

Bill of Materials

Flanges	No.	Part Number	Qty.	Units	Description	Heat Number
	1	ORDER	1	EA	24" DIA., SCH STD., 150#, RFWN, ANSI B16.5 SA 105N (N1 - FLARE GAS INLET CONNECTION)	
	2	ORDER	4	EA	24" DIA., SCH STD., 150#, RFWN, ANSI B16.5 SA 105N (FLUE BREAK FLANGES)	
	3					
	4					
	5					
	6					
	7					
Weld Fittings	No.	Part Number	Qty.	Units	Description	Heat Number
	8	ORDER	1	EA	24" DIA., SCH STD., 45 DEGREE, SA 234 WPB WELD ELBOW (N1 - WASTE GAS INLET CONNECTION ELBOW)	
	9					
	10					
	11					
	12					
Concentric Reducer	No.	Part Number	Qty.	Units	Description	Heat Number
	14	XXX-XXXX	1	EA	16" DIA X 304L S.S. WELD IN TYPE, ROLLED (VELOCITY ARRESTOR)	
	15					
	16					
Gaskets	No.	Part Number	Qty.	Units	Description	Heat Number
	17	SNG-0019	2	EA	24" DIA X 1/8" THK, 150#, 316L S.S. FLEXI-CARB GASKET (FLUE BREAK FLANGE GASKET)	
	18					
	19					
	20					
Studs & Nuts	No.	Part Number	Qty.	Units	Description	Heat Number
	21	ORDER	40	EA	1-1/4" DIA. X 7" LONG SA193 B7M STUDS (FLUE BREAK FLANGE STUDS)	
	22	SNG-0085	80	EA	1-1/4" DIA. SA194 2HM NUTS (FLUE BREAK FLANGE NUTS)	
	23					
	24					
	25					
	26					
Pipe	No.	Part Number	Qty.	Units	Description	Heat Number
	27	PPE-0037	1	EA	24" DIA., SCH STD., SMLS, SA 106B PIPE X 13'-7" LONG (STUB LEG)	
	28	PPE-0037	1	EA	24" DIA., SCH STD., SMLS, SA 106B PIPE X 1' - 9 1/4" LONG (N1 - FLARE GAS INLET EXTENSION)	
	29	PPE-0037	1	EA	24" DIA., SCH STD., SMLS, SA 106B PIPE X 45'-9 1/4" LONG (BOTTOM STACK FLUE)	
	30	PPE-0037	1	EA	24" DIA., SCH STD., SMLS, SA 106B PIPE X 58'-11 7/8" LONG (MIDDLE STACK FLUE)	
	31	PPE-0037	1	EA	24" DIA., SCH STD., SMLS, SA 106B PIPE X 12'-9 7/8" LONG (UPPER STACK FLUE)	
	32	PPE-0024	1	EA	16" DIA., SCH STD., SMLS, SA 106B PIPE X 5'-0" LONG (LOWER TIP) PORTION	
	33	PPE-0216	1	EA	16" DIA., SCH STD., SMLS, 316L S.S. PIPE X 5'-0" LONG (UPPER TIP PORTION)	
	34	PPE-0060	4	EA	6" DIA., SCH 80, WELDED, SA 106B PIPE X 11 5/8" LONG (LIFTING TRUNNION EXTENSION)	
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
Plate	No.	Part Number	Qty.	Units	Description	Heat Number
	43	ORDER	1	EA	36" DIA. X 1 1/2" THK SA 36 CS PLATE (BASEPLATE)	
	44	ORDER	1	EA	36" DIA. X 1 1/2" THK SA 36 CS PLATE (MATING BASEPLATE)	
	45	ORDER	8	EA	9" X 5 3/4" X 3/4" THK SA 36 CS PLATE (BASEPLATE GUSSETS)	
	46	ORDER	6	EA	8" X 5" X 1" THK SA 36 CS PLATE, SEE DETAIL (GUYWIRE LUGS)	
	47	ORDER	2	EA	32" O.D. X 24 1/8" I.D. X 3/4" THK SA 36 CS PLATE, SEE DETAIL (GUYWIRE RING)	
	48	ORDER	4	EA	3/8" THK. SA 516-70N PLATE, SEE DETAIL (LIFTING TRUNNION REPADS)	
	49	ORDER	8	EA	3/4" THK. SA 516-70N PLATE, SEE DETAIL (LIFTING TRUNNION STOPS)	
	50	ORDER	4	EA	1" THK. SA 516-70N PLATE, SEE DETAIL (LIFTING TRUNNION EARS)	
	51	ORDER	4	EA	3/4" THK. SA 516-70N PLATE, SEE DETAIL (LIFTING TRUNNION ENDCAPS)	
	52	ORDER	8	EA	3/8" THK. SA 516-70N PLATE, SEE DETAIL (LIFTING TRUNNION EYE PADS)	

