

BILL OF MATERIALS FOR ALTERATIONS (INCLUDING TESTING MATERIALS)			
WK	QTY	MATERIAL	SERVICE DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

VESSEL INFORMATION (FROM ORIGINAL DATA REPORT / PLATE / STAMPING)

MANUFACTURER: AMF BEARD YEAR BUILT: 1972

CONSTRUCTION CODE: ASME SEC. VIII DIV. 1 ADR-ENR-A VESSEL TAG NO: -

SERIAL NO: M192219-01-7 NATIONAL BOARD NO: 82746

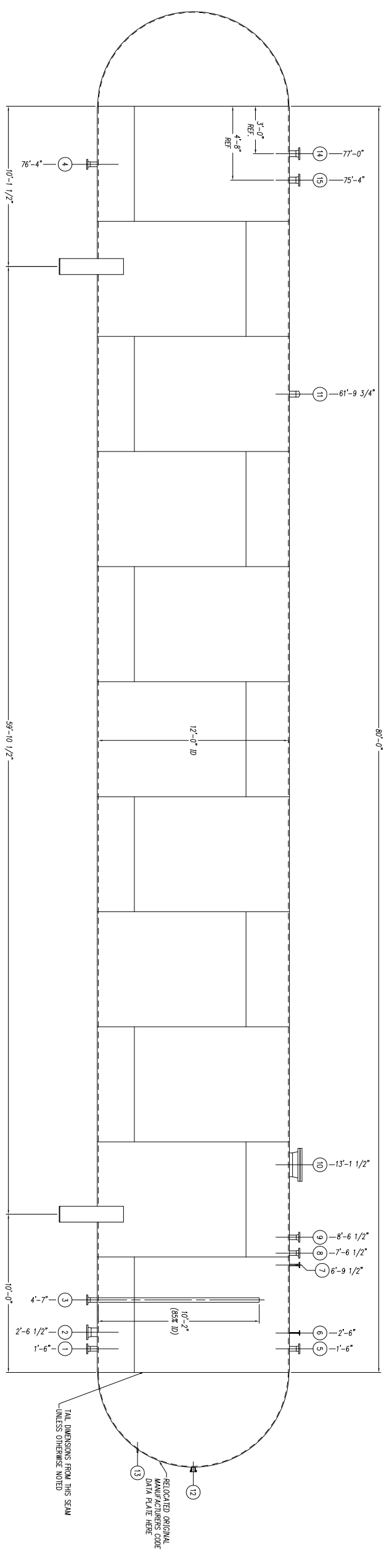
RADIOGRAPH % / JOINT EFFICIENCY: GIRTH SEAMS FULL 100%  
 RADIOGRAPH % / JOINT EFFICIENCY: LONG SEAMS FULL 100%  
 HEAT TREATMENT: GIRTH SEAMS ND (LONG SEAMS) ND  
 THICKNESSES: (SHELL) 3/4" (HEADS) 5/8" / HEMI ELLIP OR HEMI  
 CORROSION ALLOWANCE: 1/8" (HEADS) 5/8" / HEMI ELLIP OR HEMI  
 MAWP 150 PSI @ 150 °F MDMT -20 °F @ - PSI  
 VACUUM PRESSURE - PSI HYDRO TEST PRESSURE 212 PSI  
 CONSTRUCTION SAFETY FACTOR 4:1 RATIO  
 MATERIALS: SHELLS SA-516-70 HEADS SA-516-70 RE-PADS SA-516-70  
 FLANGES SA-182-1 PIPE NOZZLES SA-106-B  
 CAPACITY / WEIGHT: US GALLONS/WEIGHT 74,241  
 ORIGINAL SERVICE: LIQ. SULPHUR DIOXIDE STORAGE  
 NOTES / REMARKS: HEAD SEAMS SPOT X-RAYED. JOINT EFF. 85%  
 (KID) OF (6) IDENTICAL TANKS. SERIAL / NB NOS TO FOLLOW

1. DESIGN / ALTERATION NOTES (-) INDICATES NOT APPLICABLE OR NO CHANGE  
 DESIGN, FABRICATION, AND INSPECTION TO BE IN ACCORDANCE WITH THE ASME SECTION VIII, DIV.1 & NBIC 2010 CODE WITH LATEST ADD. 'R' STAMP REQUIRED

