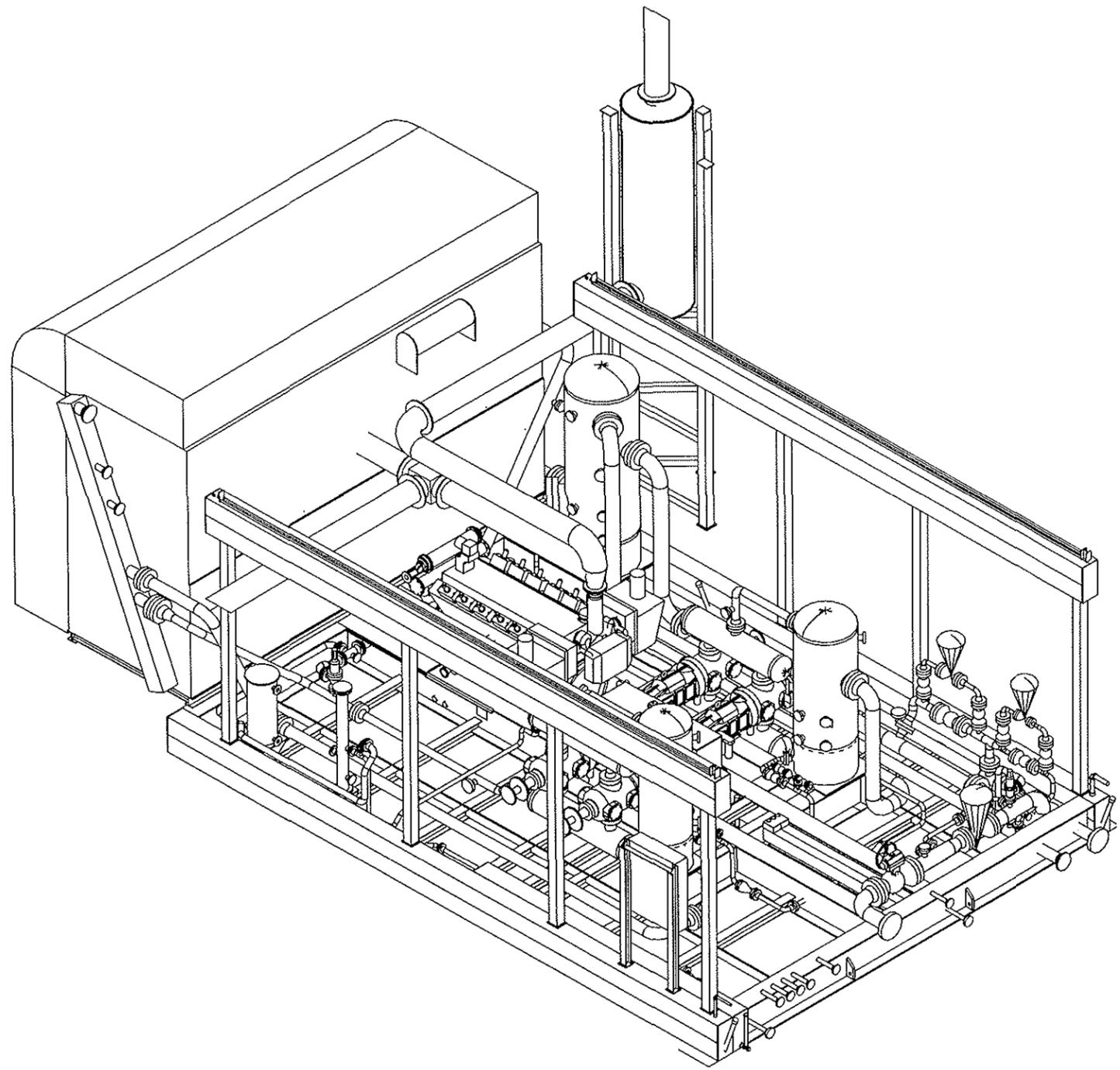
		TITLE: PLAN VIEW - GENERAL ARRANGMENT	
DRAWN BY: DB CHECK BY: CA/MA SCALE: 1/2"=1'	DATE: 02/05/07 DATE: CA/MA V.D. #	EQUIPMENT: WAUKESHA L5774LT ARIEL JGK/4-2 AIR-X-CHANGERS 156EH-116-24	CUSTOMER: BP CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: a-65-E/93-I-9
SHEET NO. REV: 1 OF 1 5			31644-GA

TOROMONT ENERGY SYSTEMS

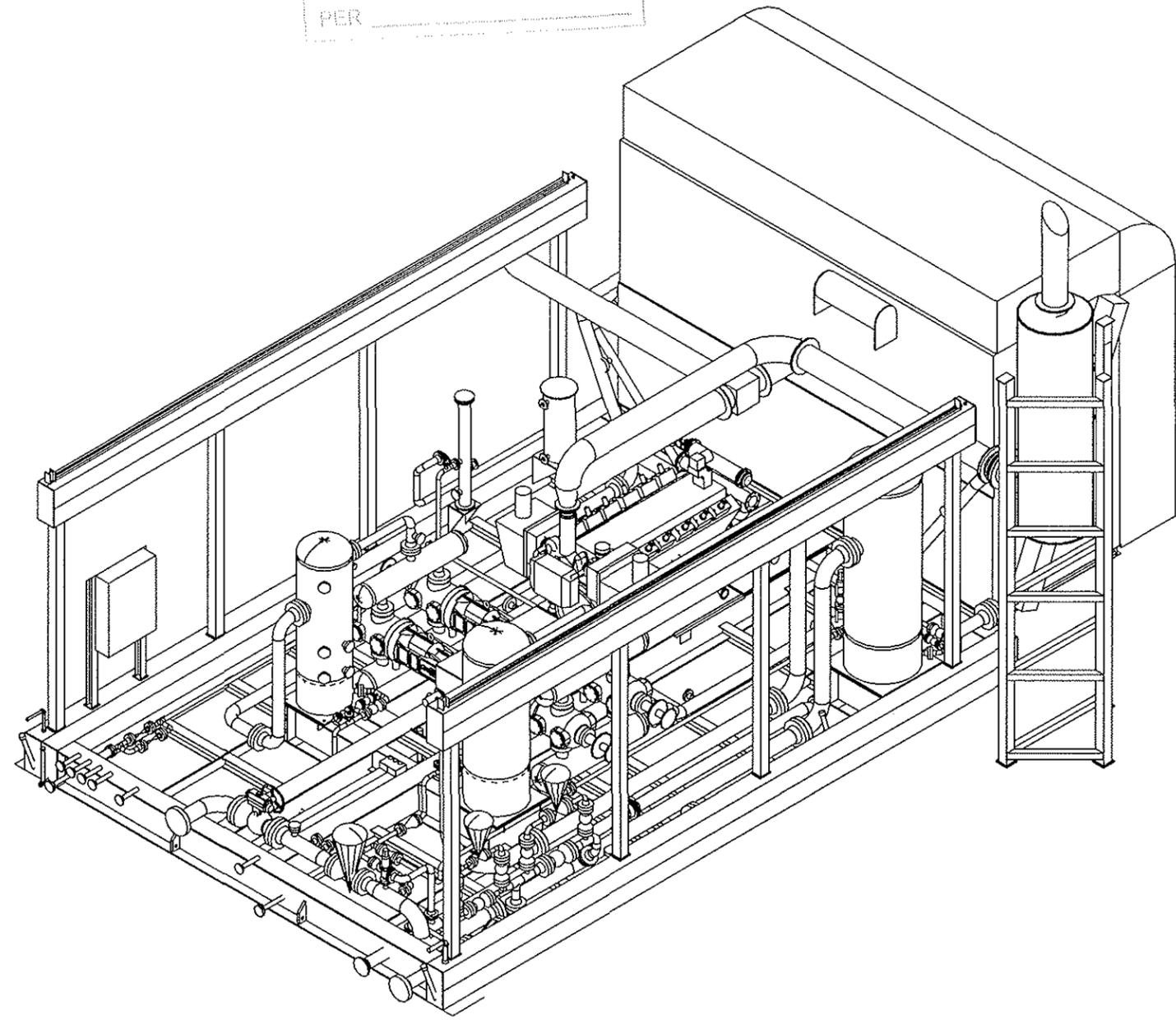
SEP 21 2007
AS BUILT

PER

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3D SOUTHEAST VIEW



3D SOUTHWEST VIEW

FILE NAME: P:\30000 Projects\31644\Drafting\31644MODEL-5.dwg
PLOT DATE: Sep 21, 2007 8:48am
PLOTTED BY: dbrown

REV.	DESCRIPTION	DATE	BY
2	AS BUILT	09/20/07	DB
1	ISSUED FOR CONSTRUCTION	05/31/07	DB
0	ISSUED FOR REFERENCE	04/04/07	DB

ENGINEER STAMP

TOROMONT ENERGY SYSTEMS

DRAWN BY: DB
DATE: 02/08/07

CHECK BY: VJ
DATE: 09/19/07

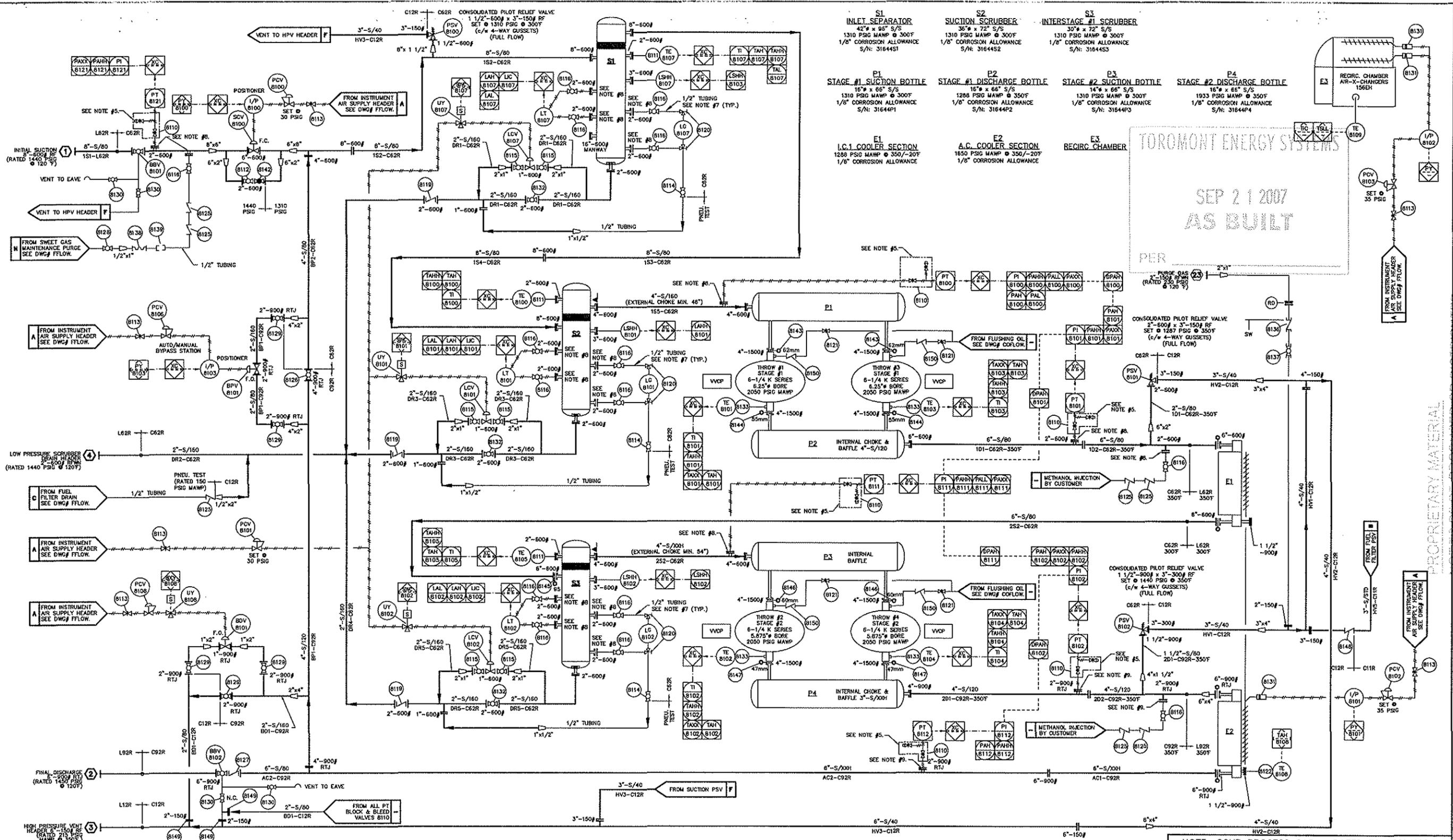
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V.G. #: XXXXX