Plate	No.	Part Number	Qty.	Units	Description	Heat Number
	53	LZR-0239	1	EA	3" X 3" X 1/2" THK 304L S.S. PLATE (GROUNDING LUG)	
	54	FLS-0121	2	EA	2" WIDE X 6 1/2" LONG X 1/4" THK 304L S.S. PLATE (WASTE GAS STRIPPER)	
	55	FLS-0071	2	EA	12" X 9" X 3/8" THK 316L S.S. PLATE (PILOT WIND SHROUD)	
	56	FLS-0053	2	EA	3" X 6" X 3/16" THK SA 36 CS PLATE (GATE LOCK PLATE)	
	57	FLS-0064	4	EA	PILOT TRACKING JOINER, 2 1/2" X 1 5/8" X 5/8" THK SA 36 CS PLATE	
	58	BAR-0011	2	EA	3" WIDE X 2" LONG X 1/4" THK SA 36 CS FLATBAR (PULLEY EXTENSION)	
	59					
	60					
	61					
Misc. Parts	No.	Part Number	Qty.	Units	Description	Heat Number
	64	FLS-0067	2	EA	PILOT RETRACTING ENCLOSED S.S. PULLEY	
	65	FLS-0063	1	EA	5" LONG X 3" C-CHANNEL (NAMEPLATE BRACKET)	
	66	CONSUMABLE	1	EA	24" DIA., 150#, PLASTIC FLANGE COVER	
	67	FLS-0054	2	EA	GATE LOCK ASSEMBLY, COMPLETE TRACK GATE & GATE LOCK	
	68	FLS-0050	12	EA	PILOT TRACKING, COMPLETE ASSEMBLIES X 24' LONG	
	69	STM-0039	4	EA	3" X 3" X 14" LONG X 1/4" THK ANGLE IRON, A36/44W (PILOT J.B./WARNING LIGHT J.B. BRACKETS)	
	70	ELC-0554	3	EA	1 5/8" X 6" LONG, GALVANIZED UNISTRUT (JUNCTION BOX CABLING)	
	71					
	72					
Ship Loose Parts	No.	Part Number	Qty.	Units	Description	Heat Number
	74	ORDER	1	EA	INCANDESCENT DUAL WARNING LIGHTS-RED 120 VAC, C/W BRACKET, PHOTOELECTRIC CONTROLLER & TRANSFER RELAY	
	75	PLT-0023	2	EA	RETRACTABLE FUEL GAS PILOT MODEL TSI#6 & TMR SYSTEM 24 V.D.C	
	76	FLS-0133	2	EA	1/4" DIA. STAINLESS STEEL PILOT RETRACTING PULLEY CABLE X 275'-0" LONG	
	77	CLA-0106	4	EA	1/4" G450 GALVANIZED CROSBY CLIPS (FOR 1/4" WINCH CABLE)	
	78	MM-0107	2	EA	5/16" G209 GALVANIZED SCREW PIN SAFETY SHACKLE (PULL DOWN SAFETY SHACKLE)(NOT DEPICTED)	
	79	CLA-0107	2	EA	1/8" GALVANIZED CROSBY CLIPS (PULL DOWN CABLE CLIP)(NOT DEPICTED)	
	80	FLS-0134	2	EA	1/8" DIA. GALVANIZED PILOT PULL DOWN CABLE X 145'-0" LONG (NOT DEPICTED)	
	81	XXX-XXXX	2	EA	15:1 WORM GEAR WINCH - DRILL DRIVEN C/W MOUNTING BASE (SEE SEPERATE DETAIL DRAWING SET)	
	82	CUSTOM	1	EA	10" X 8" HOFFMAN NEMA 4, A1018 CHNF ELECTRICAL JUNCTION BOX FOR (2) 24 VDC PILOTS	
	83	CUSTOM	1	EA	10" X 8" HOFFMAN NEMA 4, A1018 CHNF ELECTRICAL JUNCTION BOX FOR L-860 WARNING LIGHTS-120 VAC	
	84	CUSTOM	1	EA	18" X 16" X 10" CONTROL BOX FOR (2) 24 VDC PILOTS-CLASS 1 DIV. 2(NOT DEPICTED)	
	85					
	86	ELC-0939	2	EA	#16-4 SOW ELECTRICAL CABLE X 140'-0" LONG (PILOTS)	
	87	REG-0020	2	EA	1/4" DIA. NPT BELLOFRAM T-50 REGULATOR	
	88	IND-0072	2	EA	1/4" DIA. NPT BRASS, MODEL #WJ4642, 0-30 PSI GAUGE	
	89	HYD-0193	2	EA	1/4" DIA. NPT TYPE 3 FLEXIBLE FUEL SUPPLY HOSE X 140'-0" LONG (PILOTS)	
	90	PLT-0047	30	EA	FUEL HOSE/CABLE GUIDES STAINLESS STEEL(NOT DEPICTED)	
	91	CLA-0114	64	EA	FUEL HOSE/CABLE CLAMPS(NOT DEPICTED)	
	92	HYD-0190	4	EA	1/4" FUEL HOSE ENDS (AEROQUIP #4411-4S)(NOT DEPICTED)	
	93	HYD-0016	4	EA	1/4" NPT FUEL HOSE ADAPTER (AEROQUIP #2021-4-4S)(NOT DEPICTED)	
	94	MM-0107	2	EA	5/16" G209 GALVANIZED SCREW PIN SAFETY SHACKLE FOR WINCH CABLE	
	95					
	96	CONSUMABLE	30	EA	PLASTIC ZIP TIES FOR FASTENING ELECTRICAL CABLE TO HOSE GUIDES	
	97	ORDER	3	EA	1/2" GALVANIZED 6X26 IRWC CABLE X 181'-0" LONG (UPPER GUYWIRES)(FLEMISHED ONE END)	
	98	ORDER	3	EA	1/2" GALVANIZED 6X26 IRWC CABLE X 146'-0" LONG (LOWER GUYWIRES)(FLEMISHED ONE END)	
	99	CLA-0105	18	EA	1/2" G450 GALVANIZED CROSBY CLIPS (UPPER & LOWER GUYWIRE CLIPS)	
	100	MM-0116	6	EA	1/2" G414 GALVANIZED HEAVY DUTY THIMBLESS (UPPER & LOWER GUYWIRE THIMBLES)	
	101	ORDER	6	EA	3/4" GALVANIZED SCREW PIN SAFETY SHACKLES, #G2130 (UPPER & LOWER GUYWIRE SHACKLES)	
	102	ORDER	6	EA	7/8" X 18" HG-228 JAW & JAW GALVANIZED (GUYWIRE TURNBUCKLES)	
	103	ELC-0939	1	EA	#16-4 SOW ELECTRICAL CABLE X 140'-0" LONG (WARNING LIGHTS)	
	104	ELC-1207	1	EA	PILOT MOUNTED WARNING LIGHTS BRACKET-COMPLETE	
	105					
	106					
	107					
	108					

NEED ELECTRICAL SCHEMATIC & WIRING DIAGRAMS 12/06/09

MASTER VENDOR PRINT

Coating & Preparation: 1.) STACK EXTERIOR; SANDBLAST; SSPC-SP6 (1.5 - 2.5 mils) PRIMER: CLOVERDALE PRIMER, (2-2.5 mils DFT) TOPCOAT: CLOVERDALE 200C, (2-2.5 mils DFT) D.O.T ORANGE & WHITE FINISH.	Ignition System: TORNADO RETRACTABLE FUEL GAS PILOT MODEL TSI#6 c/w AUTO RELITE SYSTEM TMR 24 V.D.C. (TWD)	Name of Plant: PIPESTONE COMPRESSOR STATION Lease: 13-34-70-09 W6M Approx. Weight: 17,201 LBS. Max. Horiz. Load At Base: 3,600 LBS. Max. Vert. Load At Base: 26,100 LBS. Net Overturning Moment: 82,000 FT.-LBS. Design Wind Pressure: 0.43 kPa Design Wind Velocity: 95.8 mph Gust Factor: 2.6 Weld Procedure: #1323.2 APEGGA Permit To Practice: #P10806 CWB Registration Number: TORNG1	Drawing Number: Encana-12511-BOM (1) Drawn By: AMG Checked By: EW Date Drawn: JUNE 6, 2012 Job Number: 12511 Quote Number: GEM0312 Tag Number: S-560 Design Code: NBC 2010 Exposure Factor: 1.52 Anchor Diameter (Base): Ø 1 1/4" Corrosion Allowance: 1/8"	Title: Ø16" x 145'-0" TALL GUYWIRE SUPPORTED FLARE STACK c/w Ø16" INLET CONNECTION Customer: ENCANA CORPORATION c/o GEMINI ENGINEERED SOLUTIONS LP P.O.#: G11124-100-1011 Salesperson: STEVE CAISSIE	Sheet 1 of 1  TORNADO COMBUSTION TECHNOLOGIES INC. 1-888-882-3882 Any Technical Data and the Designs Disclosed Herein are the Exclusive Property of Tornado Technologies Inc. and/or Contained the Proprietary Rights of Others and are not to be used or Disclosed to Others without the Written Consent of Tornado Technologies Inc.
General Notes: 1.) MTRS PROVIDED ON REQUEST AND RECEIPT OF ORDER. 2.) TORNADO STANDARD FOR PLUMBNESS TOLERANCE IS 1 INCH PER 100 FEET OF VERTICAL HEIGHT. 3.) BASE PLATE ANCHORS TO BE DOUBLE NUTTED. 4.) FOUNDATION TO BE DESIGNED BY A QUALIFIED ENGINEER.	Fabrication Tolerances * Fractional: Ø0" to Ø24" ±1/8" Greater than Ø24" ±1/4" Decimal: Ø0" to Ø24" ±1/8" Greater than Ø24" ±1/4" Angular: All ±2° *Unless otherwise stated	ISSUED FOR APPROVAL PURPOSES By Y M D			
Rev.	Description				

VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE JUN 07 2012
JOB No.	P.O. #	SUB #
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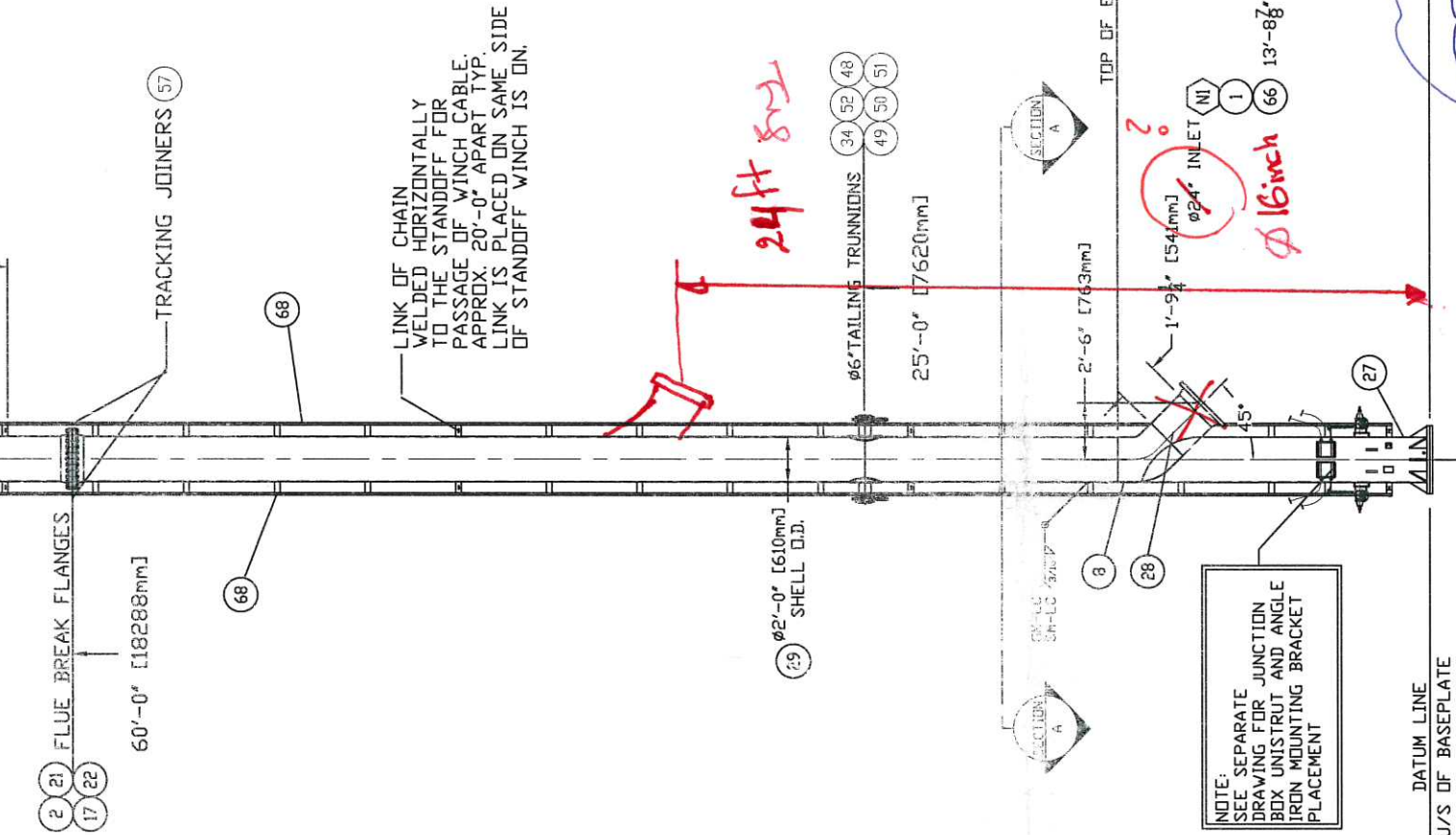
☐ APPROVED FOR CONSTRUCTION
☒ APPROVED AS NOTED. MAKE CHANGES NOTED AND ISSUE FOR CONSTRUCTION
☐ NOT APPROVED. MAKE CHANGES NOTED AND RESUBMIT FOR APPROVAL
BY: Brent Robinson
DATE: 14 JUNE 2012
GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		12/12/12	SA
	Mech Piping Eng		15 Jun 12	ES
	Mech Piping Design	Rob L	June 14	RL
	Civil Eng	T. Stein	12 June '12	TS
	Civil Design			
	Process	S N-A	14/June 12	RN
	Instru-mentation		12/6/12	Rm
	Electrical	JWF	12/06/09	JF
	Controls			
	Inspection / QA			
	Project Manager		14 June 12	BR
INTERDISCIPLINARY REVIEW				
☒ FOR APPROVAL ☐ FOR INFORMATION				
RETURN TO		DATE REQUIRED: JUN 14 2012		
☒ VENDOR				
☐ FILE				
☐				

MASTER VENDOR
JUN 14 2012

NOZZLE & COUPLING SCHEDULE

Mark No.	Qty.	Size	Material	Rating	Service	Projection Inside Outside	Welding Detail Number	Filet Weld Size A B C D	Description	Elevation	Orientation Angle
N1	1	Ø24" [406mm]	SA 105N	150#	FLARE GAS INLET CONNECTION	0"	30"	3/8"	R.F. WELD NECK	10'-0" [3,048mm]	180°
WELD DETAILS											
WELD DETAIL 1			WELD DETAIL 2			WELD DETAIL 3			WELD DETAIL 5		
Weld Procedure: TT-10			Weld Procedure: TT-1, TT-31			Weld Procedure: TT-1, TT-31			Weld Procedure: TT-1, TT-31		



NDT Notes:

% Of Radiography For Butt Welds In Contact With Waste Gas:	10%
Hardness Testing:	YES
Magnetic Particle Testing on Fillet Welds At Inlet, Lifting Devices, Baseplate And Gussets:	YES
Ultra Sonic Testing:	NONE
Dye Penetrant:	NONE

NOTE:
ORIENTATION VIEW DEPICTS
TRUE ORIENTATION PLACEMENT
OF STACK COMPONENTS.

