

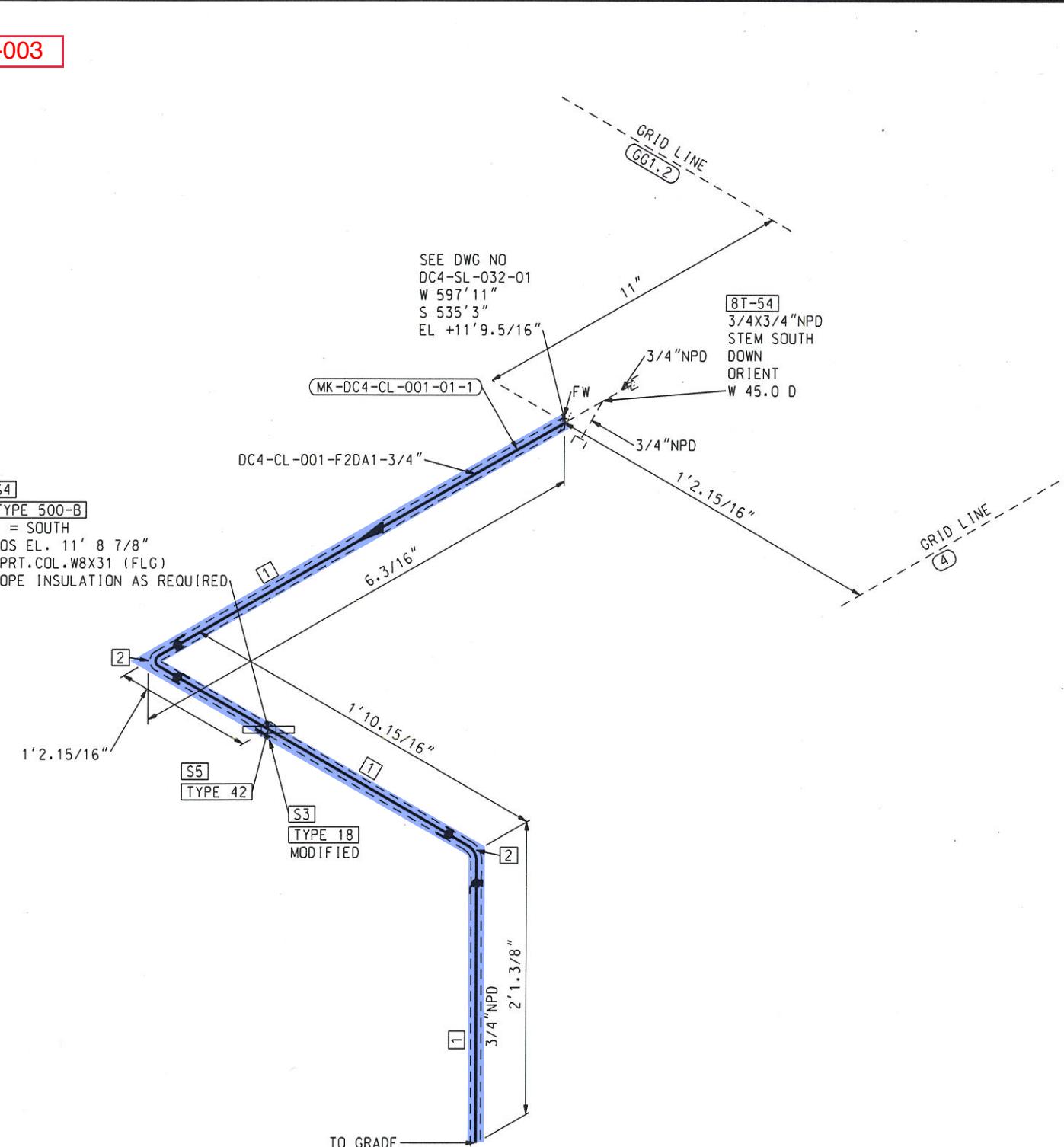
EXTRACTION NO. : 11

EXTRACTION DATE. : 20-SEP-2017

DEFALU[\$ FILE : VARFILE1: F:\070J80\ISOREF\MONSANTOHO.DEF

ENG-1042

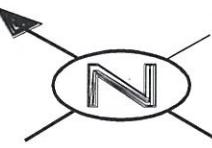
TP-006-003



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 4B

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803453		CONSTRUCTION STATUS	ECC00057-DC4-D-0002	N	N/A	GREY	5MM-14MC-PP	KI 320I 212 °F 0 PSIG	366 °F 150 PSIG	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.												
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.			Ø	20-SEP-2017	ISSUED FOR CONSTRUCTION				SGJ	VSP <i>M. J. Z.</i> 		
CAD DESIGN FILE :	070J80\SOREF\MONANT.BDR		REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	4.3'	PADJABCAAM
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	2	SLAQZZZAAA
PIPE SUPPORTS				
3	T18-0.75#10-0.15-0-0-0-CS-M	3/4	1	TYPE 18
----- * FIELD MATERIALS * -----				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
PIPE SUPPORTS				
4	T500-B-0.75#13.19-0-2-3.5-0	3/4	1	TYPE '500-B
5	T42-0.75#0-0-0-0.13-0-CS	3/4	1	TYPE 42
PIECE MARKS				

MK-DC4-CL-001-01-1				

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5-21-2018

S. STILLWELL

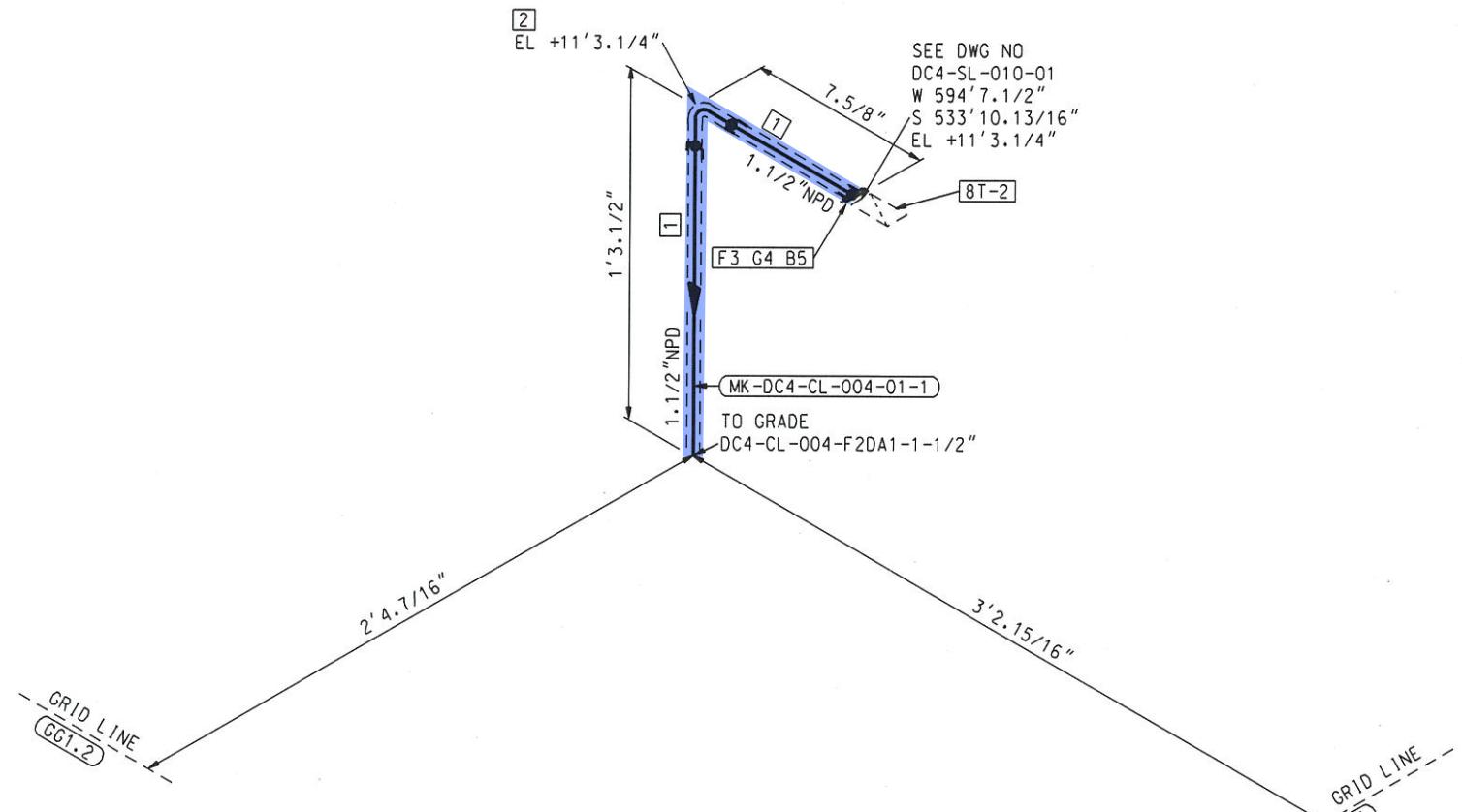


MONSANTO COMPANY
ULLING PLANT
HIGHWAY 90
ULLING, LOUISIANA 70070

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NO. I-CL-001-F2DAI-3/4*		CLASS F2DAI	
ING NO. 4-CL-001-01		SHEET 01	REV 0