TITLE: 3D VIEW - GENERAL ARRANGEMENT

EQUIPMENT:
WAUKESHA LS774LT
ARIEL JGK/4-2
AIR-X-CHANGERS 156EH-116-24

CUSTOMER:
BP CANADA ENERGY COMPANY
DJAY SOUR GAS COMPRESSOR
LSD: a-65-E/93-I-9

DWG No: 31644-3D
SHEET NO: 1 OF 1
REV: 2



TOROMONT ENERGY SYSTEMS
 SEP 21 2007
 AS BUILT
 PER

NOTE: SOUR PROCESS GAS - RATED TO 30% H2S

7	AS BUILT	09/11/07	GC
6	REVISED AS NOTED PER B.P. COMMENTS & RE-ISSUED FOR CONSTRUCTION	08/03/07	BB
5	REVISED PER B.P. COMMENTS & RE-ISSUED FOR CONSTRUCTION	07/25/07	DB
4	REVISED TAGS PER B.P. REQUEST & ISSUED FOR CONSTRUCTION	05/17/07	DB
3	ADDED RUFFNECK GLYCOL HEATERS, CHANGED FINAL DISCHARGE TO 6", REVISED SUCTION BYPASS TO 2" & RE-ISSUED FOR APPROVAL	04/26/07	DB
2	ADDED SBLG CATCHER, REMOVED DISCHARGE SCRUBBER & RE-ISSUED FOR APPROVAL	04/04/07	DB
1	RE-ISSUED FOR APPROVAL	03/08/07	DB
0	ISSUED FOR APPROVAL	01/28/07	DB
No. REVISION		DATE	BY
PROPRIETARY MATERIAL: NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF TOROMONT ENERGY SYSTEMS INC.			
TOROMONT Toromont Energy Systems Inc. 10121 - BARLOW TRAIL N.E. CALGARY ALBERTA CANADA		CUSTOMER: B.P. CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: 6-65-E/93-1-9	
SCALE: HOME	DATE: 01/25/07	BY: DB	DATE RELEASED: 09/19/07
STEP # 453	UNIT # 31644	DRAWING NO.: 31644-PFLOW	REV. 7

MATERIAL SPECIFICATIONS:

PAINT: OVERALL UNIT: VALSPAR 20-F-34 "WARM GREY".

PRIMER: COMMERCIAL IRON OXIDE NON-LIFTING PRIMER.

PROCESS PIPING: 100% X-RAY, 1/8" CORROSION ALLOWANCE, PICKLE & OIL AND PHMT @ 1175F ± 25F FOR 2 HOURS. HARDNESS TESTING OF WELDS AND HEAT AFFECTED ZONES. ACCEPTANCE CRITERIA FOR WELDS AS DEFINED IN ASME B31.3 (1999) PARA 341.4.3 - SEVERE CYCLIC CONDITIONS TABLE 341.3.2A.

VESSELS: 100% X-RAY, 1/8" CORROSION ALLOWANCE, PICKLE & OIL AND PHMT @ 1175F ± 25F FOR 2 HOURS.

OIL: SHELL MYSSELLA OIL (L430) IN ENGINE & COMPRESSOR FRAME. SAE 50W COMPOUNDING FOR CYLINDER OIL.

GLYCOL: 50% ETHYLENE INHIBITED GLYCOL/WATER SOLUTION IN ENGINE & AUXILIARY JACKET WATER SYSTEMS.

BILL OF MATERIALS: ON SEPARATE SHEET PROVIDED WITH DRAWING.

TUBING SERVICES:

SOUR: PROCESS 316 (SS) 316 (SS)
 UTILITY - CONTACTING PROCESS 316 (SS) 316 (SS)
 INSTRUMENT 316 (SS) 316 (SS)
 FRAME INTERNALS 316 (SS) 316 (SS)

NOTE #1: SPACER PLATES ARE PROVIDED FOR FUTURE INSTALLATION OF ORIFICE PLATES (IF REQUIRED).

NOTE #2: ALL 90° FLANGE CONNECTIONS ARE TO BE RTJ.

NOTE #3: VESSELS REGISTERED IN A3, B.C. & SK

NOTE #4: BOLTING ON ALL PROCESS FLANGE CONNECTIONS IS: SA-193-B7M STUDS, SA-194-2HM NUTS & 316SS GASKETS/RINGS.

NOTE #5: ALL PRESSURE TRANSMITTERS ARE PANEL MOUNTED AND C/W INTEGRAL THREE WAY MANIFOLDS TUBED TO HIGH PRESSURE FLARE. ALL SENSE LINES ARE 3/16" SEAMLESS. LOCALLY MOUNTED INSTRUMENTS SHALL BE SUPPORTED OFF OF SKID, NOT PIPING OR VESSELS.

NOTE #6: LEVEL GAUGES INDEPENDENTLY SUPPORTED AND TUBED TO VESSEL.

NOTE #7: FLANGE IS SWAGELOCK SS-B10-F32-900-RTJ FLANGE ADAPTOR, 2"-800# RTJ x 1/2" TUBING CONNECTION.

NOTE #8: FLANGE IS SWAGELOCK SS-B10-F32-900-RTJ FLANGE ADAPTOR, 2"-800# RTJ x 1/2" TUBING CONNECTION.

NOTE #9: FLANGE IS SWAGELOCK SS-B10-F32-900-RTJ FLANGE ADAPTOR, 2"-800# RTJ x 1/2" TUBING CONNECTION.

GENERAL INFORMATION:

COMPR. FRAME: - ARIEL JOK/4-2/1
 - RATED RPM = 1200
 - SERIAL NUMBER = F-27749

ENGINE: - WAUKESHA LS774LT
 - RATED 1250 HP @ 1200 RPM
 - SERIAL NUMBER = C-16316/1

PANEL: - SPARTAN CONTROLS - REMUVE 500S
 - SERIAL NUMBER = RM-17794-AA

COOLER: - AIR-X-CHANGERS - 156EH-116-24
 - SERIAL NUMBER = 074265

CYLINDERS: - THROW #1 - SERIAL NUMBER = C-92858
 - THROW #2 - SERIAL NUMBER = C-92859
 - THROW #3 - SERIAL NUMBER = C-92860
 - THROW #4 - SERIAL NUMBER = C-92861

LEGEND:

— PROCESS

— UTILITY

--- PNEUMATIC TUBING

--- ELECTRIC WIRING

○ SPACER

○ SPECTACLE BLIND

▲ SCREEN (CONE STRAINER)

◇ PANEL CONNECTION - PNEUMATIC

◇ PANEL CONNECTION - ELECTRIC

◇ PANEL ALARM / SHUTDOWN

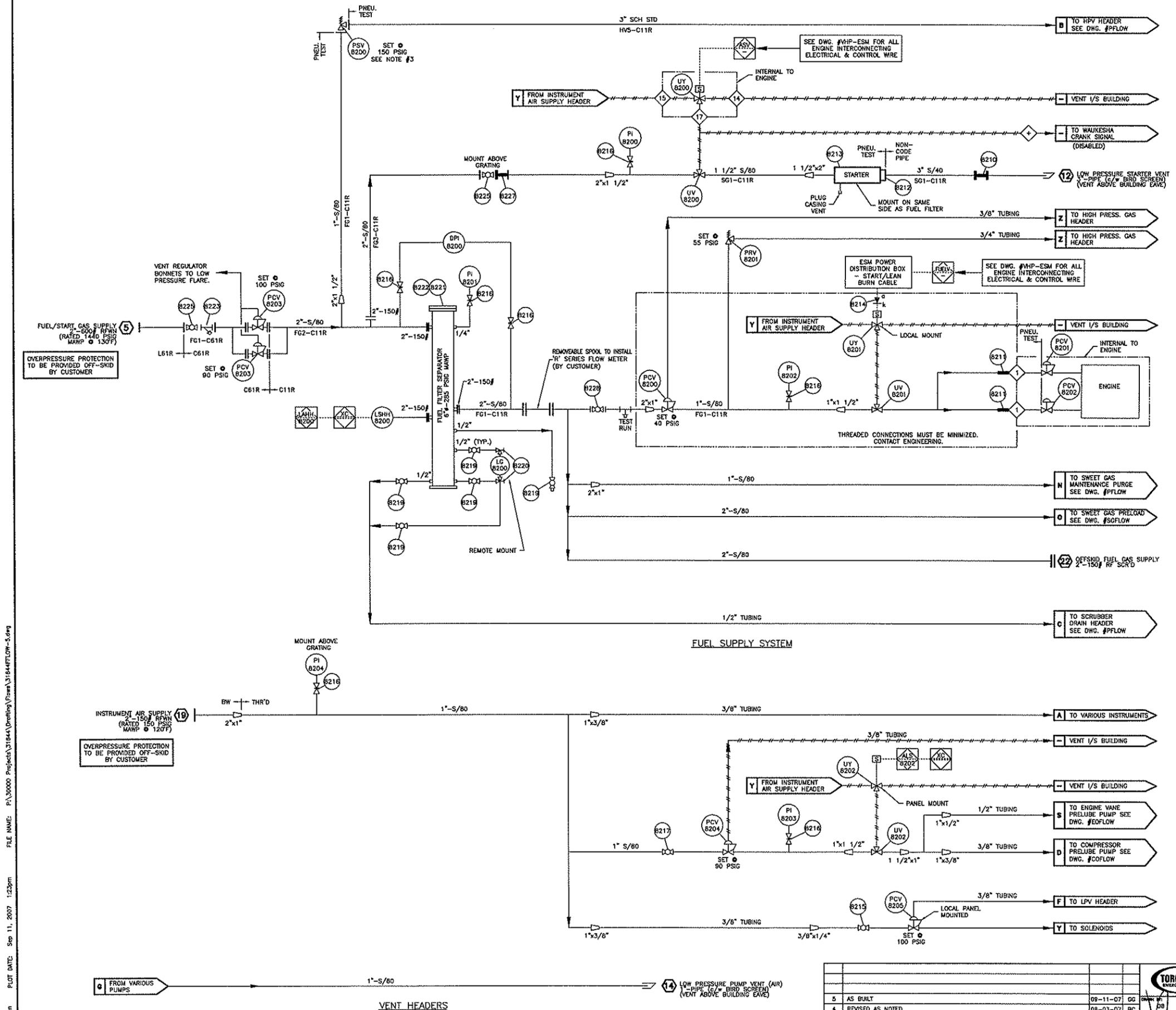
○ LOCAL MOUNTED INSTRUMENT

○ PANEL MOUNTED INSTRUMENT

◇ PNEUMATIC TO ELECTRIC

◇ ENGINE CONNECTION

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AS BUILT
PER _____

SERVICE:	TUBING	FITTINGS
SWEEET:	304 (SS)	ZINC PLATED (S)
UTILITY (CONTACTING PROCESS)	304 (SS)	ZINC PLATED (S)
INSTRUMENT	304 (SS)	ZINC PLATED (S)
FRAME INTERNALS	304 (SS)	ZINC PLATED (S)
SOUR:	316 (SS)	316 (SS)
UTILITY (CONTACTING PROCESS)	316 (SS)	316 (SS)
INSTRUMENT	316 (SS)	316 (SS)
FRAME INTERNALS	316 (SS)	316 (SS)

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
 - SIGNAL TUBING IS 3/8".
 - PSV IS SIZED FOR REGULATOR FAILURE.
 - ALL THREADED NIPPLES TO BE SCH.160. A NIPPLE IS ANY LENGTH OF THREADED PIPE LESS THAN 12" LG.