LINK OF CHAIN
WELDED HORIZONTALLY
TO THE STANDOFF FOR
PASSAGE OF WINCH CABLE.
APPROX. 20'-0" APART TYP.
LINK IS PLACED ON SAME SIDE
OF STANDOFF WINCH IS ON.

NOTE:
SEE SEPARATE
DRAWING FOR JUNCTION
BOX UNISTRUT AND ANGLE
IRON MOUNTING BRACKET
PLACEMENT

Coating & Preparation:		Ignition System:	
1.) STACK EXTERIOR; SANDBLAST: SSPC-SP6 (1.5 - 2.5 mils) PRIMER: CLOVERDALE PRIMER, (2-2.5 mils DFT) TOPCOAT: CLOVERDALE 200C, (2-2.5 mils DFT) D.D.T ORANGE & WHITE FINISH.		TORNADO RETRACTABLE FUEL GAS PILOT MODEL 151#6 AUTO RELITE SYSTEM TPMP 24 V.D.F. (TWO)	
General Notes:		Fabrication Tolerances *	
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		Decimal: Ø0" to Ø24" ±1/8" Greater than Ø24" ±1/4"	
		Angular: All ±2°	
		*Unless otherwise stated	

Name of Plant:	PIPESTONE COMPRESSOR STATION
Lease:	13-34-70-09 W6M
Approx. Weight:	17,201 LBS.
Max. Horiz. Load At Base:	3,600 LBS.
Max. Vert. Load At Base:	26,100 LBS.
Net Overturning Moment:	82,000 FT.-LBS.
Design Wind Pressure:	0.43 kPa
Design Wind Velocity:	95.8 mph
Gust Factor:	2.6
Weld Procedure:	#13232
APECGA Permit To Practice:	#P10806
CWB Registration Number:	TORNG1

Drawing Number:	Encana-12511-GA (1)
Drawn By:	AMG
Checked By:	EW
Date Drawn:	JUNE 6, 2012
Job Number:	12511
Quote Number:	GEM0312
Tag Number:	
Design Code:	NBC 2010
Exposure Factor:	1.52
Anchor Diameter (Base):	Ø 1 1/4"
Corrosion Allowance:	1/8"

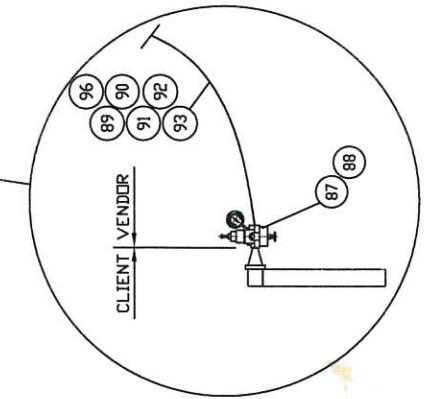
Title:	Ø16" x 145'-0" TALL GUYWIRE SUPPORTED FLARE STACK c/w Ø24" INLET CONNECTION
Customer:	ENCANA CORPORATION c/o GEMINI ENGINEERED SOLUTIONS LP
P.O.#:	G11124.100-1011
Salesperson:	STEVE CAISSIE

Sheet 1 of 5

MASTER VENDOR
PRINTLOWER SECTION
SCALE 1:1

How much clear space
is reqd. for laydown?
RKL

NOTE:
QUANTITIES OF TWO
FUEL GAS REGULATORS,
GAUGES, AND LENGTHS
OF FUEL HOSE SUPPLIED
BY TORNADO.

BASE DETAIL
SCALE 4:1

RECEIVED
VENDOR
PRINT

VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE
		JUN 07 2012
JOB No.	P.O. #	SUB #
G11124.100		1

☐ APPROVED FOR CONSTRUCTION

☐ APPROVED AS NOTED. MAKE CHANGES NOTED AND ISSUE FOR CONSTRUCTION

☒ NOT APPROVED. MAKE CHANGES NOTED AND RESUBMIT FOR APPROVAL

BY: Brent Robinson

DATE: 14 Jun 12

GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		June 14/12	BR
	Mech Piping Eng	E.S.	13 June 12	E.S.
	Mech Piping Design	Rob L	June 14	RLL
	Civil Eng	T. Stein	12 June 12	TS
	Civil Design			
	Process	S N-A	14 Jun 12	SN
	Instru-mentation		12/6/12	12 m
	Electrical	J F	12/6/12	JF
	Controls			
	Inspection / QA			
	Project Manager		14 Jun 12	BR