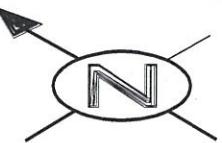
TP-006-003



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE			
POD MODEL FILE :	PP803453	CONSTRUCTION STATUS	ECC00057-DC4-D-6116		N	N/A	GREY	5MM-14MC-PP	KI320I	212	PSIG	0	366	150	SVC	SVC	V100	
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.																	
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.																		
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.																		
0	20-SEP-2017		ISSUED FOR CONSTRUCTION						SCJ	VSP NF 10/10/18								
CAD DESIGN FILE :	070J80\ISOREF\MONANTO.BDR		REV	DATE		REVISION DESCRIPTION						BY	CHECKED BY	STRESS	APPROVED	DRAWING NO.	SHEET	
																DC4-CL-004-01	REV	
																01	0	

CWA# 4B



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1.1/2	1.7'	PADJABCAM
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1.1/2	1	SLAQZZAAA
3	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1.1/2	1	FCAABBCAAA

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
4	SW METALLIC GSKT:ASME B16.20,CL150.316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1.1/2	1	XDSAFZZOSI
5	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.75" BOLT LENGTH	1/2	4	YZZZHZZFFE

PIECE MARKS

MK-DC4-CL-004-01-1

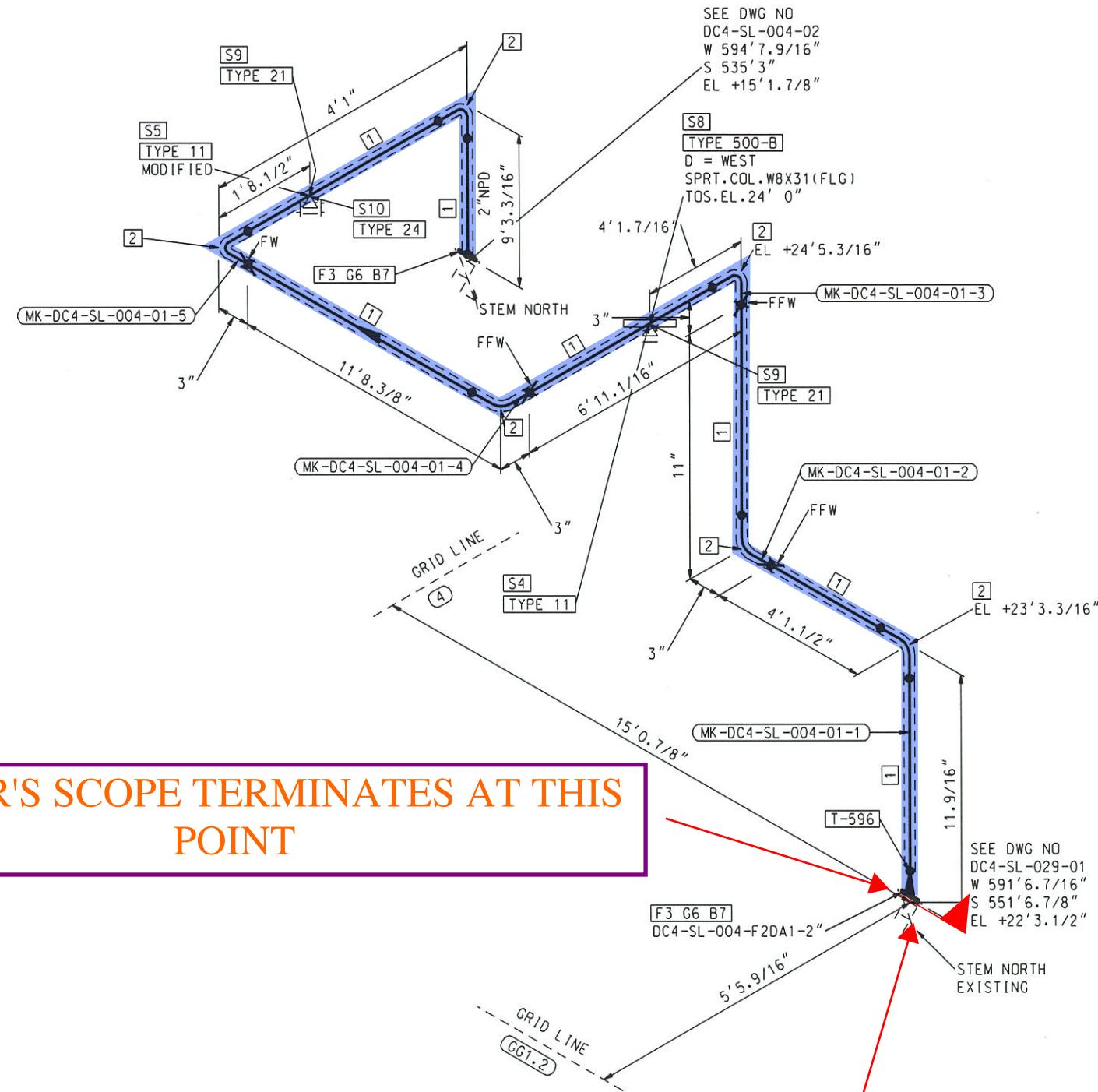
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TURNER-INDUSTRIES
6-21-2018
S. STILLWELL

JACOBS

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, TEXAS 77650
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PROJECT NO. 070J81 XX
COMMODITY CL
LINE NO. DC4-CL-004-F2DA1-1-1/2'
CLASS F2DA1
CONTRACT NO. FAB/CONST. MODEL AREA
DRAWING NO. MON11900
SHEET 01
REV 0

TP-006-003



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE :	PP803453	CONSTRUCTION STATUS	FSI2-D-0007A	N	N/A	N/A	1"-9MC-HC	302	45	366	150	SVC
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.			N	N/A							
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.											
ISSUED FOR CONSTRUCTION												
0	04-OCT-2017											
CAD DESIGN FILE :	07QJ80\ISOREF\MONANTO.BDR	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	

MONANTO COMPANY	LULING PLANT	LULING, LOUISIANA 70070
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JACOBS	MONSANTO	
PROJECT NO. 07QJ81 XX	COMMODITY	
SL	LINE NO.	CLASS
	DC4-SL-004-F2DA1-2*	F2DA1
CONTRACT NO.	FAB/CONST.	MODEL AREA
MON11900		
DRAWING NO.	SHEET	REV
DC4-SL-004-01	01	0

CWA# 4B

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 ASME-B16.9	2	37.5'	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT,	2	6	WAAAABBAAA
3	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	2	FEABZZAAA

PIPE SUPPORTS

4	T11-2#18-4-0-0-0-CS	2	1	TYPE 11
5	T11-2#20-4-0-0-0-CS-M	2	1	TYPE 11

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
6	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	2	XDSAFZZORG
7	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	8	YZZHZZFFE

PIPE SUPPORTS

8	T500-B-2#8-0-2-7-0	2	1	TYPE 500-B
9	T21-2#0-0-0-0.13-0	2	2	TYPE 21
10	T24-2#0-4-0-0.13-0-CS	2	1	TYPE 24

PIECE MARKS

MK-DC4-SL-004-01-1 MK-DC4-SL-004-01-2 MK-DC4-SL-004-01-3 MK-DC4-SL-004-01-4 MK-DC4-SL-004-01-5

RECEIVED
TURNER-INDUSTRIES

6-21-2018

S. STILLWELL

EXTRACTION NO. : 20

EXTRACTION DATE. : 22-NOV-2017

ISOCEN DEFAULT IS FILE : VARTBLI.F:\070J80\ISREF\MONSANTO.DEF

ENG-1042

TP-006-003

SEE DWG NO
DC4-SL-004-01
W 594'7.9/16"
S 535'3"
EL +15'1.7/8"