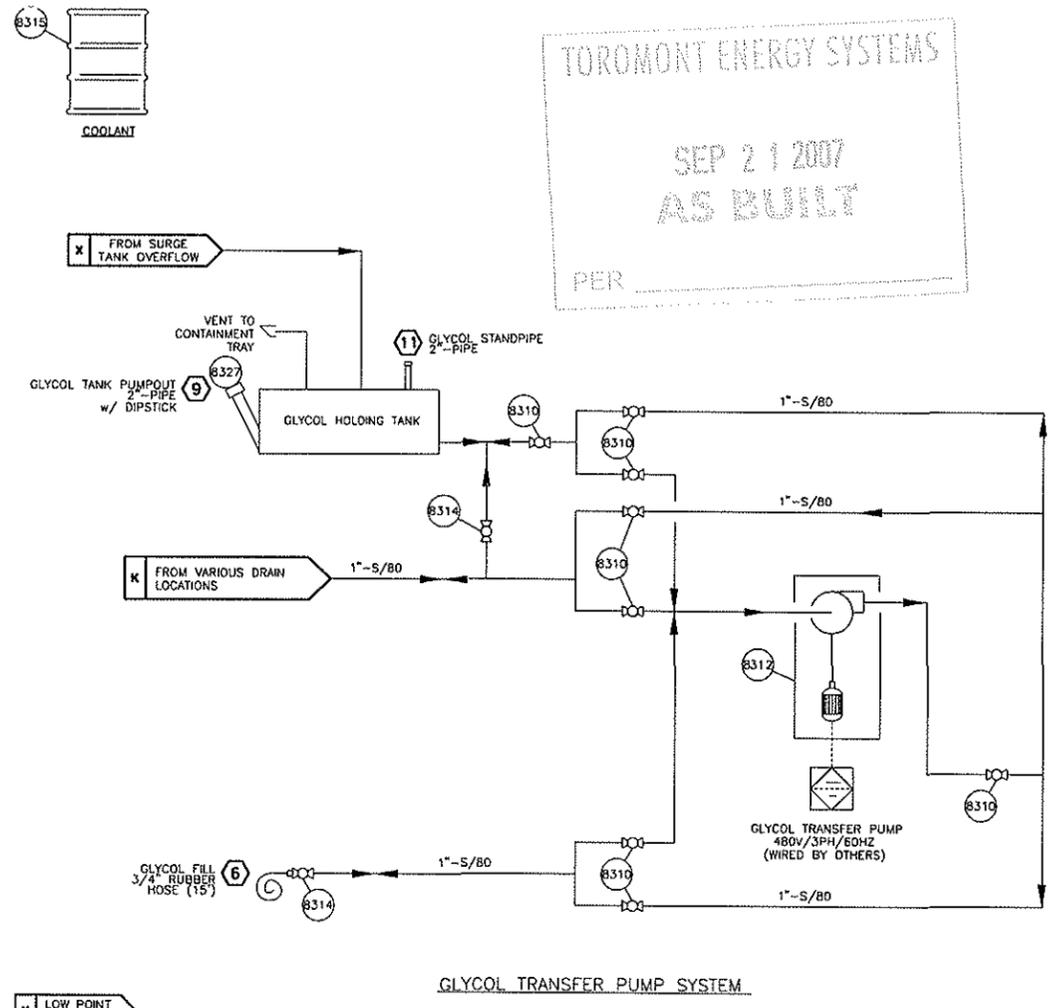
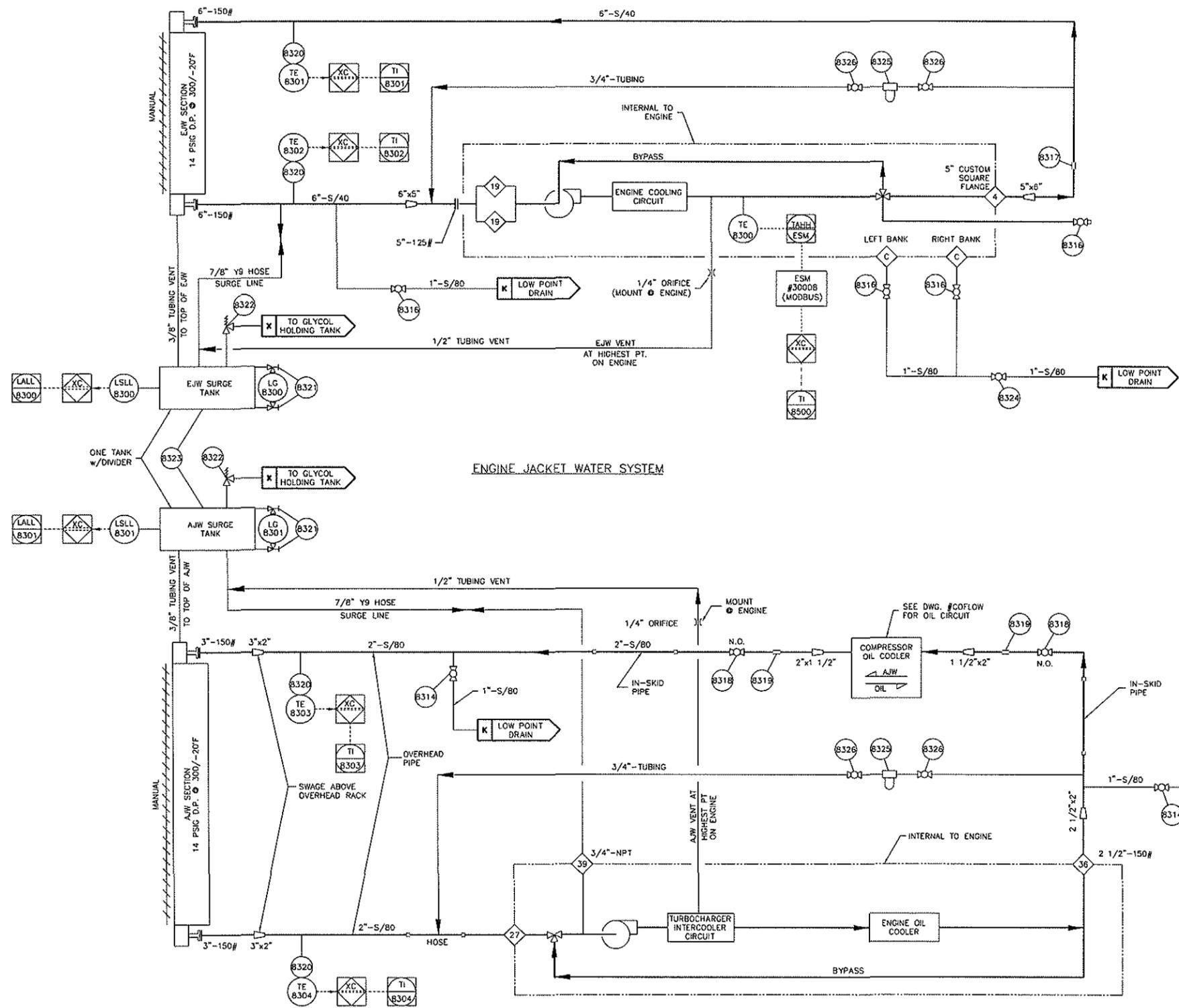
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 PLOT DATE: Sep 11, 2007 1:23pm
 PLOTTED BY: gpreen

NOTES
1. ALL OTHER NOTES FOUND ON DWG. #PFLOW

REV.	DESCRIPTION	DATE	BY	CHK	APP
5	AS BUILT	09-11-07	GG	DB	DB
4	REVISED AS NOTED	08-03-07	BC	DB	DB
3	REVISED TAGGING PER B.P. REQUEST & ISSUED FOR CONSTRUCTION	05/31/07	DB	DB	DB
2	REVISED PER CUSTOMER MARK-UP & RE-ISSUED FOR APPROVAL	04/27/07	DB	DB	DB
1	RE-ISSUED FOR APPROVAL	03/08/07	DB	N.T.S.	DB
0	ISSUED FOR APPROVAL	02/12/07	DB	DB	DB

		TITLE: FUEL FLOW DIAGRAM	
MADE EQUIPMENT:		FOR:	
FUEL FLOW DIAGRAM WAUKESHA L5774LTE (ESM)		BP CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: a-65-E/93-1-9	
DWG. No.	31644-FFLOW	SHEET No.	1 OF 5

PLOT DATE: Sep 20, 2007 3:47pm FILE NAME: F:\30000 Projects\31644\Drawings\Flows\31644WFLW-6.dwg



TOROMONT ENERGY SYSTEMS
SEP 21 2007
AS BUILT
PER

SERVICE:	PIPING	FITTINGS
SWEET:		
□ PROCESS	304 (SS)	ZINC PLATED (S)
□ UTILITY (CONTACTING PROCESS)	304 (SS)	ZINC PLATED (S)
□ INSTRUMENT	304 (SS)	ZINC PLATED (S)
□ FRAME INTERNALS	304 (SS)	ZINC PLATED (S)
SOUR:		
■ PROCESS	316 (SS)	316 (SS)
■ UTILITY (CONTACTING PROCESS)	316 (SS)	316 (SS)
■ INSTRUMENT	316 (SS)	316 (SS)
■ FRAME INTERNALS	316 (SS)	316 (SS)

- NOTES:
 1. FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
 2. SLOPE ALL VENT LINES UP TO SURGE TANK.
 3. SEE DWG. #VHP-ESM FOR ALL ENGINE INTERCONNECTING ELECTRICAL & CONTROL WIRE.
 4. ALL THREADED NIPPLES TO BE SCH.160. A NIPPLE IS ANY LENGTH OF THREADED PIPE LESS THAN 12" LG.