☒ FOR APPROVAL ☐ FOR INFORMATION

RETURN TO DATE REQUIRED JUN 14 2012

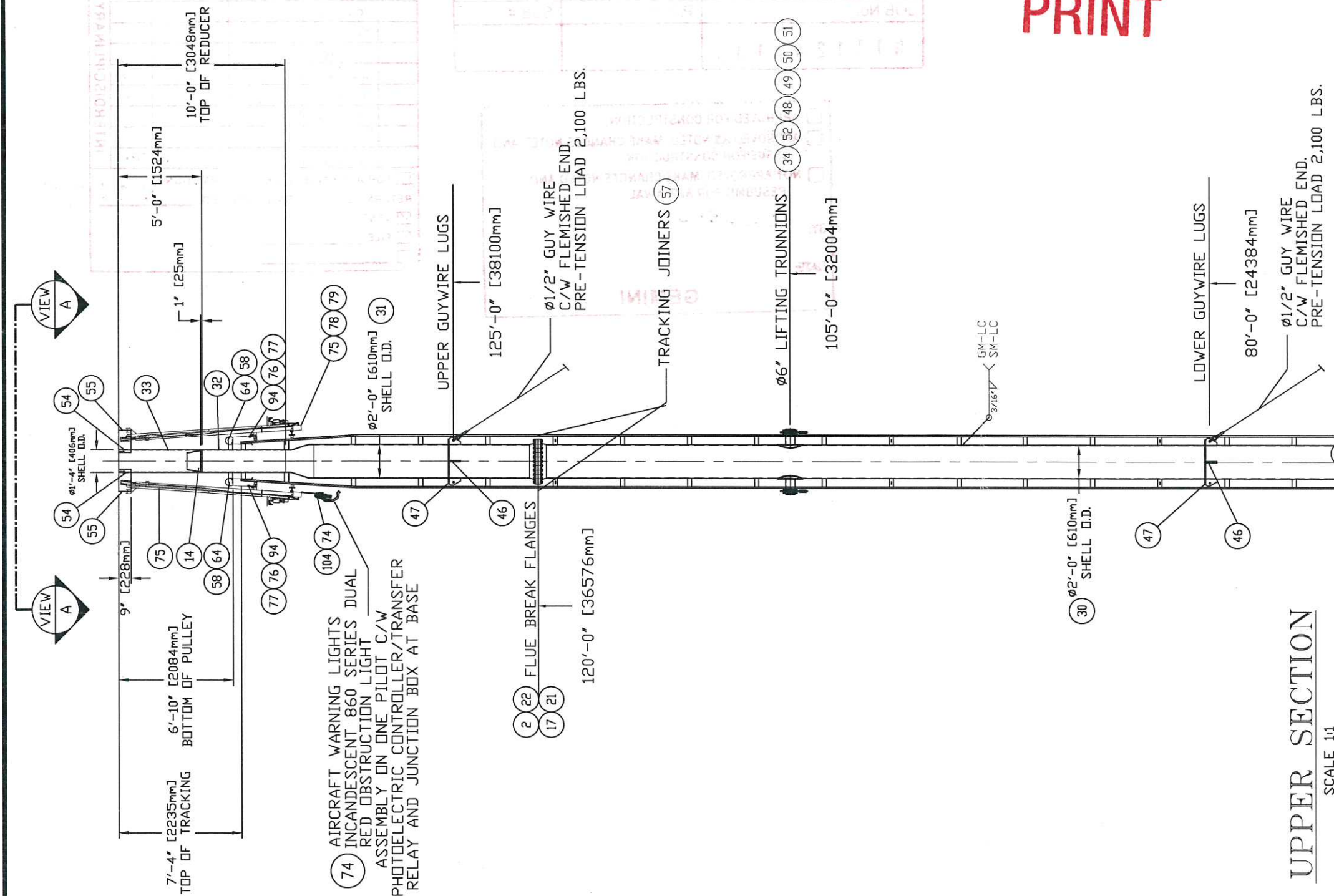
☒ VENDOR

☐ FILE

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INTERDISCIPLINARY REVIEW

**MASTER VENDOR
PRINT**



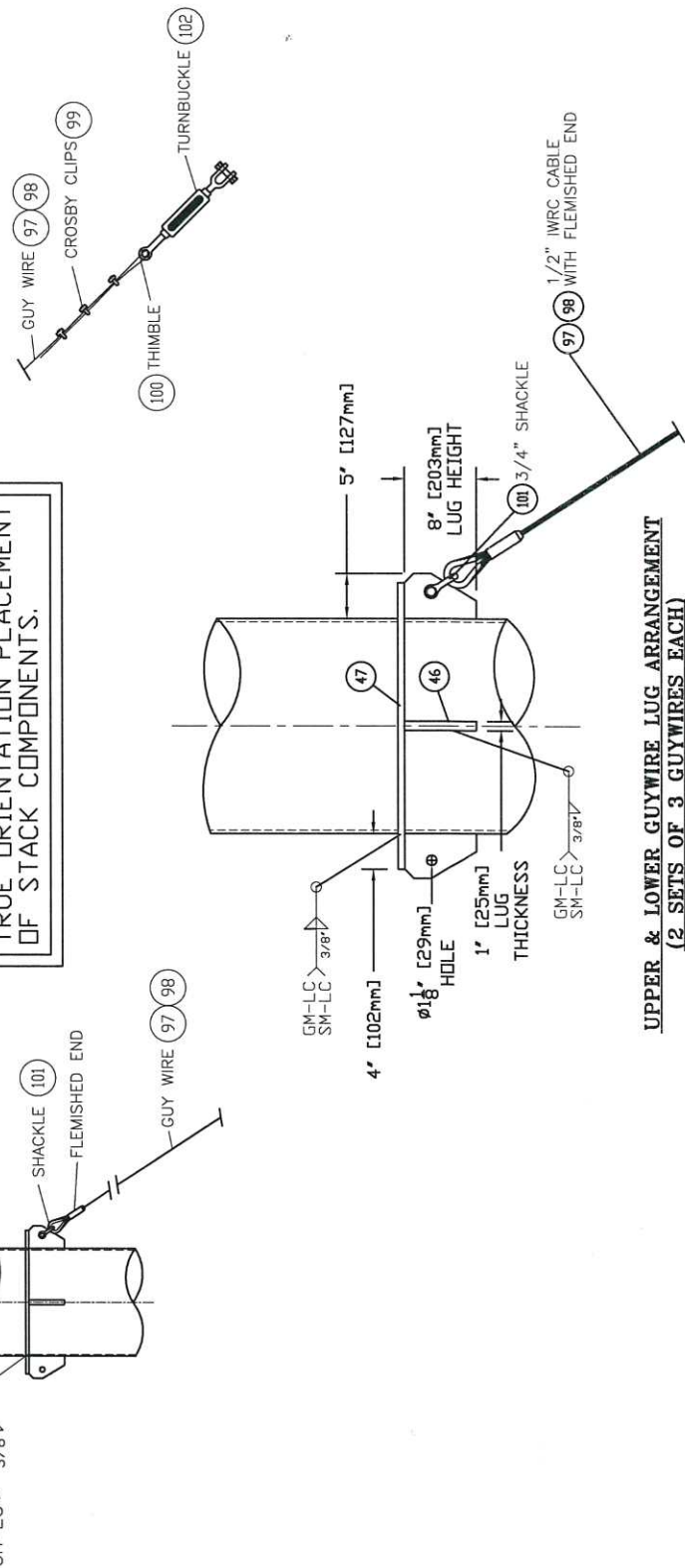
GUYWIRE LUG CONNECTION

ONE - 3/4" GALVANIZED SCREW PIN SAFETY SHACKLE
ONE - 1/2" 6 x 26 GALV. IRWC CABLE F.D.E.
(TYPICAL 3 SETS)

NOTE:
ORIENTATION VIEW DEPICTS
TRUE ORIENTATION PLACEMENT
OF STACK COMPONENTS.

GUYWIRE ANCHOR CONNECTION

ONE - 7/8" x 18" J & J TURNBUCKLE
ONE - 1/2" GALVANIZED HEAVY THIMBLE
THREE - 1/2" GALVANIZED CROSBY CLIPS
ONE - 1/2" 6 x 26 GALV. IRWC CABLE F.D.E.
(TYPICAL 3 SETS)



UPPER & LOWER GUYWIRE LUG ARRANGEMENT
(2 SETS OF 3 GUYWIRES EACH)

SCALE 4:1

O	ISSUED FOR APPROVAL PURPOSES	AMG	12	06	06
Rev.	Description	By	Y	M	D

Coating & Preparation: 1.) STACK EXTERIOR; SANDBLAST: SSPC-SP6 (1.5 - 2.5 mils) PRIMER: CLOVERDALE PRIMER, (2-2.5 mils DFT) TOPCOAT: CLOVERDALE 200C, (2-2.5 mils DFT) D.D.T ORANGE & WHITE FINISH.		Ignition System:	
		TORNADO RETRACTABLE FUEL GAS PILOT MODEL TSI#6 c/w AUTO RELITE SYSTEM TPMR 24 V.D.C. (TWO)	
General Notes:			Fabrication Tolerances *
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		Decimal: $\varnothing 0" \text{ to } \varnothing 24"$ $\pm 1/8"$ Greater than $\varnothing 24"$ $\pm 1/4"$	
		Angular: All $\pm 2^\circ$	
		*Unless otherwise stated	