[18] STEM NORTH

[3] 2X2"NPD
EL +13'9.7/8"

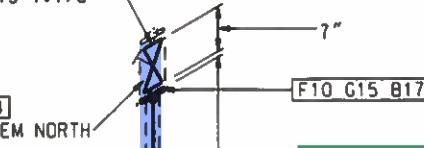
[S12] TYPE 11
MODIFIED

SEE DWG NO
DC4-SL-032-01
W 594'9.3/8"
S 535'3"
EL +13'1.13/16"

[4] 2X3/4"NPD
1.13/16"

2X3/4"NPD
5

[13] STEM EAST



USE JUMPER HOSE TO CONNECT TO SPOOL
ON ISO DC4-SL-010-01

[S20] TYPE 500-B
D = NORTH
TOS EL.13' 4 3/4"
SPRT. COL. W8X31(FLG)

[S21] TYPE 21

F10 G15 B17

TV 6116-10

[19] STEM UP
FC/FC

F10 G15 B17

DC4-SL-004-F2DA1-4"

CONN TO
6116/ S4
4" RFFE 300
W 594'7.9/16"
S 539'3.13/16"
EL +13'10.15/16"

MK-DC4-SL-004-02-1

GRID LINE

GRID LINE

GCT-2

[2] 4X2"NPD
1.1/16" OFFSET
FLAT SIDE D

BLIND #2

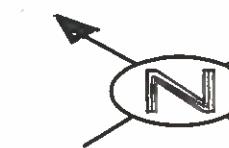
NOTE: REFER TO THE PIPING MATERIALS NARRATIVE

(JACOBS STANDARD 07QJ81XX-E02-D030-00002)

, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS

FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS

DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	OTY.	COMMODITY
1	PIPE, S-STD. BE. ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 ASME-B16.9	2	3.7'	PAAJABBAAM
2	ECCENTRIC REDUCER, S-STD. BE. ASTM-A234-WPB, WROUGHT.	4X2	1	WRBAABAAA
3	TEE, S-STD. BE. ASTM-A234-WPB, WROUGHT. ASME-B16.9	2X2	1	WTAAABBAA
4	SOCKETWELD WELDING OUTLET, CL3000, BE/SWE, ASTM-A105, MSS SP-97	2X3/4	1	WOBSABQFA
5	FLATOLET, CL3000, BE/SWE, ASTM-A105	2X3/4	1	WOUASBOFA
6	CAP, S-STD. BE. ASTM-A234-WPB, WROUGHT. ASME-B16.9	2	1	WCAAABBASA
7	NIPPLE, PE X MTE, S-XS, 3" LONG. ASTM: A53, TYPE E GR. B. OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	1	POFAABCAAM
8	NIPPLE, PE, S-XS, 3" LONG. ASTM: A53, TYPE E GR. B. OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	1	POCAABCAAM
9	FLANGE, CL300, RFFE/BE, ASTM-A105, ASME-B16.5, WN, S-STD BORE	4	1	FAABBBBAAA
10	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	3	FEABZZAAA
11	GATE VALVE, CS, CL800, SW, DS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	1	FA233-B

PIPE SUPPORTS

12	T11-2#12-4-0-0-CS-M	2	1	TYPE 11
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* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	OTY.	COMMODITY
13	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	3/4	1	TCAOZZZAAA
14	SW METALLIC GSKT:ASME B16.20,CL300,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	4	1	XDSBFZZOSI
15	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	3	XDSAFZZORG
16	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 4.5" BOLT LENGTH	3/4	8	YZZZHZZFFE
17	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	12	YZZZHZZFFE
18	GATE VALVE, CS, CL150, RF, DS&Y, BOLTED BONNET, HO, TAG: FA245-ECC00057	2	1	FA245-1

INSTRUMENTS

19	INSTRUMENT TV-6116-10	2	1	TV-6116-10
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PIPE SUPPORTS

20	T500-B-2#24.5-0-2-6-0	2	1	TYPE 500-B
----	-----------------------	---	---	------------

21	T21-2#0-0-0-0.13-0	2	1	TYPE 21
----	--------------------	---	---	---------

PIECE MARKS

MK-DC4-SL-004-02-1 MK-DC4-SL-004-02-2

RECEIVED
TURNER-INDUSTRIES

6-21-2018

S. STILLWELL

CWA# 4B

PIPING PLAN REFERENCE:

POS MODEL FILE : PPB03453

NOTES:

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.
FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

1.

ALL BOLT HOLES TO STRADDLE NORTH-SOUTH
AND/OR VERTICAL E'S UNLESS NOTED.

2.

† DENOTES AN APPROXIMATE DIMENSION,
FIELD CHECK BEFORE FABRICATION.

CAD DESIGN FILE : 070J80\ISREF\MONSANTO.BDR

P&ID NO.

FSI2-D-0007A

STRESS RELIEVE

N

TRACING

N/A

FINISH COLOR

N/A

INSULATION

1"-9MC-HC

COATING SYSTEM

NPR

OPERATING CONDITIONS

TEMP °F

45

PSIG

366

DESIGN CONDITIONS

TEMP °F

150

PSIG

SVC

TEST PRESS

SVC

TEST MEDIA

V100

NOTE

RNT

MCP

ISSUED FOR CONSTRUCTION

BY

CHECKED BY

STRESS

APPROVED

JACOBS

MONSANTO

PROJECT NO. 070J81XX

COMMODITY

SL

CLASS

DC4-SL-004-F2DAI-4'

F2DAI

CONTRACT NO.

MODEL AREA

DRAWING NO.

Sheet

004-SL-004-02

02

REV

0

MONSANTO COMPANY
LUDWIG PLANT
HIGHWAY RD
CALDWELL, IDAHO 83614
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PLOTTED ON: 11/22/2017

Alaris

TP-006-003

EXTRACTION NO. : 8

EXTRACTION DATE. : 20-SEP-2017

VARIFI L01::F:\070J80\ISOREF\MONSANTO.BDR

ISOCEN DEFAULTS FILE : ENG-1042 CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR

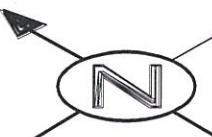
**USE JUMPER HOSE TO CONNECT TO SPOOL
ON ISO DC4-SL-004-02**

BLIND #3

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 4B

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE
PDG MODEL FILE : PP803453	CONSTRUCTION STATUS	ECC00057-DC4-D-6116	N	N/A	N/A	1'-9MC-HC		NPR	302	45	366	150	SVC	SVC	V100
NOTES:															
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
2. ± DENOTES AN APPROXIMATE DIMENSION. FIELD CHECK BEFORE FABRICATION.															
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE	ISSUED FOR CONSTRUCTION				REVISION DESCRIPTION				SGJ	VSP NT	Z	APPROVED	



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1.1/2	2.7'	PADJABCAM
2	CONCENTRIC SWAGE, S-STD X S-XS, BLE X PSE, ASTM-A234-WPB, WROUGHT, MSS SP-95	2X1.1/2	1	WSACGWAAA
3	SPECIALTY ITEM 8S-118	1.1/2X3/4	1	8S-118
4	REDUCING BRANCH TEE, CL3000, SWE, ASTM-A105, ASME-B16.11	1.1/2X3/4	1	STBQZZAAA
5	NIPPLE, PE, S-XS, 3" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	2	POCAABCAM
6	NIPPLE, PE X MTE, S-XS, 3" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	2	POFAABCAM
7	FLANGE, CL300, RFFE/BE, ASTM-A105, ASME-B16.5, WN, S-STD BORE	2	1	FAABBBAAA
8	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1.1/2	1	FCAABBAAA
9	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1.1/2	1	FA233-8
10	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	2	FA233-8

PIPE SUPPORTS

11	T11-1.5#8-4-0-0-0-CS-M	1.1/2	1	TYPE 11
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* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
12	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	3/4	2	TCAQZZAAA
13	SW METALLIC GSKT:ASME B16.20,CL300,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	2	1	XDSBFZZOSI
14	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1.1/2	1	XDSAFZZOSI
15	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 3.5" BOLT LENGTH	5/8	8	YZZZHZZFFE
16	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.75" BOLT LENGTH	1/2	4	YZZZHZZFFE
17	SPECIALTY ITEM 8T-2	1.1/2	1	8T-2

PIPE SUPPORTS

18	T125B-1.5#0-17-0-0-1	1.1/2	1	TYPE 125B
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PIECE MARKS

MK-DC4-SL-010-01-1

RECEIVED
TURNER-INDUSTRIES

6-21-2018

S. STILLWELL

PLOTTED ON : 9/21/2017

JACOBS

MONSANTO

MONSANTO COMPANY
LILING PLANT
HIGHWAY 90
LILING, CHINA 7000
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PROJECT NO. 070J81 XX

COMMODITY

SL

LINE NO.