STORAGE TANK CAPACITIES - SEE "GENERAL ARRANGEMENT DWG."
 EJW CIRCUIT CAPACITY 224 U.S. GAL AJW CIRCUIT CAPACITY 70 U.S. GAL

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REV.	DESCRIPTION	DATE	BY	STEP NO.	520	DWG. NO.	31644-WFLOW	SHEET NO.	1 OF 1	TITLE:	FOR:
5	AS BUILT	09-11-07	GG							TOROMONT ENERGY SYSTEMS FLOW DIAGRAM - WATER SYSTEMS MAJOR EQUIPMENT: WATER FLOW DIAGRAM WAUKESHA L5774LT ESM ARIEL JGK/4-1/2 FOR: BP CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: o-65-E/93-1-9	
4	ISSUED FOR CONSTRUCTION	07/26/07	DB								
3	REVISED TAGGING PER B.P. REQUEST	05/31/07	DB								
2	CHANGED PUMP TO ELECTRIC & RE-ISSUED FOR APPROVAL	03/08/07	DB								
1	RE-ISSUED FOR APPROVAL	03/08/07	DB								
0	ISSUED FOR APPROVAL	02/08/07	DB								

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ENGINE / PANEL EXTERNAL THERMOCOUPLE INTERFACE WIRING	
TRC #	ENGINE PYRO HARNESS
TE-8401	CYL #1-L
TE-8402	CYL #2-L
TE-8403	CYL #3-L
TE-8404	CYL #4-L
TE-8405	CYL #5-L
TE-8406	CYL #6-L
TE-8407	PRETURBO-L
TE-8408	CYL #1-R
TE-8409	CYL #2-R
TE-8410	CYL #3-R
TE-8411	CYL #4-R
TE-8412	CYL #5-R
TE-8413	CYL #6-R
TE-8414	PRETURBO-R

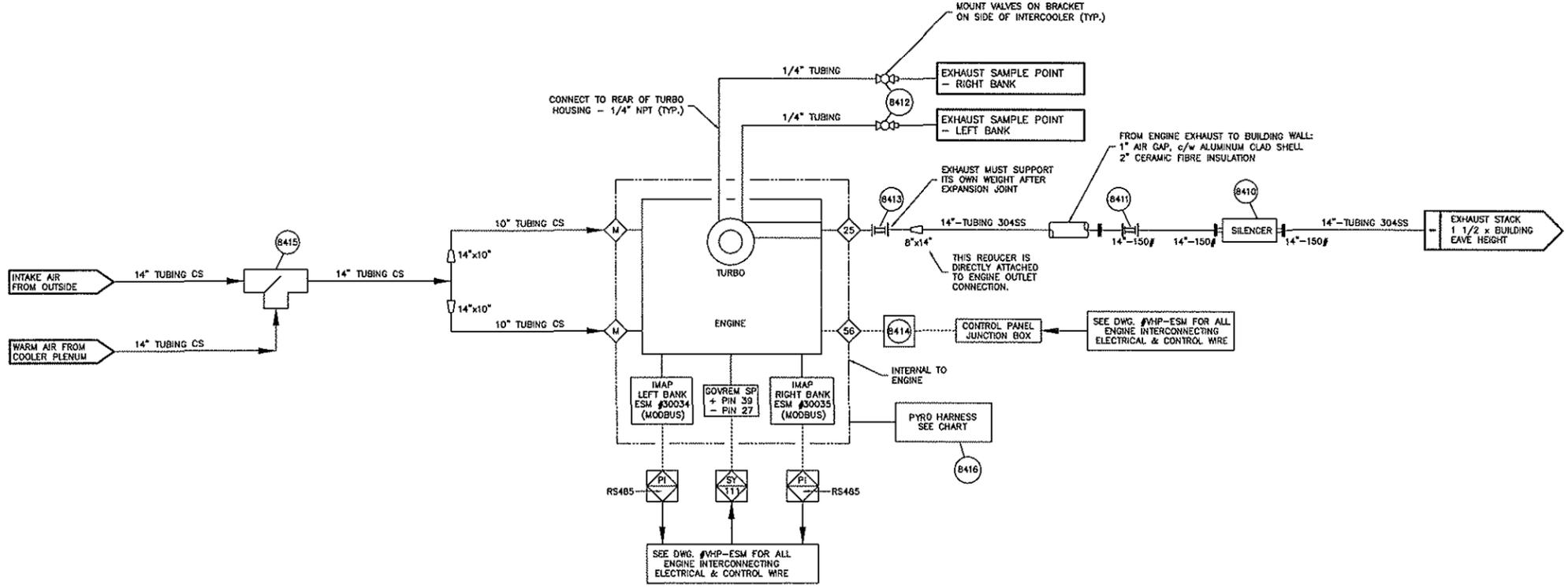
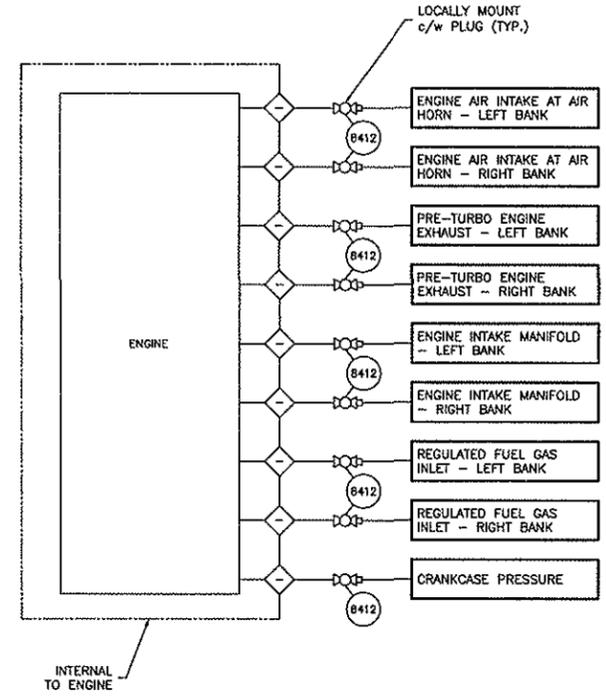
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WAUKESHA ESP PARAMETERS	
WKI FOR SHOP TEST RUN =	95
WKI FOR FIELD CONDITIONS =	_____
(GAS ANALYSIS REQUIRED)	
LOAD INERTIA =	117 lb/ft ²
NOx =	_____ g/BHP-HR

NOTES:
1. FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
2. SIGNAL TUBING IS 1/4".
3. ALL THREADED NIPPLES TO BE SCH.160. A NIPPLE IS ANY LENGTH OF THREADED PIPE LESS THAN 12" LG.

SERVICE:	TUBING	FITTINGS
SWEET:	304 (SS) ZINC PLATED (S)	304 (SS) ZINC PLATED (S)
	304 (SS) ZINC PLATED (S)	304 (SS) ZINC PLATED (S)
	304 (SS) 316 (SS)	304 (SS) 316 (SS)
SOUR:	316 (SS) 316 (SS)	316 (SS) 316 (SS)
	316 (SS) 316 (SS)	316 (SS) 316 (SS)
	316 (SS) 316 (SS)	316 (SS) 316 (SS)



AIR INTAKE & EXHAUST SYSTEMS

NOTES:
1. FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
2. SIGNAL TUBING IS 1/4".

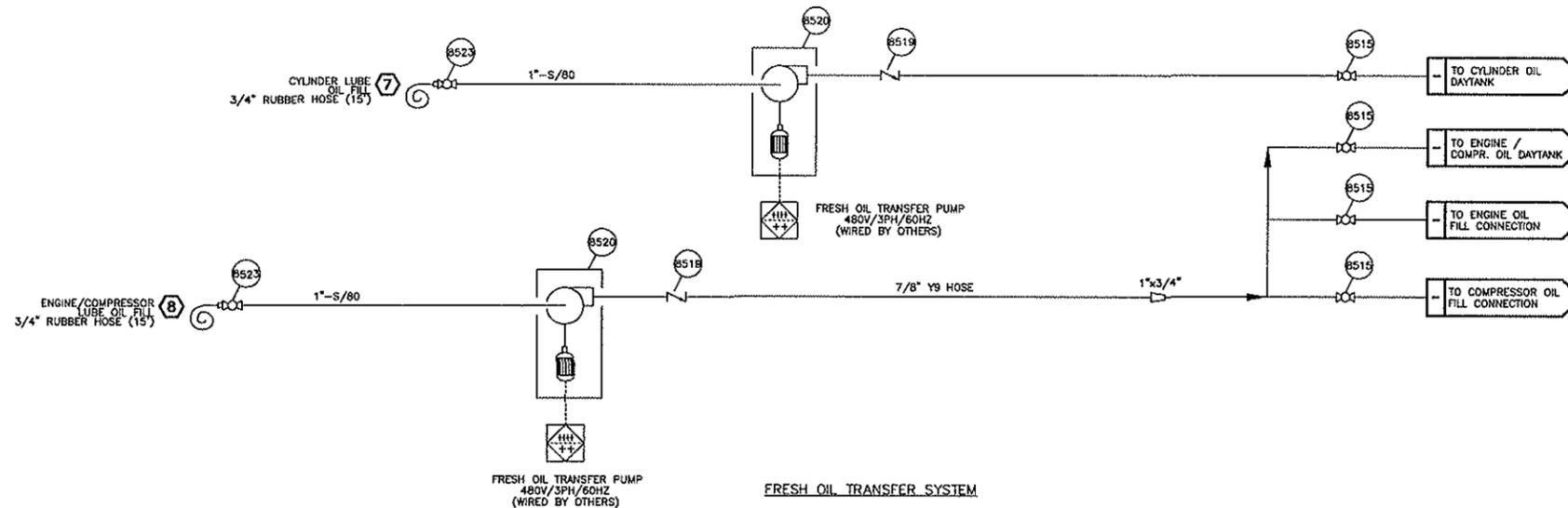
REV.	DESCRIPTION	DATE	BY	STEP No.	DWG. No.	SHEET No.	TITLE
6	AS BUILT	09-11-07	GG		31644-AEFLOW	1 OF 6	AIR / EXHAUST FLOW DIAGRAM
5	RE-ISSUED FOR CONSTRUCTION	08-03-07	BC				
4	RE-ISSUED FOR CONSTRUCTION	07/26/07	DB				
3	REVISED TAGGING PER B.P. REQUEST & ISSUED FOR CONSTRUCTION	05/24/07	DB				
2	CHANGED EXHAUST PIPING TO STAINLESS STEEL & RE-ISSUED FOR APPROVAL	04/27/07	DB				
1	RE-ISSUED FOR APPROVAL	03/08/07	DB				
0	ISSUED FOR APPROVAL	02/08/07	DB				

DATE: 02/08/07
BY: DB
STEP No.: 530

<p>MAJOR EQUIPMENT: AIR & EXHAUST FLOW DIAGRAM WAUKESHA L5774LTE (ESM)</p>	<p>FOR: BP CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: a-65-C/93-1-9</p>
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PLOTTED BY: agmawm PLOT DATE: Sep 11, 2007 1:44pm FILE NAME: P:\30000 Projects\31644\Drawings\Flow\31644-AEFLOW-6.dwg