2. RE-RATE DESIGN DATA  
 DESIGN PRESSURE (INT) - PSIG @ - °F  
 DESIGN PRESSURE (EXT) - PSIG @ - °F  
 MAWP - PSIG LIMITED BY: - °F  
 MDMT - °F @ - PSIG  
 CHAMPY IMPACT REQUIREMENTS: -

DESIGN LIQUID LEVEL: - SHELL = - NOZZLES = -  
 CORROSION ALLOWANCE: HEADS = - SHELL = - NOZZLES = -  
 RADIOGRAPH: - FOR A JOINT EFF. OF: -  
 SHELL CAT. A (LONG SEAMS) -  
 SHELL CAT. B (GIRTH SEAMS) - RATIO  
 HEAD TO SHELL SEAMS -  
 HEAD CAT. A -  
 HYDRO TEST @ - PSIG  
 PWHT: -  
 WIND SPEED - EXPOSURE - IMP. -  
 SEISMIC -  
 3. ESTIMATED WEIGHTS & CAPACITY:  
 FAB WEIGHT EMPTY - LBS FULL HD - LBS  
 ESTIMATED SHIPPING WEIGHT - TONS LBS

WELDING PROCEDURES FOR ALTERATIONS:  
 HEAD / SHELL: -  
 SHELL / SHELL: -  
 FLANGE TO PIPE: -  
 NOZZLE NECK TO VESSEL: -  
 COUPLINGS: -  
 SUPPORTS: -  
 MISC: -



Total Energy Fabrication Corp  
**ISSUED FOR APPROVAL**  
 Date 2/18/11  
 Initials REM

GENERAL NOTES:

FABRICATION NOTES:

ALTERATION NOTES:

MARK	QTY	SIZE	RATE	TYPE	SCH.	SERVICE	OS PROJ.	IS PROJ.	ATT TYPE	THK. / WIDTH REPAD	A - B - C WELD SIZE	FLG	NECK	PAD	COVER	BOLTS	GASKET	OTHER
15	1	4	300	RFNM		RELIEF VALVE												
14	1	4	300	RFNM		RELIEF VALVE												
13	1	.75	3000H	CHLG		TEMP. GAUGE												
12	1	2.5	SPCL	WVF		ROCHESTER GAUGE CON.												
11	1	4	CAP	-		EXISTING												
10	1	18	150	RFNM		EXISTING MANWAY												
9	1	3	150	RFNM		VAPOR RETURN (EXIST)												
8	1	3	150	RFNM		EXISTING												
7	1	1	150	RFNM		EXISTING												
6	1	.50	150	RFNM		PRESSURE GA (EXIST).												
5	1	3	150	RFNM		LEVEL BRIDLE (EXIST)												
4	1	3	150	RFNM		DRAIN (EXIST)												
3	1	3	150	RFNM		INLET (EXIST)												
2	1	6	150	RFNM		LIQUID OUTLET (EX.)												
1	1	3	150	RFNM		LEVEL BRIDLE (EXIST)												

SCHEDULE OF OPENINGS				BILL OF MATERIAL														
MARK	QTY	SIZE	RATE	TYPE	SCH.	SERVICE	OS PROJ.	IS PROJ.	ATT TYPE	THK. / WIDTH REPAD	A - B - C WELD SIZE	FLG	NECK	PAD	COVER	BOLTS	GASKET	OTHER
A	ISSUED FOR APPROVAL	2/18/11	REM															
B	PER CUSTOMER COMMENTS	2/22/11	REM															

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REVISIONS

DATE	BY	REFERENCES

PROJECT / LOCATION: TOTAL ENERGY FABRICATION CORP. BLACKWELL, OK

P.L. NO: -

DATE: 2/18/11

USER: -

SCALE: NONE

DRAWN BY: -

CHECKED BY: -

DATE: 2/18/11

CERTIFIED BY: -

DATE: -

DESCRIPTION: STORAGE TANK 144" ID X 80'-0" S/S HORIZONTAL ELEVATION & GENERAL ARRANGEMENT (6) UNITS AS SHOWN

DRAWING NO: 0-TEF-179 SH. 1 OF 1

REV: B