DC4-SL-010-F2DA1-1-1/2"

CLASS

F2DA1

CONTRACT NO.

MON1900

FAB/CONST.

MODEL AREA

DRAWING NO.

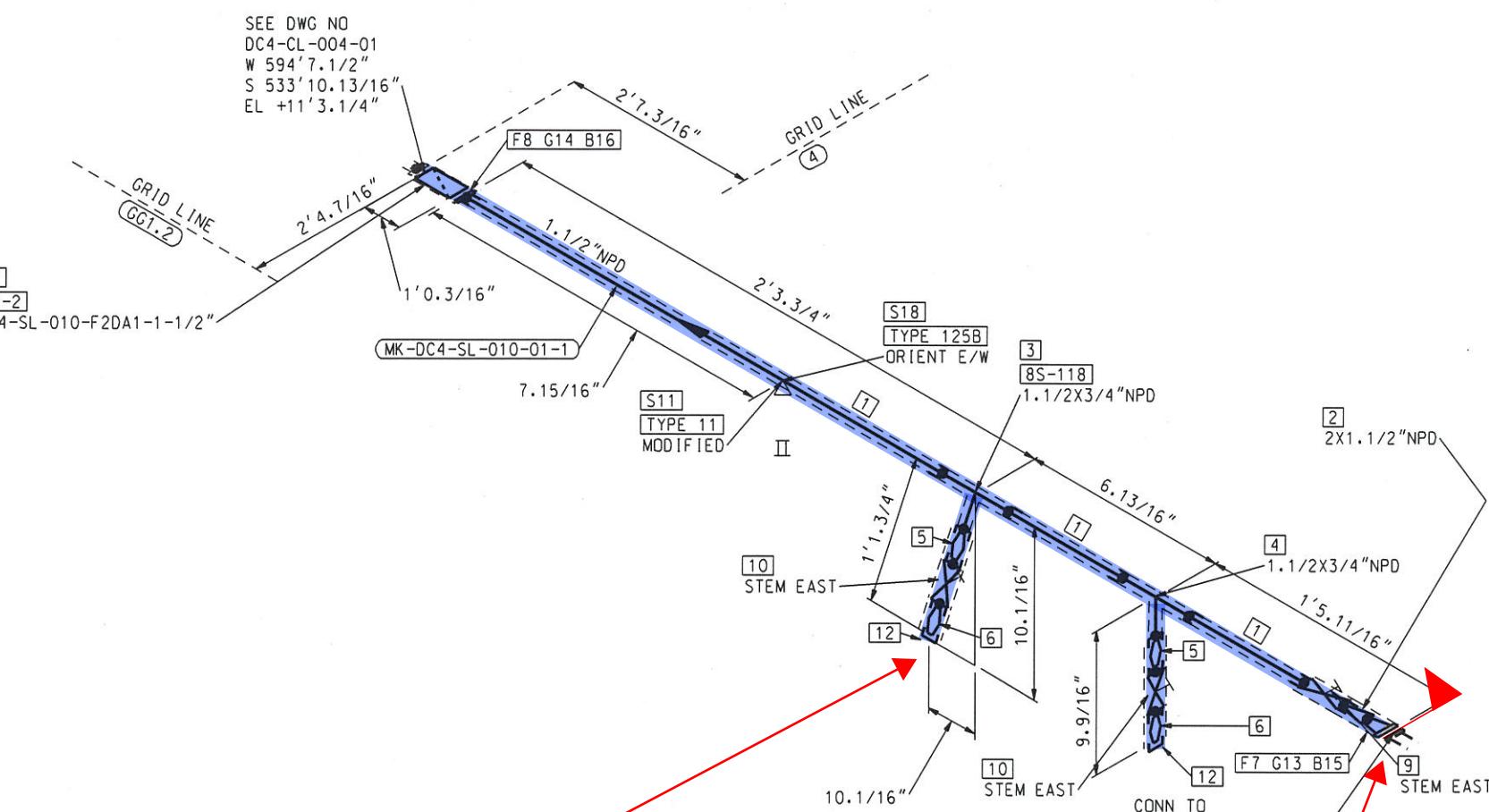
DC4-SL-010-01

SHEET

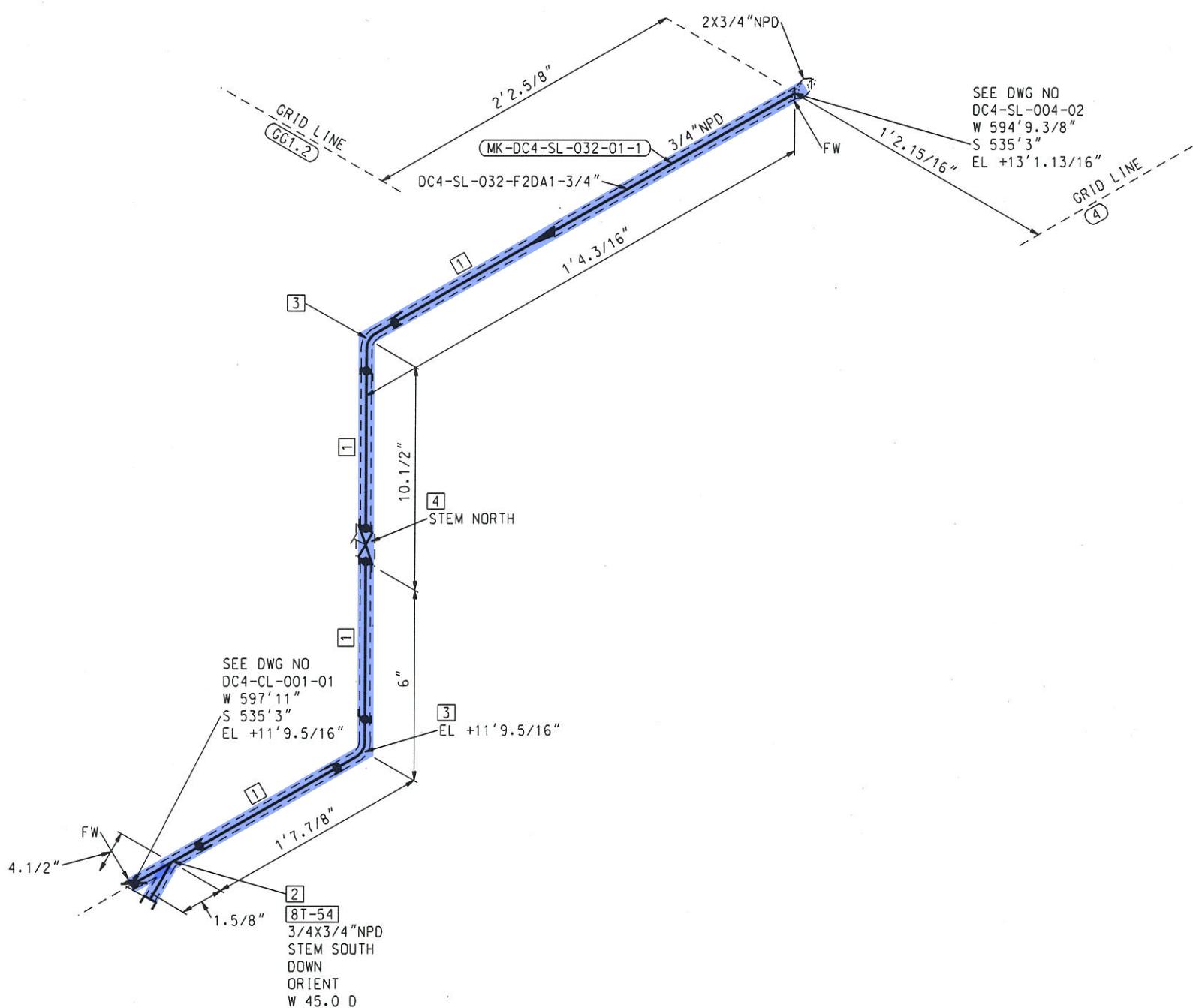
01

REV

0



TP-006-003



CWA# 4B

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	3.9'	PADJABCAM
2	SPECIALTY ITEM 8T-54	3/4X3/4	1	8T-54
3	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	2	SLAQZZAAA
4	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	1	FA233-8