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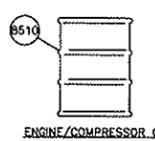
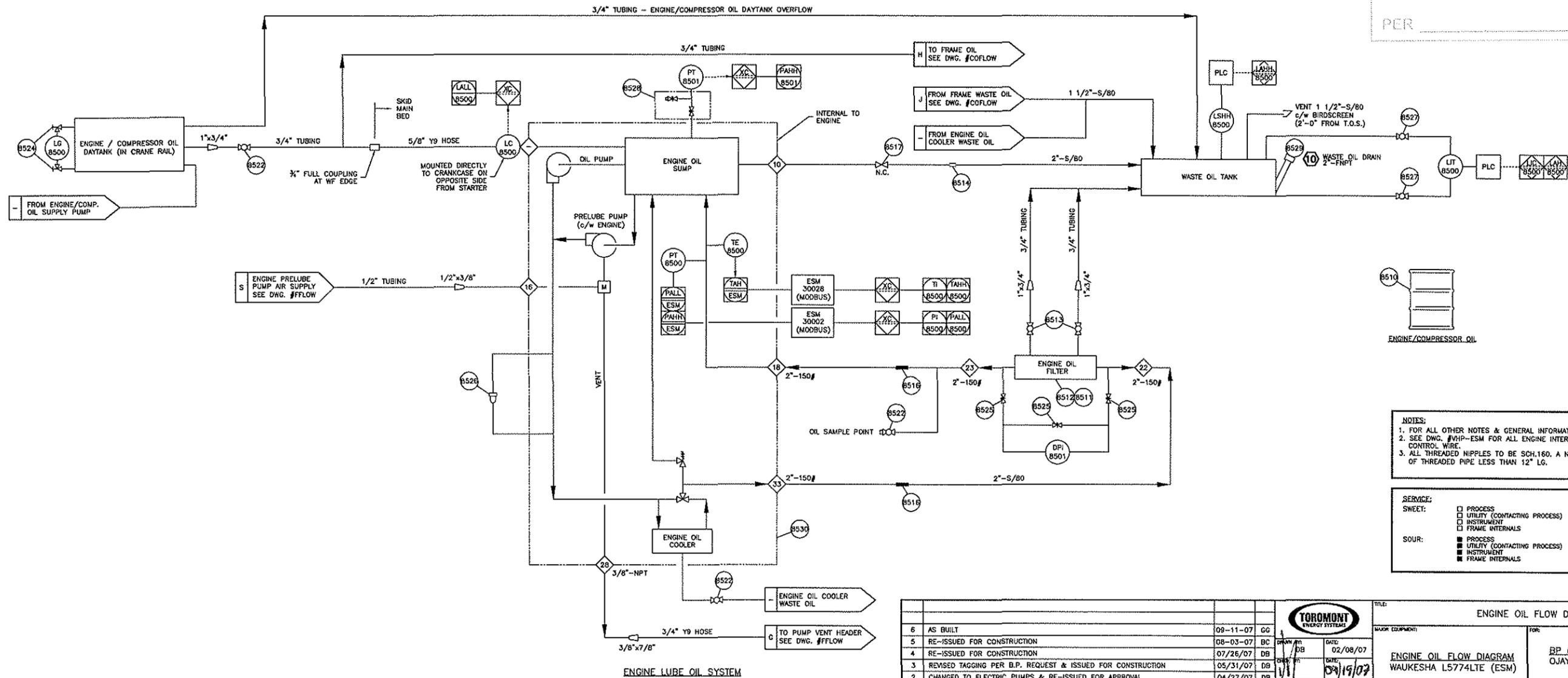


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TOROMONT ENERGY SYSTEMS

SEP 21 2007
AS BUILT

PER _____



- NOTES:**
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
 - SEE DWG. #VHP-ESM FOR ALL ENGINE INTERCONNECTING ELECTRICAL & CONTROL WIRE.
 - ALL THREADED NIPPLES TO BE SCH.160. A NIPPLE IS ANY LENGTH OF THREADED PIPE LESS THAN 12" LG.

SERVICE:	TUBING	FITTINGS
PROCESS	304 (SS)	ZINC PLATED (S)
UTILITY (CONTACTING PROCESS)	304 (SS)	ZINC PLATED (S)
INSTRUMENT	304 (SS)	ZINC PLATED (S)
FRAME INTERNALS	316 (SS)	316 (SS)
SOUR:	316 (SS)	316 (SS)
UTILITY (CONTACTING PROCESS)	316 (SS)	316 (SS)
INSTRUMENT	316 (SS)	316 (SS)
FRAME INTERNALS	316 (SS)	316 (SS)

REV.	DESCRIPTION	DATE	BY	STEP No.	DRW. No.	SHEET No.	TOTAL
6	AS BUILT	09-11-07	GG			1	6
5	RE-ISSUED FOR CONSTRUCTION	08-03-07	BC				
4	RE-ISSUED FOR CONSTRUCTION	07/26/07	DB				
3	REVISED TAGGING PER B.P. REQUEST & ISSUED FOR CONSTRUCTION	05/31/07	DB				
2	CHANGED TO ELECTRIC PUMPS & RE-ISSUED FOR APPROVAL	04/27/07	DB				
1	RE-ISSUED FOR APPROVAL	03/08/07	DB				
0	ISSUED FOR APPROVAL	02/08/07	DB				

		ENGINE OIL FLOW DIAGRAM	
DRAWN BY: DB CHECKED BY: N.T.S. DATE: 02/08/07 DATE: 03/19/07	MAJOR EQUIPMENT: ENGINE OIL FLOW DIAGRAM WAUKESHA L5774LTE (ESM)	FOR: BP CANADA ENERGY COMPANY OJAY SOUR GAS COMPRESSOR LSD: o-65-E/93-1-9	TOROMONT ENERGY SYSTEMS
STEP No. 540	DRW. No. 31644-EFLOW	SHEET No. 1 OF 6	REV. 6

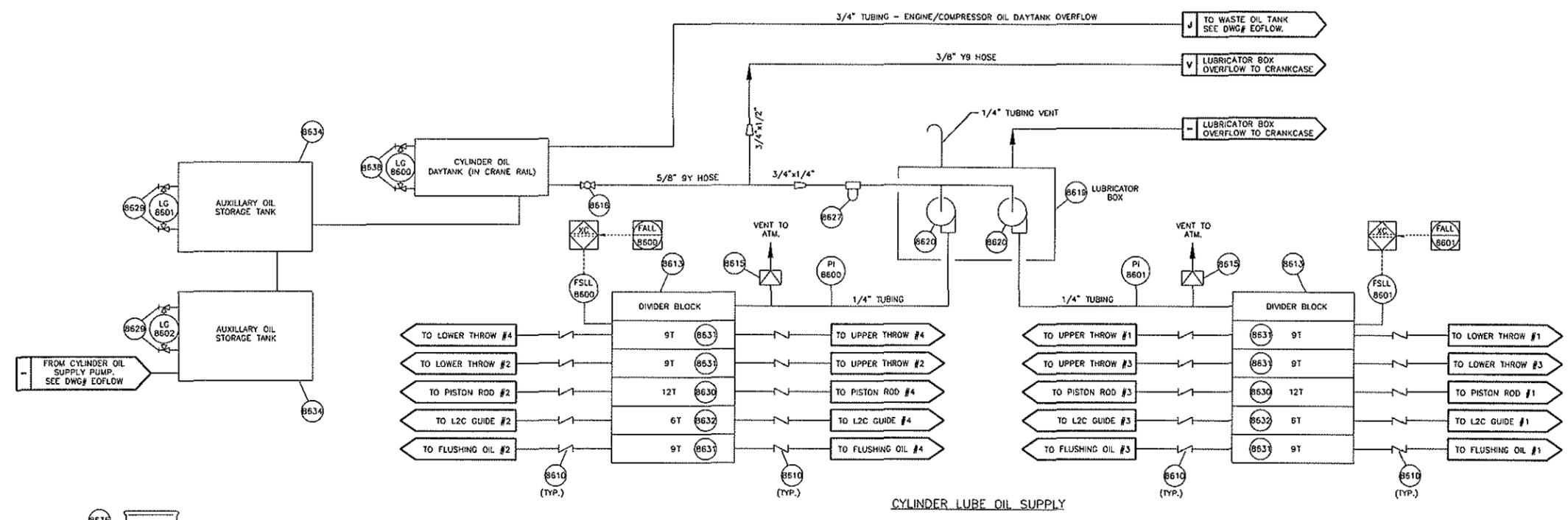
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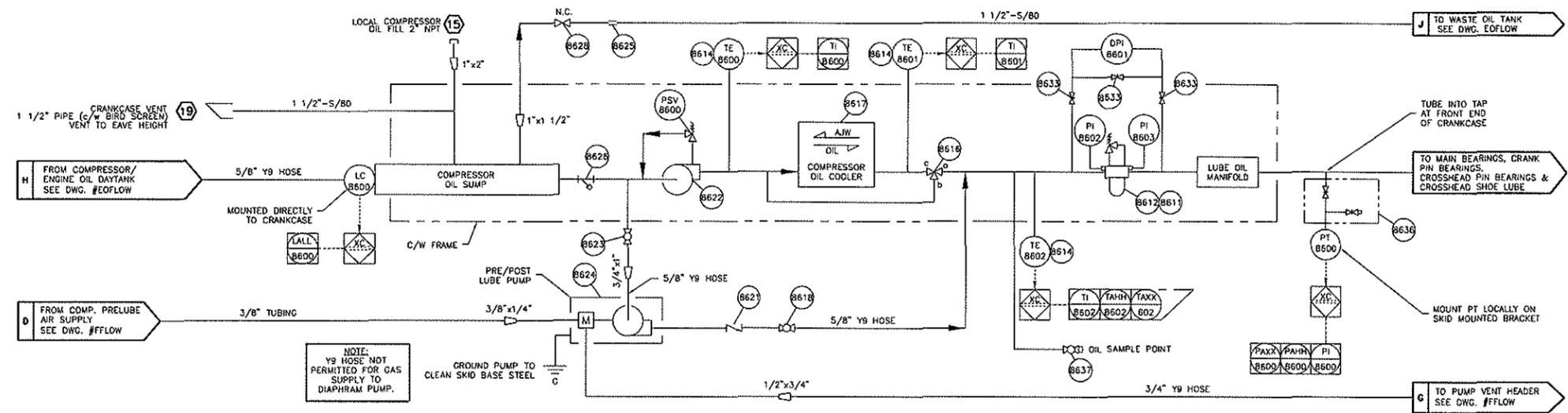
THROW #1 - 6.25"
 THROW #2 - 5.875"
 THROW #3 - 6.25"
 THROW #4 - 5.875"
 CYLINDER SIZES

THROWS# 1 & 3
 DESIGN CYCLE TIME IS 14.0 SECONDS.
 DESIGN OIL FLOW RATE IS 19.2 US PINTS/DAY

THROWS# 2 & 4
 DESIGN CYCLE TIME IS 12.0 SECONDS.
 DESIGN OIL FLOW RATE IS 22.4 US PINTS/DAY



CYLINDER LUBE OIL SUPPLY



COMPRESSOR FRAME LUBE OIL CIRCULATING SYSTEM

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 TOROMONT ENERGY SYSTEMS INC.

TOROMONT ENERGY SYSTEMS
 SEP 21 2007
 AS BUILT
 PER

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
 - LETTER TAGS REFER TO DOCUMENT: DANDY-GEMINISD.
 - BREATHER ELEMENT MUST BE SPRAYED WITH SAE 20 TO 40 OIL.
 - ALL THREADED NIPPLES TO BE SCH.160. A NIPPLE IS ANY LENGTH OF THREADED PIPE LESS THAN 12" LG.