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Max. Horiz. Load At Base:	3,600 LBS.
Max. Vert. Load At Base:	26,100 LBS.
Net Overturning Moment:	82,000 FT.-LBS.
Design Wind Pressure:	0.43 kPa
Design Wind Velocity:	95.8 mph
Gust Factor:	2.6
Weld Procedure:	#1323.2
APEGGA Permit To Practice:	#P10806
CWB Registration Number:	TDRNG1

Drawing Number:	Encana-12511-GA (2)
Drawn By:	AMG
Checked By:	EW
Date Drawn:	JUNE 6, 2012
Job Number:	12511
Quote Number:	GEM0312
Tag Number:	
Design Code:	NBC 2010
Exposure Factor:	1.52
Anchor Diameter, (Base):	Ø 1 1/4"
Corrosion Allowance:	1/8"

Title: ø16" x 145'-0" TALL GUYWIRE SUPPORTED FLARE STACK c/w ø24" INLET CONNECTION
Customer: ENCANA CORPORATION c/o GEMINI ENGINEERED SOLUTIONS LP
P.O.#: G11124.100-1011
Salesperson: STEVE CAISSIE

Sheet 2 of 5



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MASTER VENDOR
PRINT

VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE JUN 07 2012
JOB No.	P.O. #	SUB #
G 11124.100		1

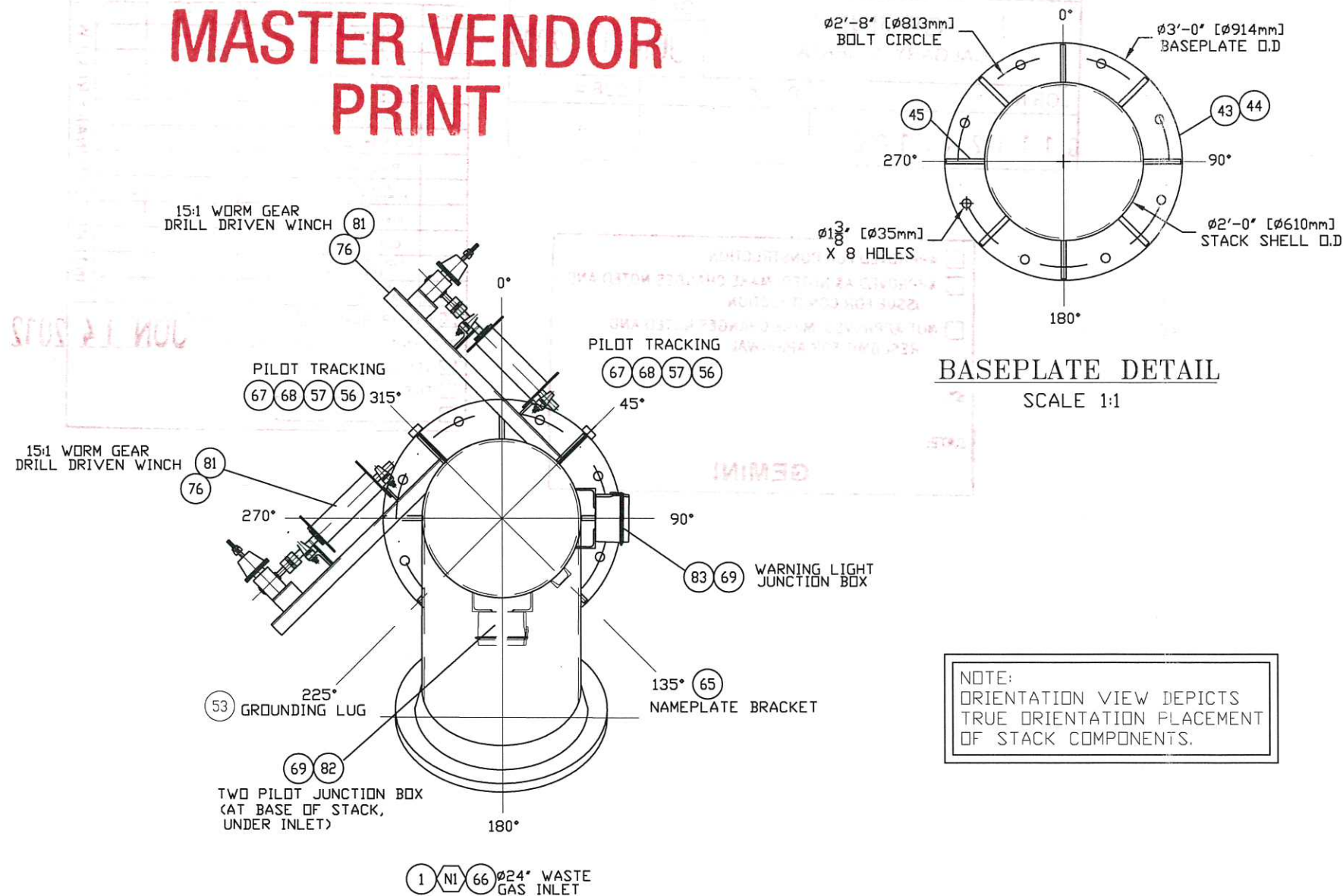
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☐ NOT APPROVED. MAKE CHANGES NOTED AND RESUBMIT FOR APPROVAL
BY: <u>Brent Robinson</u>
DATE: <u>14 JUNE 2012</u>
GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		<u>12/07/12</u>	<u>SR</u>
	Mech Piping Eng		<u>13 June 12</u>	<u>F.S.</u>
	Mech Piping Design	<u>Rob L</u>	<u>June 14</u>	<u>RLL</u>
	Civil Eng	<u>T. Stein</u>	<u>12 June 12</u>	<u>TS</u>
	Civil Design			
	Process	<u>SN-A</u>	<u>14 June 12</u>	<u>SN</u>
	Instru-mentation		<u>12/6/12</u>	<u>Ry</u>
	Electrical	<u>JOF</u>	<u>12/06/09</u>	<u>JF</u>
	Controls			
	Inspection / QA			
	Project Manager		<u>14 JUNE 12</u>	<u>BR</u>