PIECE MARKS

MK-DC4-SL-032-01-1

RECEIVED
TURNER-INDUSTRIES
6-21-2018
S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS

FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY:

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NOE
POS MODEL FILE : PP803453	CONSTRUCTION STATUS	ECC00057-DC4-D-0002	N	N/A	N/A	I*-9MC-HC	302 NPR	45 366 150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.										
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.											
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE			REVISION DESCRIPTION		BY	CHECKED BY	STRESS	APPROVED	

JACOBS

MONSANTO

PROJECT NO. 070J81 XX

COMMODITY

SL

LINE NO. DC4-SL-032-F2DAI-3/4"	CLASS F2DAI
-----------------------------------	----------------

EXTRACTION NO. : 5

EXTRACTION DATE. : 21-NOV-2017

1: F:\070J80\ISOREF\MONSANTONR. DEF

ENG-1042

TP-006-004

NOTE: NORTH ARROW ROTATED
FOR CLARITY

38.6

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7E

PIPELINE DESIGN & FABRICATION DRAWINGS ADDRESSED IN THIS DRAWING																
PIPELINE PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE		
PDS MODEL FILE : PP803215		CONSTRUCTION STATUS	ECC00057-DC9-D-3817		N	N/A	GREY	5MM-14MC-PP	KI 320I	212	96	366	150	SVC	SVC	V100
NOTES:		3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.				Ø	21-NOV-2017	ISSUED FOR CONSTRUCTION					HAJ	PHD				
				1	31-MAY-2018	ADDED COORDINATES					MCP	PAP		N/A	Dtd	
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			REV	DATE		REVISION DESCRIPTION					BY	CHECKED BY		STRESS	APPROVED	

JACOBS

卷之三

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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PROJECT NO. 070J81 XX

COMMODITY

CL

CONTRACT NO. FAB/CONST. MO
MCN11033

MONSANTO

LINE NO.

DC7-CL-114-F20A1-2

AREA DRAWING NO.

PLOTTED ON : 5/31/2018

I SOGEN DEFAULTS FILE : VARFILE:F:\070J80\ISOREF\MONSANTONR.DF

EXTRACTION DATE. : 21-NOV-2017

EXTRACTION NO. : 5

TP-006-004

NOTE: NORTH ARROW ROTATED
FOR CLARITY

38.6

* SHOP MATERIALS *				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	120.1'	PAAJABBAAM
2	SOCKETWELD WELDING OUTLET, CL3000, BE/SWE, ASTM-A105, MSS SP-97	2X3/4	2	WOBSABQAFA
PIPE SUPPORTS				
3	T11-2#20-4-0-0-0-CS-M	2	1	TYPE 11
4	T11-2#18-4-0-0-0-CS	2	11	TYPE 11
* FIELD MATERIALS *				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
PIPE SUPPORTS				
5	T24-2#0-4-0-0.13-0-CS	2	1	TYPE 24
6	T21-2#0-0-0-0.13-0	2	4	TYPE 21
PIECE MARKS				
MK-DC7-CL-114-02-1 MK-DC7-CL-114-02-2 MK-DC7-CL-114-02-3				

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7B

RECEIVED
TURNER-INDUSTRIES
6-20-2018
S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.
PDS MODEL FILE : PPB03215		CONSTRUCTION STATUS
ECC00057-DC9		
NOTES:		
3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD TO VERIFY DIMENSION BEFORE INSTALLATION		
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.		
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		
CAD DESIGN FILE : 07DJB0\ISOREF\MONSANTO.BDR		

-D-3817	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE
	N	N/A		GREY	5MM-14MC-PP	KI 320I	212	96	366	150			
LD FIT UP. TION.											SVC	SVC	V100
0	21-NOV-2017	ISSUED FOR CONSTRUCTION									HAJ	PHD	
1	31-MAY-2018	ADDED COORDINATES									MCP	PAP	N/A DAD
REV	DATE			REVISION DESCRIPTION							BY	CHECKED BY	STRESS APPROVED

JACOBS

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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LOTTED ON : 5/31/2018

EXTRACTION NO. : 6

EXTRACTION DATE. : 21-NOV-2017

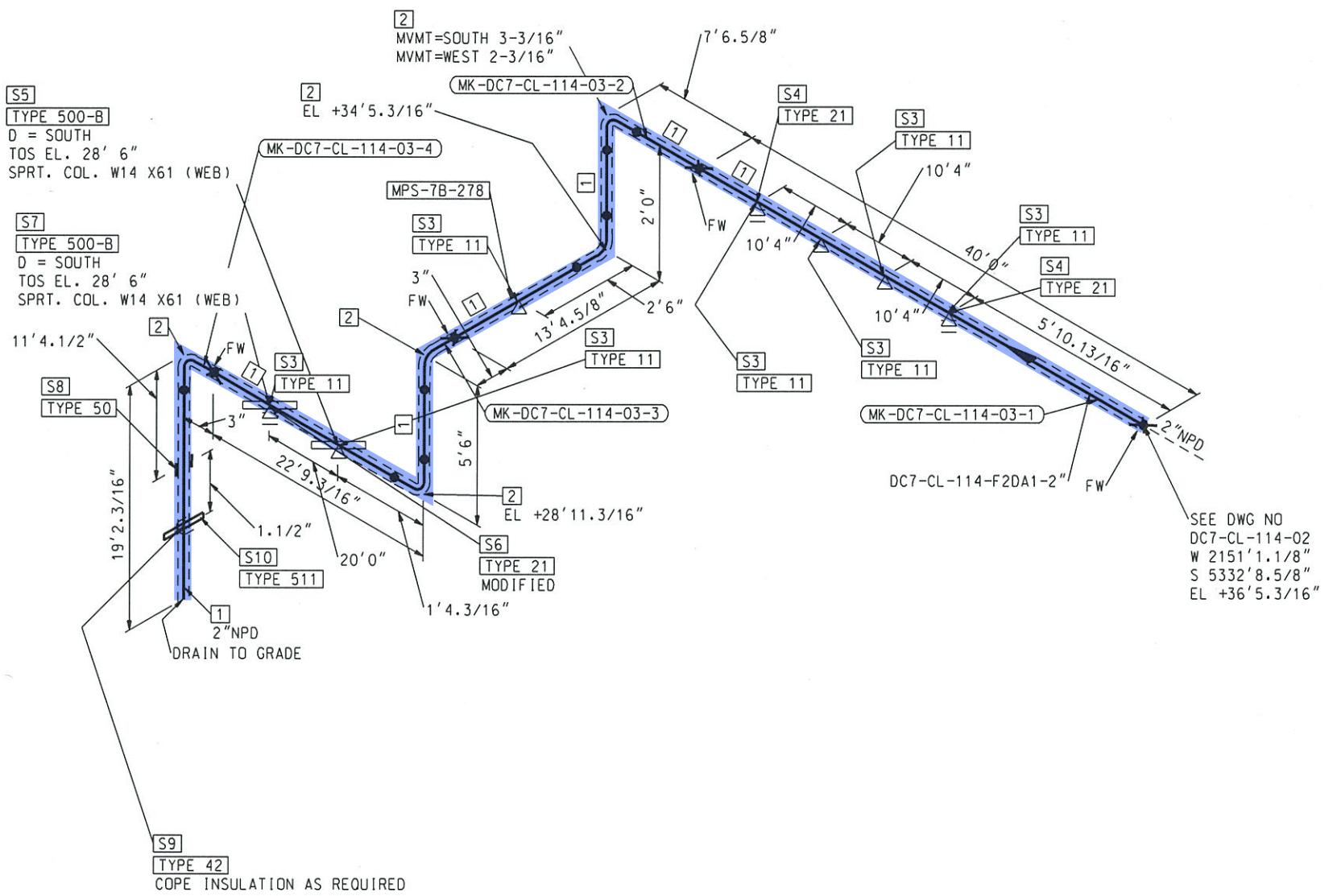
FILE : VARFIL01:F:\070J80\ISOREF\MONSANTONR.DER