SERVICE:	TUBING	FITINGS
SWEET:		
<input type="checkbox"/> PROCESS	304 (SS)	ZINC PLATED (S)
<input type="checkbox"/> UTILITY (CONTACTING PROCESS)	304 (SS)	ZINC PLATED (S)
<input type="checkbox"/> INSTRUMENT	304 (SS)	ZINC PLATED (S)
<input type="checkbox"/> FRAME INTERVALS	316 (SS)	316 (SS)
SOUR:		
<input checked="" type="checkbox"/> PROCESS	316 (SS)	316 (SS)
<input checked="" type="checkbox"/> UTILITY (CONTACTING PROCESS)	316 (SS)	316 (SS)
<input checked="" type="checkbox"/> INSTRUMENT	316 (SS)	316 (SS)
<input checked="" type="checkbox"/> FRAME INTERVALS	316 (SS)	316 (SS)

REV.	DESCRIPTION	DATE	BY	STEP NO.	550	DWG. NO.	31644-CDFLOW	SHEET NO.	1 OF 1	TOTAL	6
6	AS BUILT	08-11-07	GG								
5	RE-ISSUED FOR CONSTRUCTION	08-03-07	BC								
4	RE-ISSUED FOR CONSTRUCTION	07/26/07	DB								
3	REVISED TAGGING PER B.P. REQUEST & ISSUED FOR CONSTRUCTION	05/31/07	DB								
2	REVISED PER CUSTOMER MARK-UP & RE-ISSUED FOR APPROVAL	04/27/07	DB								
1	RE-ISSUED FOR APPROVAL	03/08/07	DB								
0	ISSUED FOR APPROVAL	02/08/07	DB								

FILE NAME: P:\30000 Projects\31644\Drawing\Draw\31644-CDFLOW-6.dwg
 PLOTTED BY: gbrwn
 PLOT DATE: Sep 20, 2007 3:47pm

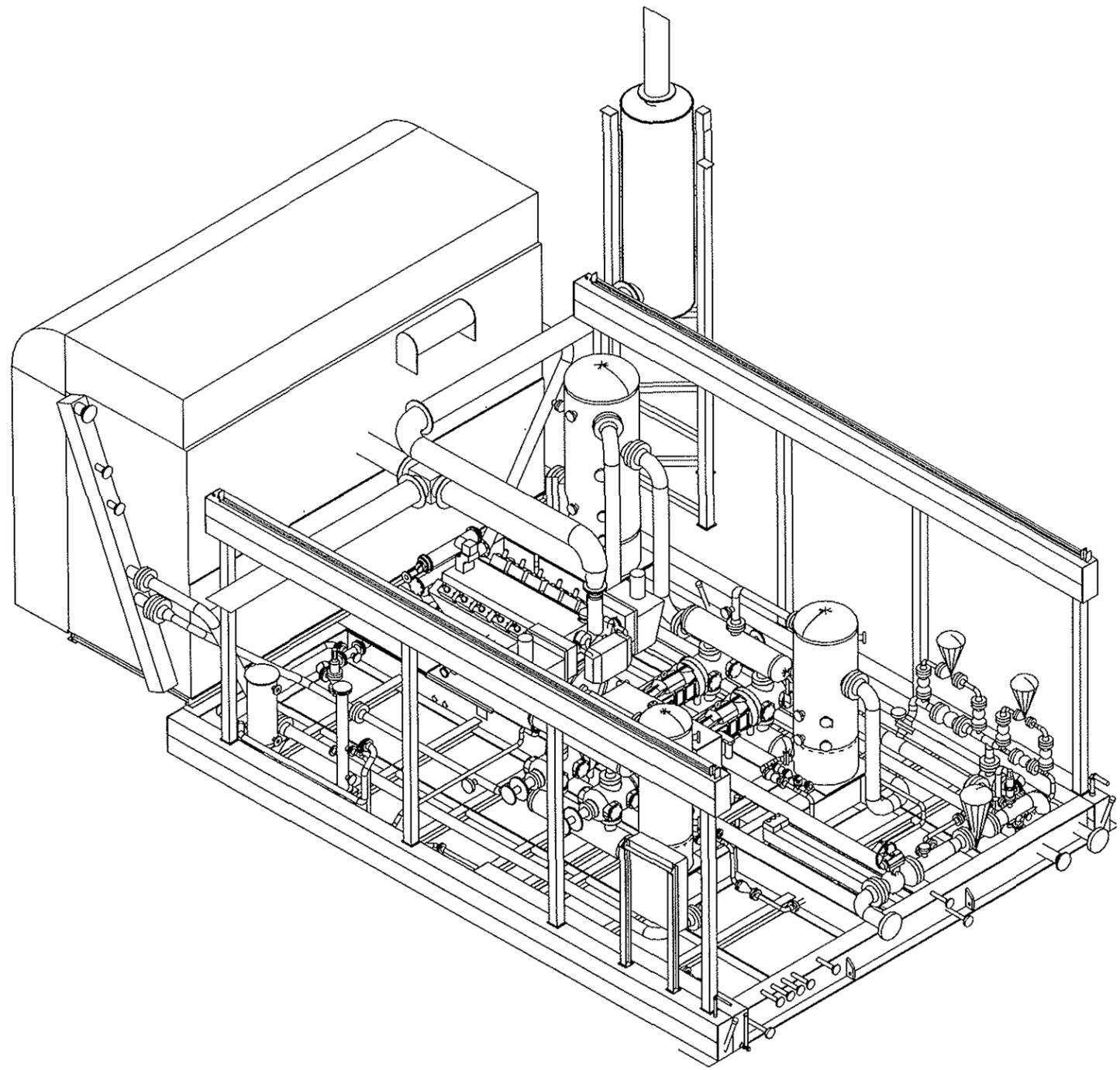
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TOROMONT ENERGY SYSTEMS

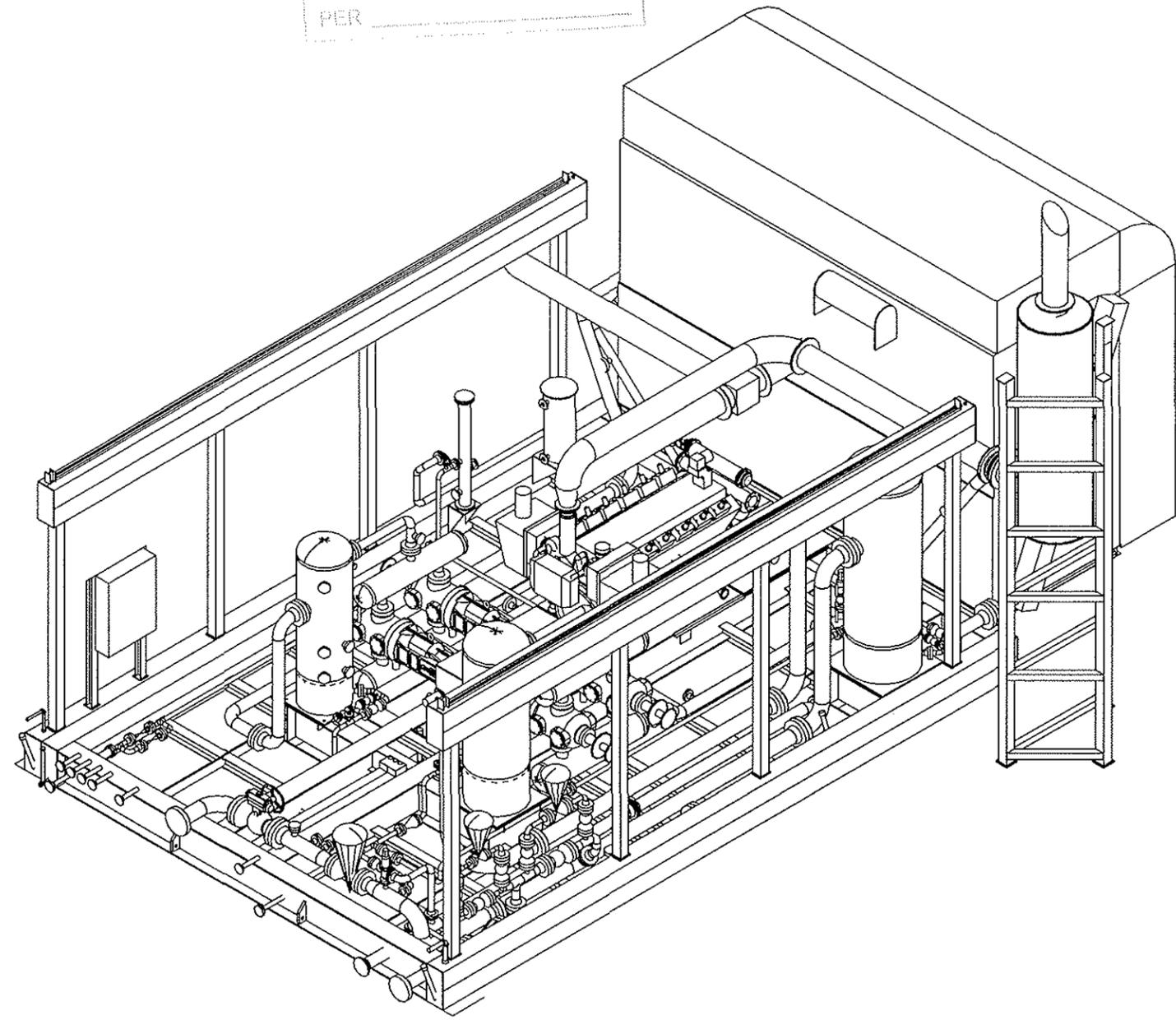
SEP 21 2007
AS BUILT

PER

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3D SOUTHEAST VIEW



3D SOUTHWEST VIEW

FILE NAME: P:\30000 Projects\31644\Drafting\31644MODEL-5.dwg
PLOT DATE: Sep 21, 2007 8:48am
PLOTTED BY: dbrown

REV.	DESCRIPTION	DATE	BY
2	AS BUILT	09/20/07	DB
1	ISSUED FOR CONSTRUCTION	05/31/07	DB
0	ISSUED FOR REFERENCE	04/04/07	DB

ENGINEER STAMP

TOROMONT ENERGY SYSTEMS

DRAWN BY: DB
DATE: 02/08/07

CHECK BY: [Signature]
DATE: 09/19/07

SCALE: -
V.G. #: XXXXX

TITLE: 3D VIEW - GENERAL ARRANGEMENT

EQUIPMENT:
WAUKESHA LS774LT
ARIEL JGK/4-2
AIR-X-CHANGERS 156EH-116-24

CUSTOMER:
BP CANADA ENERGY COMPANY
DJAY SOUR GAS COMPRESSOR
LSD: a-65-E/93-I-9

DWG No: 31644-3D
SHEET NO: 1 OF 1
REV: 2

ESM SET-UP AND OPERATION

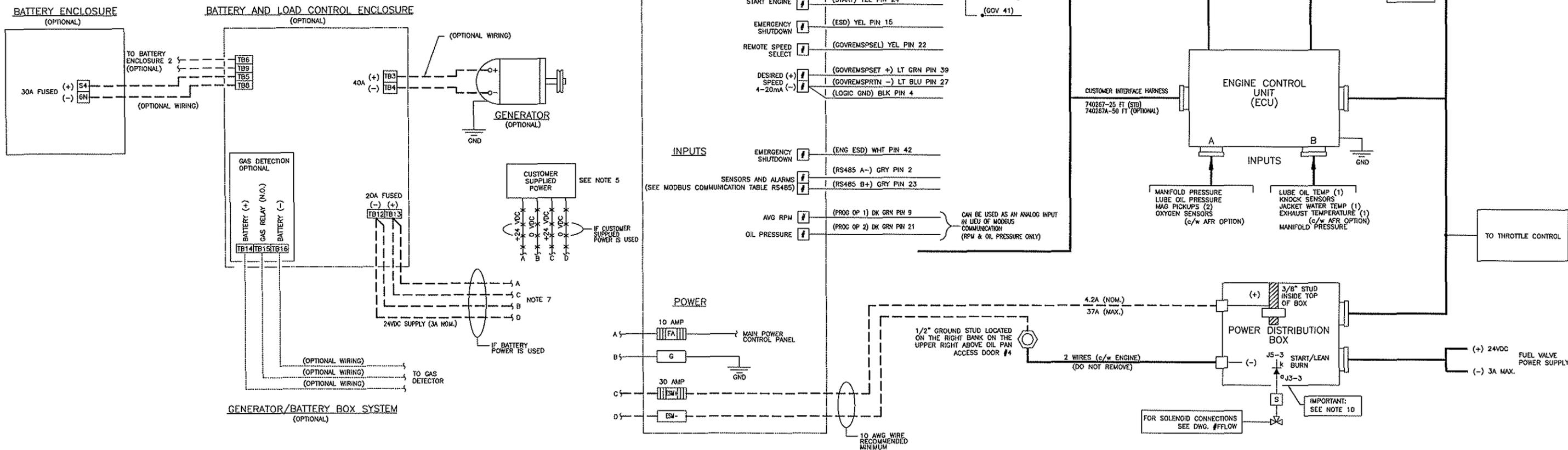
WARNING:
ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT TO INTERFACE WITH OR CHANGE THE ESM AND ANY OF ITS COMPONENTS.