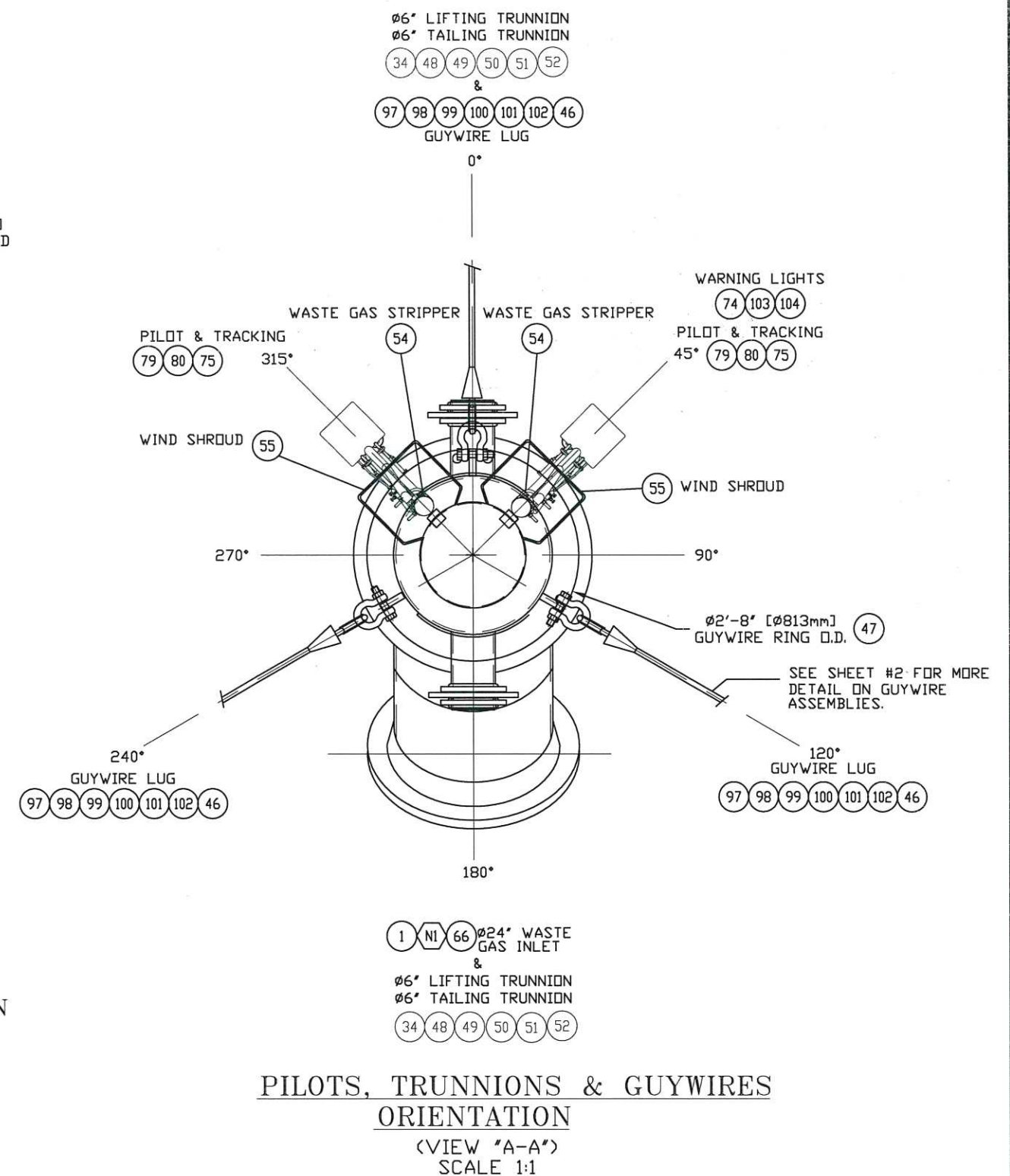
☒ FOR APPROVAL ☐ FOR INFORMATION
RETURN TO _____ DATE REQUIRED: JUN 14 2012
☒ VENDOR
☐ FILE
☐ _____

INTERDISCIPLINARY REVIEW

MASTER VENDOR PRINT



LIFT UP ↔ SHIP DOWN



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VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE
		JUN 07 2012
JOB No.	P.O. #	SUB #
G 11124.100		1

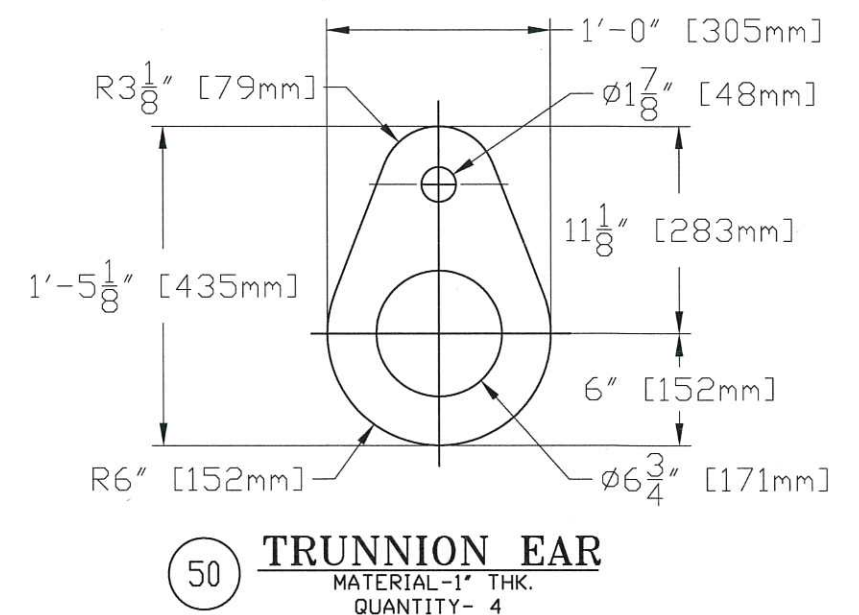
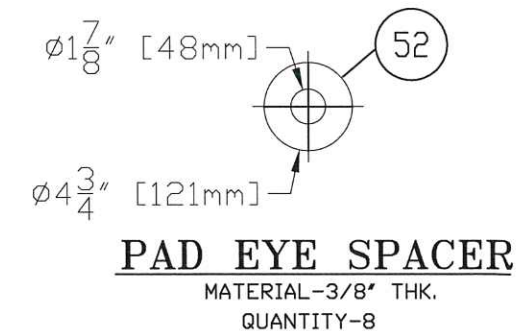
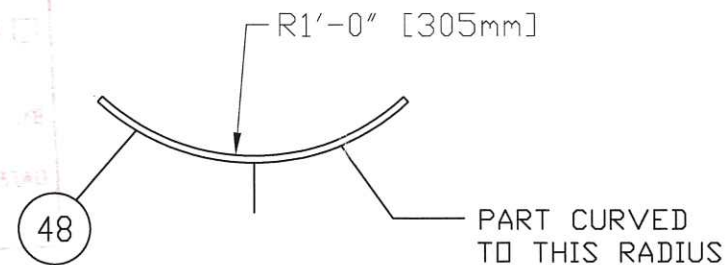
☒ APPROVED FOR CONSTRUCTION
☐ APPROVED AS NOTED. MAKE CHANGES NOTED AND ISSUE FOR CONSTRUCTION
☐ NOT APPROVED. MAKE CHANGES NOTED AND RESUBMIT FOR APPROVAL
BY: Brent Robinson
DATE: 14 June 2012
GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		12 June 12	SM
	Mech Piping Eng		13 June 12	ES
	Mech Piping/Design	Rob C	June 14	RLC
	Civil Eng	T. Stein	12 June 12	TS
	Civil Design			
	Process	S N-A	14 June 12	Ruy
	Instru-mentation		12/6/12	RH
	Electrical	JWF	12/6/12	JF
	Controls			
	Inspection/QA			
	Project Manager		14 June 12	RP