TP-006-004

NOTE: NORTH ARROW ROTATED
FOR CLARITY

38.6

* SHOP MATERIALS *				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	108.4'	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	2	5	WAAAABBAAA
PIPE SUPPORTS				
3	T11-2#18-4-0-0-0-CS	2	7	TYPE 11
* FIELD MATERIALS *				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
PIPE SUPPORTS				
4	T21-2#0-0-0-0.13-0	2	2	TYPE 21
5	T500-B-2#17.81-0-2-4.19-0	2	1	TYPE 500-B
6	T21-2#0-0-0-0.25-0-M	2	1	TYPE 21
7	T500-B-2#17.81-0-2-6-0	2	1	TYPE 500-B
8	T50-2#0-0-0-0-0.25-CS	2	1	TYPE 50
9	T42-2#0-0-0-0.13-0-CS	2	1	TYPE 42
10	T511-2#18-22-0-0-0	2	1	TYPE 511
PIECE MARKS				
MK-DC7-CL-114-03-1 MK-DC7-CL-114-03-2 MK-DC7-CL-114-03-3 MK-DC7-CL-114-03-4				



MK-DC7-CL-114-Q3-1 MK-DC7-CL-114-Q3-2 MK-DC7-CL-114-Q3-3 MK-DC7-CL-114-Q3-4

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7B

PIPELINE DESIGN & CONSTRUCTION DRAWINGS												TEST PRESSURE & MEDIA			NOE		
PIPE PLAN REFERENCE:			P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NOE		
PIPE LINE MODEL FILE :		CONSTRUCTION STATUS	ECC00057-DC9-D-3817	N		N/A	GREY	5MM-14MC-PP	KI320I	212	96	366	150	SVC	SVC	V100	
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.																
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.				Ø	21-NOV-2017		ISSUED FOR CONSTRUCTION					HAJ	PHD				
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.				1	31-MAY-2018		ADDED COORDINATES					MCP	PAP	N/A	DAD		
CAD DESIGN FILE :	070J89\ISOREF\MONSANTO.BDR			REV	DATE		REVISION DESCRIPTION					BY	CHECKED BY	STRESS	APPROVED		

JACOBS

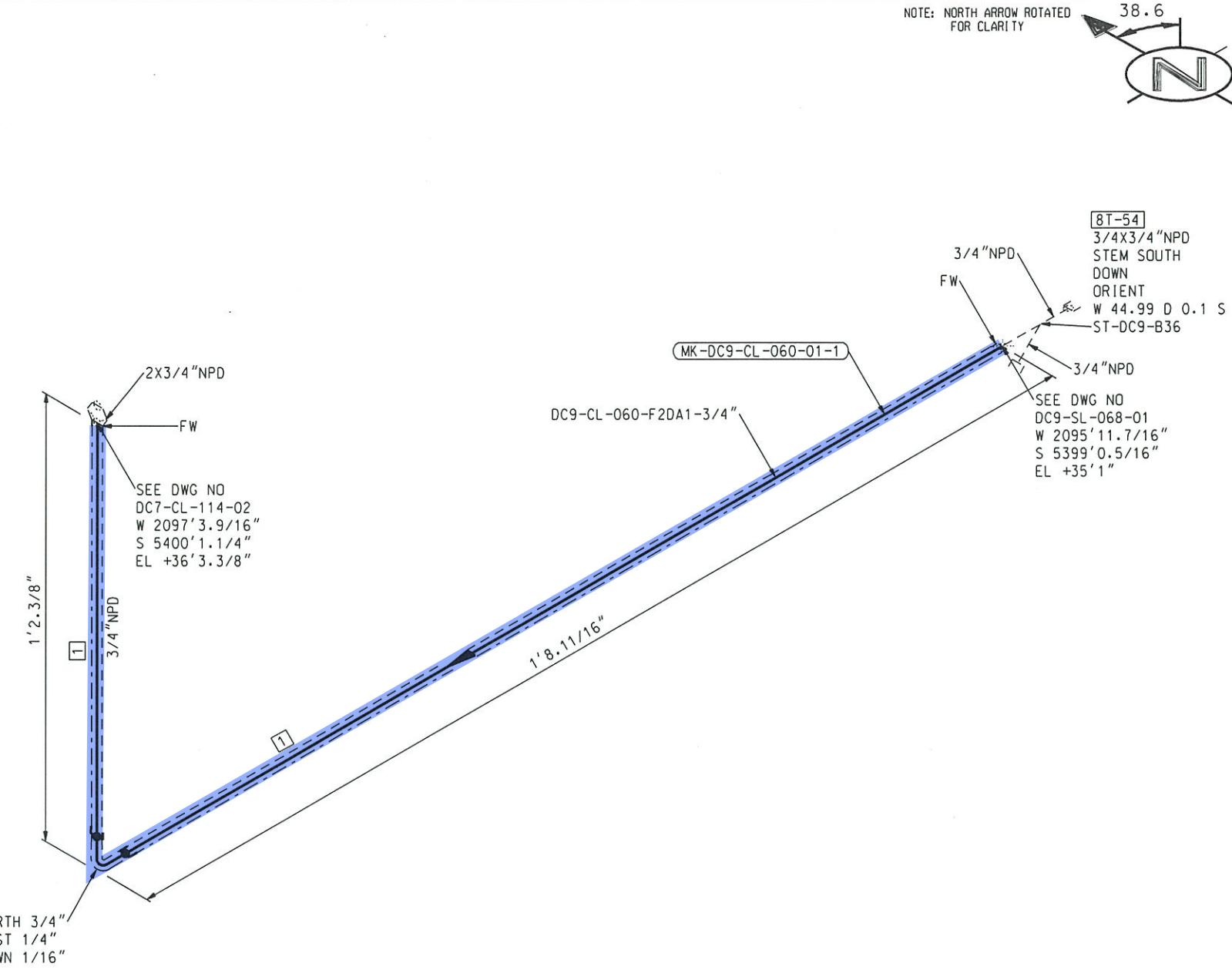
ONSANTO

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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PLOTTED ON : 5/31/2018

TP-006-004



* SHOP MATERIALS *

NO. DESCRIPTION

1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	2.8'	PADJABCAAM
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	1	SLAQZZAAA

PIECE MARKS

MK-DC9-CL-060-01-1

PIPING PLAN REFERENCE:

POS MODEL FILE : PP803205

NOTES:

1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH

AND/OR VERTICAL C'S UNLESS NOTED.

2. ± DENOTES AN APPROXIMATE DIMENSION,

FIELD CHECK BEFORE FABRICATION.

CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR

P&ID NO.

ECC00057-DC9-D-3213

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.

FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

ISSUED FOR CONSTRUCTION

NMP

PCB

STRESS RELIEVE

N

0

ADDED COORDINATES

DAP

PAP

TRACING

ET

31-MAY-2018

REVISED DESCRIPTION

N/A

MB

FINISH COLOR

GREY

366

REVISION DESCRIPTION

BY

CHECKED BY

INSULATION

1'-9MC-HC

150

STRESS

APPROVED

COATING SYSTEM

KI 320I

212

TEST PRESS

SVC

OPERATING CONDITIONS

PSIG

96

TEST MEDIA

SVC

DESIGN CONDITIONS

PSIG

366

NODE

V100

CWA# 7B

JACOBS

PROJECT NO. 070J81XX

COMMODITY

CL

MON11900

MONSANTO

LINE NO.

DC9-CL-060-F2DA1-3/4'

CLASS

F2DA1

CONTRACT NO.

FAB/CONST.

MODEL AREA

DRAWING NO.

DC9-CL-060-01

SHEET

01

REV

Monsanto Company
Luling Plant
Highway 90
Luling, Louisiana 70750THIS DRAWING IS THE PROPERTY OF
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PLOTTED ON : 2/6/2018