- REFER TO ESM OPERATION AND MAINTENANCE MANUAL FOR DETAILED OPERATION.
- CONNECT TO A 24VDC FUEL SHUTOFF VALVE. ESM MUST CONTROL THIS VALVE TO ENSURE ERROR FREE OPERATION.
- PRIOR TO RUNNING THE ENGINE, THE ESM MUST BE SET-UP AND TESTED WITH THE ENGINE SERVICE PROGRAM (ESP).
- ENGINE AND COMPRESSOR PRE-LUBE SHALL BE CONTROLLED BY THE COMPRESSOR CONTROL PANEL. THE PRE-LUBE LOGIC INSIDE THE ESM WILL BE TURNED OFF BY SETTING PRE-LUBE TIME TO ZERO IN THE ESP SOFTWARE.
- SUPPLY POWER TO THE ESM FOR ONE MINUTE BEFORE POWERING THE COMPRESSOR CONTROL PANEL.

MODBUS COMMUNICATIONS TABLE (RS485)	
NAME	ADDRESS
IMAP LEFT BANK / REAR	30034
IMAP RIGHT BANK / FRONT	30035
ENGINE OIL TEMPERATURE	30028
COOLANT (EJW) OUTLET TEMPERATURE	30008
INTAKE MANIFOLD TEMPERATURE -- LEFT ONLY	30027
SPEED	30001
ENGINE OIL PRESSURE	30002

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TOROMONT ENERGY SYSTEMS
SEP 21 2007
AS BUILT



NOTES AND SPECIFICATIONS

ELECTRICAL CLASSIFICATION: CLASS 1 DIV. 2 CLASS 1 DIV. 1

- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL WIRING MEETS APPLICABLE CODES AND STANDARDS FOR AREA.
- MAXIMUM ALLOWABLE VOLTAGE DROP IN WIRING IS 0.5V @ 35A.
- PROPER COMPRESSOR SKID DROPPING IS THE CUSTOMER'S RESPONSIBILITY.
- DISCONNECT ALL ELECTRICAL EQUIPMENT FROM GROUND BEFORE WELDING.
- ESM REQUIRES 18-32V DC SUPPLY, LOW VOLTAGE ALARM AT 21 VDC. (ALM 454) MAXIMUM VOLTAGE RIPPLE IS 10% PEAK TO PEAK @ 100HZ.
- FOR REMOTE SPEED CONTROL JUMPER PINS GOV. 40 AND GOV. 41.
- THIS CONNECTION CAN BE THROUGH THE GENERATOR/BATTERY BOX SYSTEM OR SUPPLIED BY CUSTOMER.
- THE ECU BOX CANNOT BE REMOVED FROM THE FACTORY INSTALLED LOCATION PER WAUKESHA DIRECTIVE.
- SET ENGINE PRELUDE TIMER TO ZERO VIA ESP SOFTWARE.
- MUST INSTALL A 1N5408 SUPPRESSION DIODE.
- ENGINE PRELUDE PERMISSIVE.

WIRING LEGEND

CUSTOMER	---x---x---x---
OPTIONAL	-----
ESM SUPPLIED CONNECTIONS	-----
TEST PANEL AND GROUNDING CONNECTIONS	-----
SKID WIRING	-----

REVISION		DATE	BY
0	ISSUED FOR REFERENCE	05/31/07	DB

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TOROMONT ENERGY SYSTEMS 10121 - BARLOW TRAIL N.E. CALGARY ALBERTA CANADA

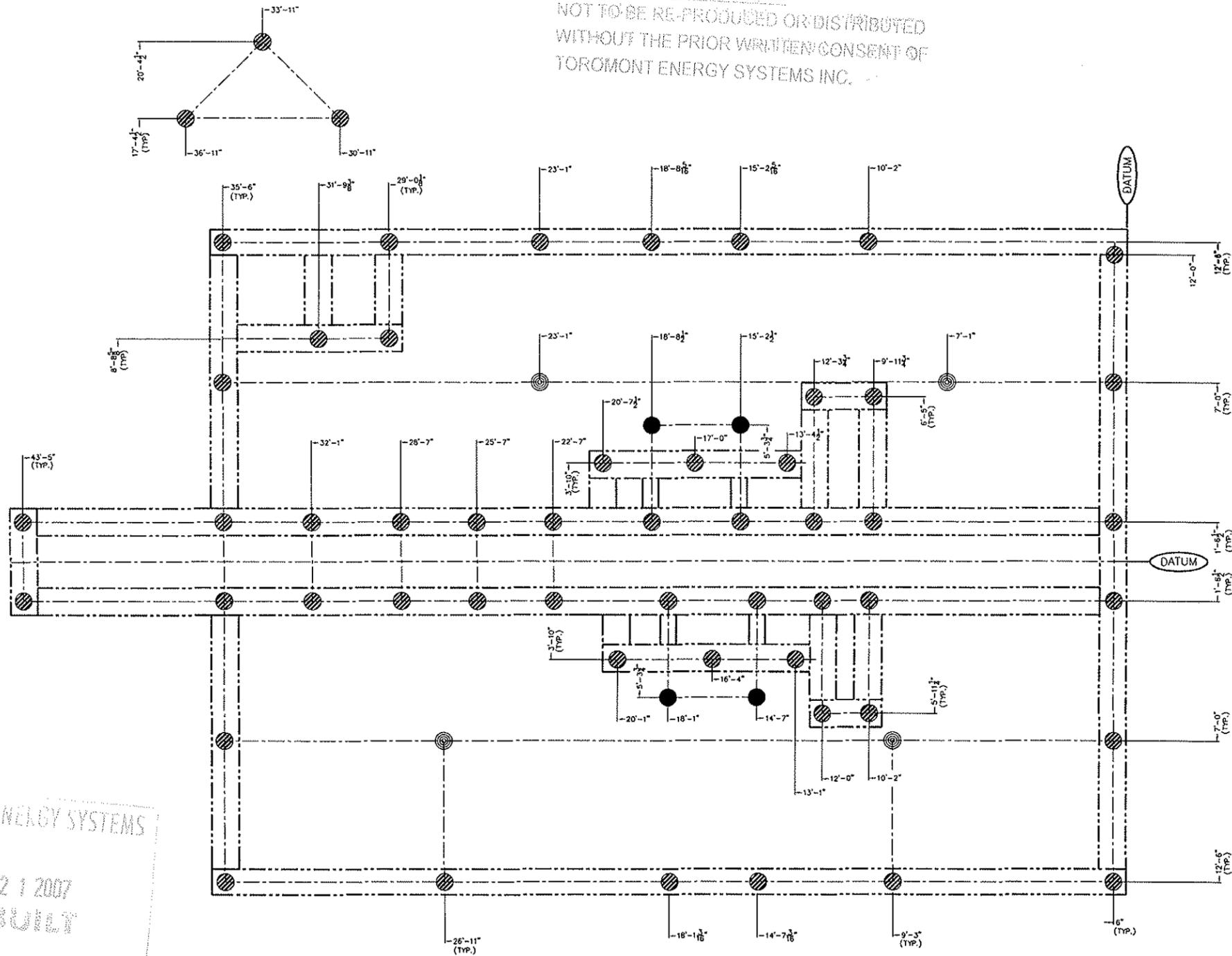
TITLE: **ELECTRICAL FLOW DIAGRAM**
WAUKESHA
VHP-ESM/PACKAGE INTERFACE

CUSTOMER: **BP CANADA ENERGY COMPANY**
OJAY SOUR GAS COMPRESSOR
LSD: 0-65-E/93-11-9

SCALE: NONE DATE: 02/05/07 BY: DB DATE RELEASED: 09/19/07 RELEASED BY: [Signature]
STEP # N/A UNIT #31644 DRAWING NO.: VHP-ESM REV. NO.: 0

M:\PACKAGE TEMPLATES\LS7747 JK6-3\WIRING FLOWS\VHP-ESM-0.DWG

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MAJOR COMPONENT WEIGHTS

Description	Weight (lbs.)
COMPRESSOR FRAME c/w CYLINDERS:	18,456
ENGINE:	21,000
COOLER:	36,950
SLUG CATCHER	11,619
SUCTION SCRUBBER	6,242
INTERSTAGE #1 SCRUBBER:	4,615
THROW #1 & #3 BOTTLES:	2,924
THROW #2 & #4 BOTTLES:	2,924
BUILDING	10,200
SKID BASE: (w/o CONCRETE)	52,208
SKID BASE: (w/ CONCRETE)	82,806
MUFFLER: (TRUNION MOUNTED - SHIP LOOSE)	1,655
PIPING/INSTRUMENTATION:	24,450
FLUIDS:	11,386
TOTAL PACKAGE (INCLUDING 7% SAFETY FACTOR):	249,922

- - SUPPORT POINT FOR DISCHARGE BOTTLE WEDGE SUPPORTS.
- ⊙ - SUPPORT POINT FOR SPLIT SKID JOINT (ASSIST FIELD ASS'Y)
- ⊗ - SUPPORT POINT (NOT NECESSARILY A PILE LOCATION)