INTERDISCIPLINARY REVIEW

☒ FOR APPROVAL	☐ FOR INFORMATION
RETURN TO	DATE REQUIRED: JUN 14 2012
☒ VENDOR	
☐ FILE	
☐	

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VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE JUN 07 2012
JOB No. G 11124.100	P.O. #	SUB # 1

☒ APPROVED FOR CONSTRUCTION
☐ APPROVED AS NOTED. MAKE CHANGES NOTED AND ISSUE FOR CONSTRUCTION
☐ NOT APPROVED. MAKE CHANGES NOTED AND RESUBMIT FOR APPROVAL
BY: <u>Brian Robinson</u>
DATE: <u>14 June 10</u>
GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		<u>June 11</u>	<u>SR</u>
	Mech Piping Eng		<u>13 June 12</u>	<u>GS</u>
	Mech Piping/Design	<u>Rob L</u>	<u>June 14</u>	<u>RIC</u>
	Civil Eng	<u>T. Stein</u>	<u>12 June 12</u>	<u>TS</u>
	Civil Design			
	Process	<u>SN-A</u>	<u>14 June 12</u>	<u>SN</u>
	Instrumentation		<u>12/6/12</u>	<u>KM</u>
	Electrical	<u>JNF</u>	<u>12/06/09</u>	<u>JNF</u>
	Controls			
	Inspection / QA			
	Project Manager		<u>14 June 12</u>	<u>BR</u>

INTERDISCIPLINARY REVIEW

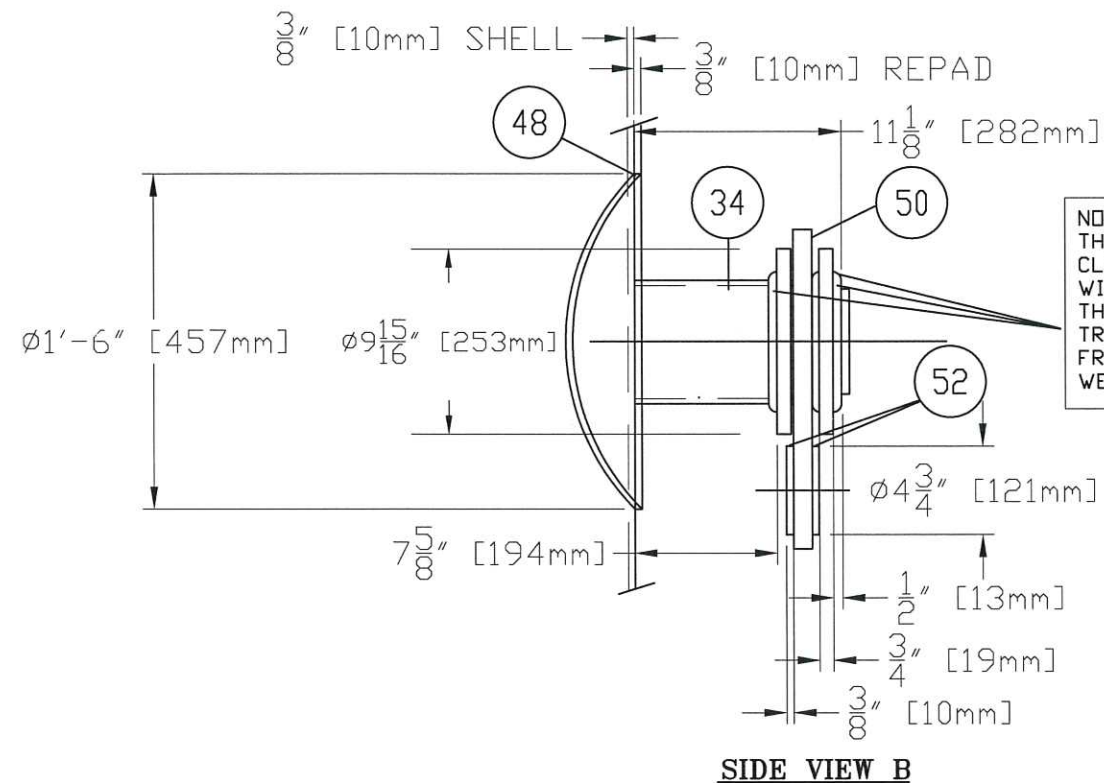
☒ FOR APPROVAL ☐ FOR INFORMATION
RETURN TO ☒ VENDOR ☐ FILE
DATE REQUIRED: JUN 14 2012

NOTE:

THE TRUNNION EAR MUST BE ABLE TO
ROTATE FREELY ON THE TRUNNION
EXTENSION.

- TWO TRUNNIONS ARE REQUIRED AT ANY ONE LIFTING/TAILING ELEVATION
- ATTACHMENT HAS BEEN DESIGNED TO ACCEPT A 1-1/2" NOMINAL SIZE CROSBY G209/G2130 SHACKLE AND VERTICAL SLINGS (SPREADER BEAM OR FRAME REQUIRED)
- THE LIFTING APPURTENANCE HAS BEEN DESIGNED TO TAKE ZERO (0) SIDE LOADING DUE TO USE OF A SPREADER BAR. PLEASE CONSULT TORNADO IF ADDITIONAL SIDE LOADING IS REQUIRED.

MASTER VENDOR PRINT



NOTE:
THE TRUNNION STOP
CLOSEST TO THE STACK
WILL BE WELDED ONLY ON
THE STACK SIDE. THE
TRUNNION STOP FURTHEST
FROM THE STACK MUST BE
WELDED ON BOTH SIDES.

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PRINT

VENDOR DWG. CONTROL		
GEMINI CALGARY, ALBERTA		DATE JUN 07 2012
JOB No.	P.O. #	SUB #
G 11124.100		1

☒ APPROVED FOR CONSTRUCTION
☐ APPROVED AS NOTED. MAKE CHANGES NOTED AND
ISSUE FOR CONSTRUCTION
☐ NOT APPROVED. MAKE CHANGES NOTED AND
RESUBMIT FOR APPROVAL

BY: *BRAND ROBINSON*
DATE: 14 JUNE 2012

GEMINI

GEMINI				
Order	Discipline	To	Date	Initials
	Project Engineer		June 14/12	ER
	Mech Piping Eng		13 June 12	E.S.
	Mech Piping Design	Rob L	June 14	RLC
	Civil Eng	T. Stein	12 June 12	TS
	Civil Design			
	Process	S.N-A	14 June 12	SN
	Instru-mentation		12/6/12	RM
	Electrical	JF	14/6/12	JF
	Controls			
	Inspection / QA			
	Project Manager		14 June 12	BR

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INTERDISCIPLINARY REVIEW