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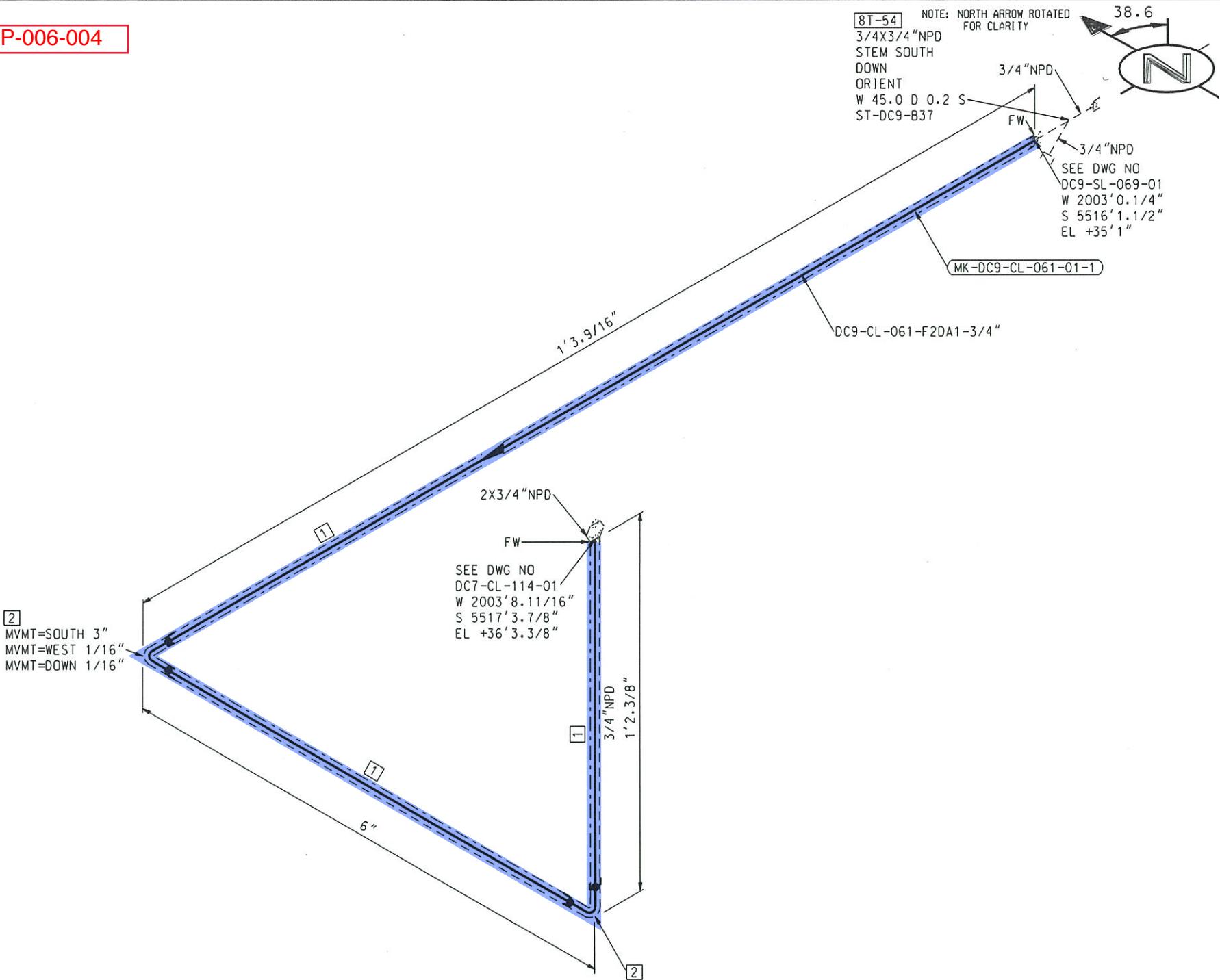
EXTRACTION NO. : 4

EXTRACTION DATE. : 06-NOV-2017

ISogen Defaults File : VARFL01:F:\070J80\ISOREF\MONSANTO.R.0DF

ENG-1042

TP-006-004



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7B

* SHOP MATERIALS *	
NO.	DESCRIPTION
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11

SIZE	QTY.	COMMODITY
3/4	2.8'	PADJABCAAM
3/4	2	SLAOZZAAA

PIECE MARKS
MK-DC9-CL-061-01-1

RECEIVED
TURNER-INDUSTRIES
6-20-2018
S. STILLWELL

PLOTTED ON 6/6/2018

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	CONDITIONS PSIG	DESIGN CONDITIONS TEMP °F	PSIG	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803205	CONSTRUCTION STATUS	ECC00057-DC9-D-3213	N	ET	GREY	I*-9MC-HC	KI320I	212	96	366	150	SVC	SVC
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.		0	02-NOV-2017		ISSUED FOR CONSTRUCTION			NMP	PCB				
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		1	31-MAY-2018		ADDED COORDINATES			DAP	PAP	N/A	NTB		
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR		REV	DATE		REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED		

JACOBS

MONSANTO

PROJECT NO. 070J81 XX

COMMODITY

CL

CONTRACT NO.

MON11900

LINE NO.

DC9-CL-061-F2DA1-3/4*

CLASS

F2DA1

FAB/CONST.

MODEL AREA

DRAWING NO.

DC9-CL-061-01

SHEET

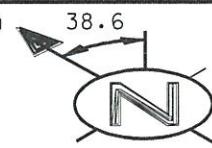
01

REV

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070
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dilede

TP-006-004

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

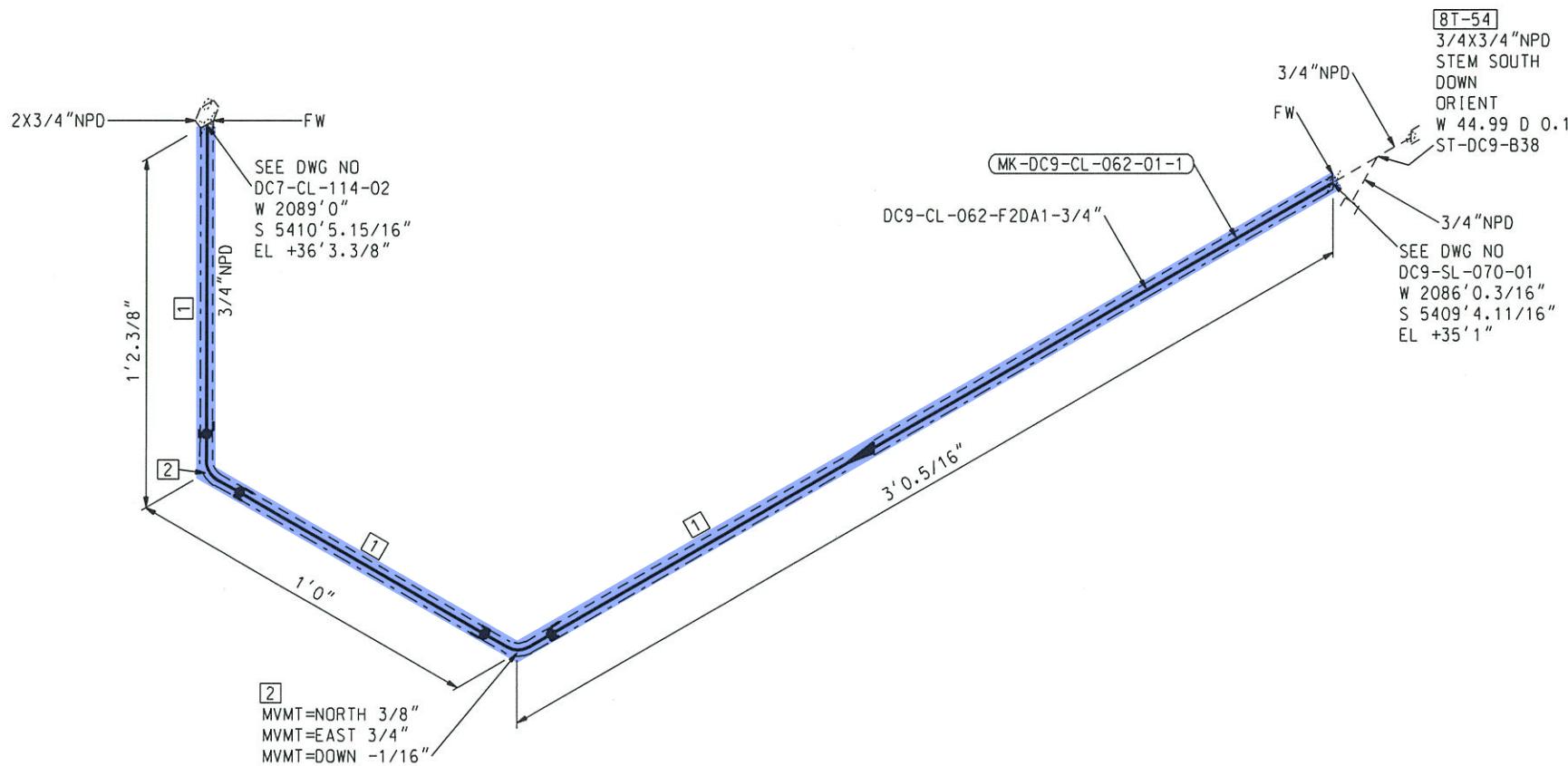
NO. DESCRIPTION

1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	5.0'	PADJABCAAM
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	2	SLAQZZAA