PLEASE READ CAREFULLY

1. INSTALLATION OF THIS SKIDDED COMPRESSOR PACKAGE IS ENTIRELY THE RESPONSIBILITY OF THE OWNER.
2. ALL PILE CAPS MUST BE SHIMMED LEVEL AND WELDED TO THE SKID WITH CONTINUOUS WELDMENTS USING GOOD WELDING PRACTICES. STITCH WELDING IS NOT ACCEPTABLE. STEP SHIMMING IS NOT ACCEPTABLE. TOROMONT ENERGY SYSTEMS INC. DOES NOT WARRANT VIBRATION ISSUES RELATING TO POOR PILE TO SKID CONNECTIONS, OR INSUFFICIENT PILE DESIGN.
3. AS A MINIMUM 3 SIDES OF PILE CAP SHOULD BE WELDED TO THE SKID MEMBER.
4. PACKAGES INCORPORATING SEAL PANS (DRIP) IN THE WINGS WILL RESTRICT ACCESS TO SUPPORTS BELOW. IT MAY BE NECESSARY TO CUT THE SEAL PAN TO GAIN ACCESS TO THESE AREAS.
5. A RECIPROCATING COMPRESSOR IS CAPABLE OF PRODUCING VERY HIGH HORIZONTAL COUPLES ABOUT THE CENTERLINE OF THE CRANKCASE. CAREFUL CONSIDERATION MUST BE GIVEN TO THE LOCATION OF SUPPORT BELOW THE CYLINDER CROSSHEAD AREA OF THE SKID. A SINGLE POINT OF SUPPORT BELOW THE CENTERLINE OF EACH THROW IS NOT SUFFICIENT.
6. IT IS ALWAYS RECOMMENDED TO PERFORM A GEO-TECHNICAL INVESTIGATION OF THE SUB-SURFACE CONDITIONS OF THE INSTALLATION SITE.
7. IT IS THE END USER'S RESPONSIBILITY TO PLACE THE PILES AS RECOMMENDED BY A CIVIL ENGINEER AND TO DETERMINE THE PILE DIAMETER AND DEPTH BASED ON THE SOIL CONDITIONS.
8. THIS DRAWING INDICATES THE MINIMUM SUGGESTED NUMBER OF SUPPORT POINTS. THE ACTUAL NUMBER AND LOCATION REQUIRED MAY BE MORE, DEPENDING ON SOIL CONDITIONS, DEPTH OF REFUSAL, FIELD EXPERIENCE, ENGINEERING OPINION, ETC.. TOROMONT ENERGY SYSTEMS INC. DOES NOT AND CANNOT WARRANT THIS SUGGESTED DESIGN AND IT IS STRONGLY RECOMMENDED THAT A CIVIL ENGINEER FAMILIAR WITH PACKAGED RECIPROCATING COMPRESSORS BE CONSULTED TO DESIGN THE FOUNDATION FOR THIS COMPRESSOR PACKAGE.
9. SKID DEFLECTION CAN CAUSE ALIGNMENT PROBLEMS, PIPE STRAIN AND VIBRATION. ONCE EQUIPMENT HAS BEEN PLACED ON PILE CAPS, EQUIPMENT MUST BE CHECKED FOR ALIGNMENT AND PIPE STRAIN. ALIGN AS REQUIRED.
10. REFERENCE THE GENERAL ARRANGEMENT DRAWING FOR LOCATION OF MAJOR EQUIPMENT.

1	REVISED AS PER AP DYNAMICS RECOMMENDATIONS	08/03/07	VS
0	ISSUED FOR REFERENCE	05/02/07	DB
No.	REVISION	DATE	BY

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TOROMONT ENERGY SYSTEMS
 10121 - BARLOW TRAIL N.E. CALGARY ALBERTA CANADA

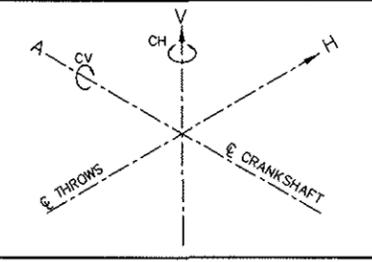
TITLE: SUGGESTED SUPPORT LOCATION
 WAURESHA 1577417 / ARIEL JGK/4-2
 AIR-X-CHANGERS 150EH-116-24

CUSTOMER: B.P. CANADA ENERGY COMPANY
 OJAY SOUR GAS COMPRESSOR
 LSD: 0-65-E/93-1-9

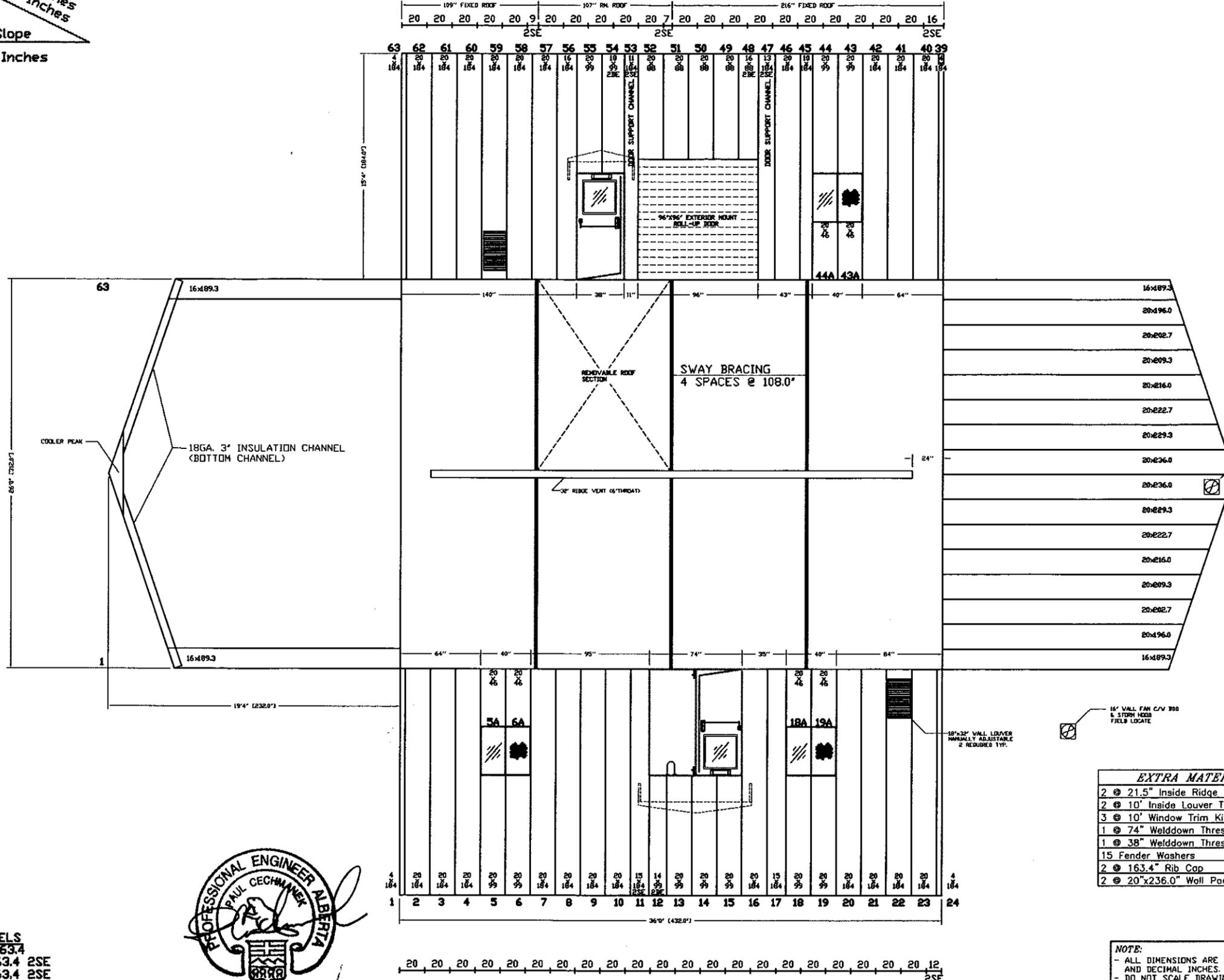
SCALE: 1/2" = 1'-0" DATE: 05/02/07 BY: DB DATE RELEASED: 07/15/07 RELEASED BY: DB
 STEP: N/A UNIT: 31644 DRAWING NO.: 31644-PILE 80/1

TOROMONT ENERGY SYSTEMS
 SEP 21 2007
 AS BUILT
 PER

COMPRESSOR UNBALANCED FORCES @ 1200 RPM						
THROW #	1	2	3	4	5	6
CYLINDER BORE (IN.)	6.25"	5.875"	6.25"	5.875"	---	---
UNBALANCED SHAKING FORCES = NIL (ALL FRAMES)						
Description	Tag	Ft. lbs.				
PRIMARY VERTICAL COUPLE	CV1	17,586				
PRIMARY HORIZONTAL COUPLE	CH1	6,803				
SECONDARY VERTICAL COUPLE	CV2	0				
SECONDARY HORIZONTAL COUPLE	CH2	158				



52.0 Inches
 156.0 Inches
 4:12 Slope
 TC=164.4 Inches
 RP=163.4 Inches



Straight-Up Metal Buildings Ltd.

22GA Tan Exterior Walls R-12
 22GA Tan Exterior Roof R-12
 24GA Fluted Alum. White Interior
 Tan Trim

BUILDING COMPONENTS

Produced & Shipped	
Inspected	By
BRAKE	
19 @ 10' Bottom Channel	
13 @ 10' Top Channel	
8 @ 10' Eaves Drip	
8 @ 10' Lining Corners	
6 @ 10' of 3" Ins Channels	
6 @ 10' of 6" Ins Channels	
63 @ 8' of 6" 22 GA. Insulation Ribs	
11 @ 10' Base Flashing	
8 @ 10' Eaves Trough Support	
2 @ (24.0)(24.0) 2 Ridge C/W Joiners	
36'3" RidgeCap (Vent Style)	
2 @ 163.4", 2 @ 10' Gable Flashing	
2 @ 36'0" EavesTrough 4 Caps	

ACCESSORIES

384" (6")RidgeVent 115' Chain 4 Pullies	
4 @ 14'6" DownSpouts 4 Elbows	
4 Flashing EndCaps	
2 @ Name Plates	
NO. SIZE TYPE	
1 @ Double Door Canopy	
1 @ Single Door Canopy	
2 @ 16" Exhaust Fan	

DOORS

NO.	SIZE	TYPE	FRAME
1	96"x96"	Roll-Up Door	1

FABRICATION

1 @ 432" Ice Rakes	
1 @ 216" Ice Rakes	
1 @ 109" Ice Rakes	
3 @ 305.0" H.S.S. Sway Braces (UP=45.5")	
2 @ 183" 16GA Channel Door Support	
2 @ 107" Lifting Lugs(1 to c/w Pegs)	

MISC

3.0 Rolls of 4mm Poly Vapour Barrier	
102 @ 3x10 Fluted Alum. White Liner	
22 @ Bags of R12 Insulation(120)	
11000 @ #8 Tan Screws	
4600 @ #8 White Screws	
1100 @ #10 Screws	
140 @ #14 Screws	
12 @ Tubes of White Caulking	
20 @ Tubes of Gray Caulking	

WINDOWS

NO.	SIZE	TYPE
3	40x40	Standard

Roll-Up Door to be Exterior Mount

CLIENT: TOROMONT ENERGY SYSTEMS

PROJECT: BP CANADA ENERGY COMPANY

TITLE: PLAN/PANEL LAYOUT

SIZE: W 26'0"	L 36'0"	H 15'4"	4.012
Sq.FT. W 1502'	C 57'	R 987'	T 2546'
Perimeter 124'0"	Volume		

Quote: 0707003 Unit: 31644
 Drawn by: C. YOUNG Date: SEPT 06/07

Checked by: Date:
 APPROVED BY: Date:
 Job: 07-0776 Drawing: 07-0776

DESIGN DATA

LOCATION	?
LSD	?
Ss	1.0 kPa
Sr	0.1 kPa
q-1/30	0.46 kPa
Za	0
Zv	1
V	0.05

EXTRA MATERIALS

2 @ 21.5" Inside Ridge Cap	
2 @ 10' Inside Louver Trim	
3 @ 10' Window Trim Kits	
1 @ 74" Welddown Threshold	
1 @ 38" Welddown Threshold	
15 Fender Washers	
2 @ 163.4" Rib Cap	
2 @ 20"x236.0" Wall Panels	

NOTE:
 - ALL DIMENSIONS ARE IN INCHES AND DECIMAL INCHES.
 - DO NOT SCALE DRAWINGS.
 - ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO ROUGH OPENINGS.
 - CONFIRM LOCATION OF ANY LOUVERS AND OR ANY FANS BEFORE INSTALLING.

ROOF PANELS
 41 @ 20x163.4
 1 @ 7.0x163.4 2SE
 1 @ 9.0x163.4 2SE
 1 @ 12.0x163.4 2SE
 1 @ 16.0x163.4 2SE