SIZE QTY. COMMODITY

PIECE MARKS

MK-DC9-CL-062-01-1



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7B

RECEIVED
TURNER-INDUSTRIES
6-20-2018
S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803215		ECC00057-DC9-D-3213	N	ET	GREY	1"-9MC-HC	KI3201	TEMP °F 212	PSIG 96	TEMP °F 366	PSIG 150	SVC
NOTES: 3. FFW = SHOT TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.			0	02-NOV-2017	ISSUED FOR CONSTRUCTION				NMP	PCB		
			1	31-MAY-2018	ADDED COORDINATES				DAP	PAP	N/A	MB
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED

JACOBS**MONSANTO**

PROJECT NO. 070J81XX

COMMODITY

CL

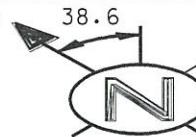
LINE NO. DC9-CL-062-F2DA1-3/4"	CLASS F2DA1
CONTRACT NO. MON11900	FAB/CONST. DRAWING NO. DC9-CL-062-01

ISOPEN DEFAULTS FILE : VARFL01:F:\070J80\ISOREF\MONSANTONR.DEF

EXTRACTION DATE. : 06-NOV-2017

EXTRACTION NO. : 4

TP-006-004

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

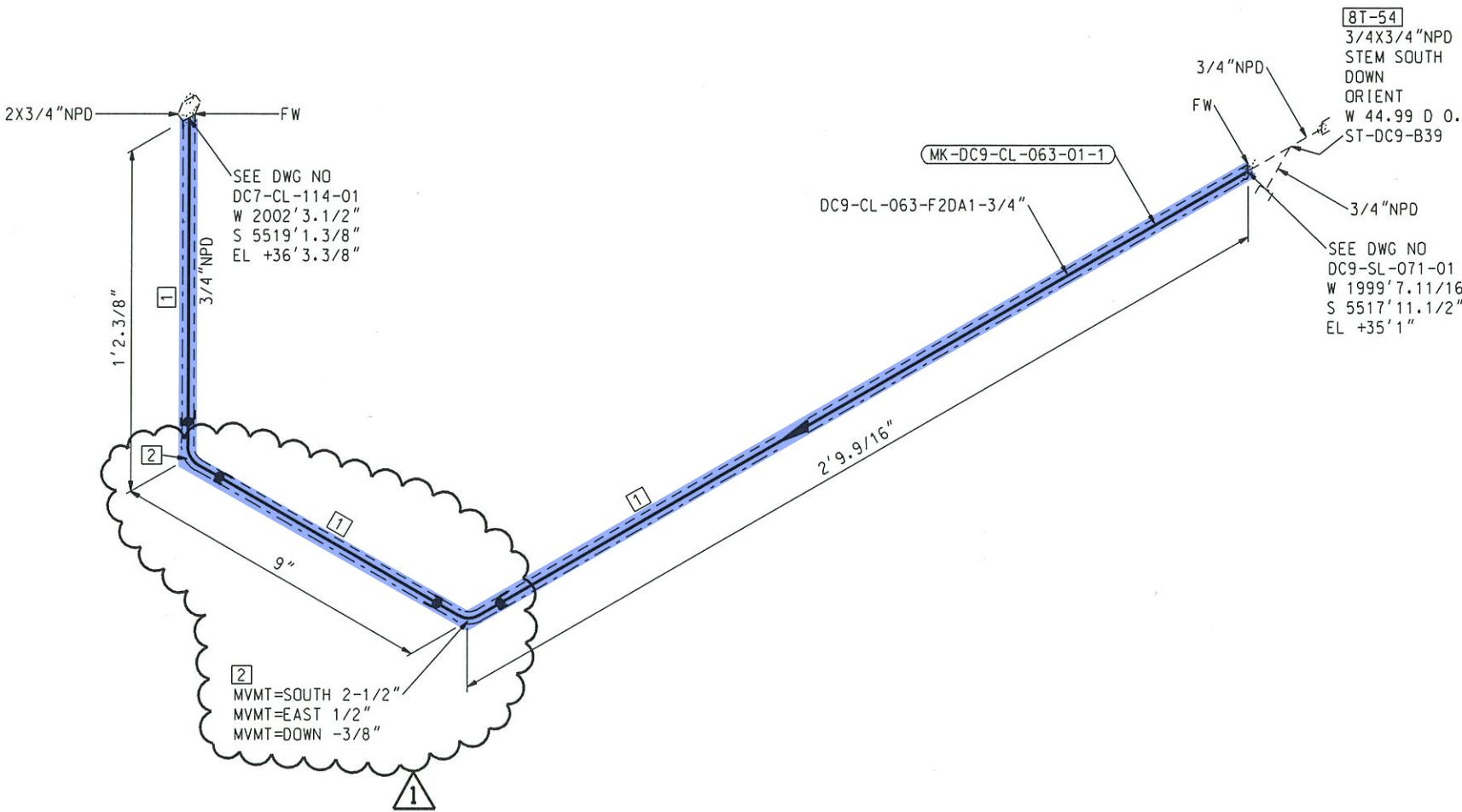
NO. DESCRIPTION

- 1 PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85
2 90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11

SIZE	QTY.	COMMODITY
3/4	4.5'	PADJABCAAM
3/4	2	SLAOZZAAA

PIECE MARKS

MK-DC9-CL-063-01-1



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7B

RECEIVED
TURNER-INDUSTRIES
6-20-2018
S. STILLWELL

PIPELINE PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
POS MODEL FILE : PP083215	CONSTRUCTION STATUS	ECC00057-DC9-D-3213	N	ET	GREY	1'-9MC-HC	KI320I	212 96	366 150	SVC	SVC	V100
NOTES: 3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.												
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.												
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			REV	DATE		REVISION DESCRIPTION		BY	CHECKED BY	STRESS	APPROVED	

JACOBS

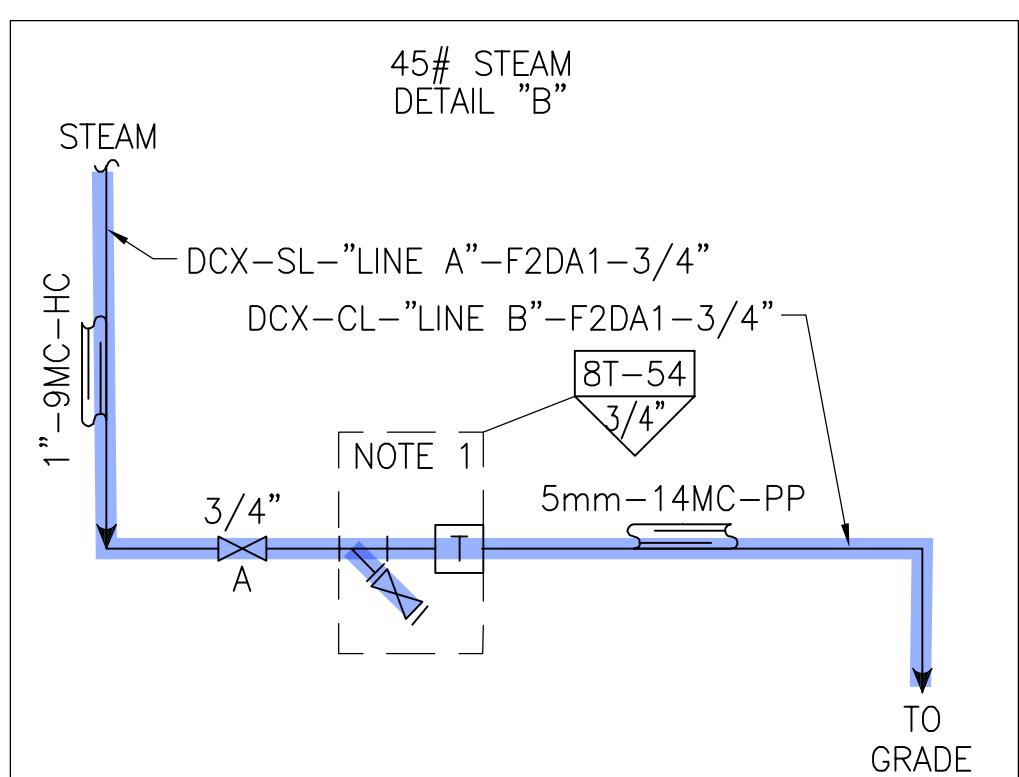
PROJECT NO. 070J81 XX

MONSANTOMONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, TEXAS 77650
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WRITTEN CONSENT OF MONSANTO COMPANY.LINE NO.
DC9-CL-063-F2DA1-3/4'
CLASS
F2DA1CONTRACT NO.
MON11900
FAB/CONST.
MODEL AREA
DRAWING NO.
DC9-CL-063-01
SHEET
01
REV
I

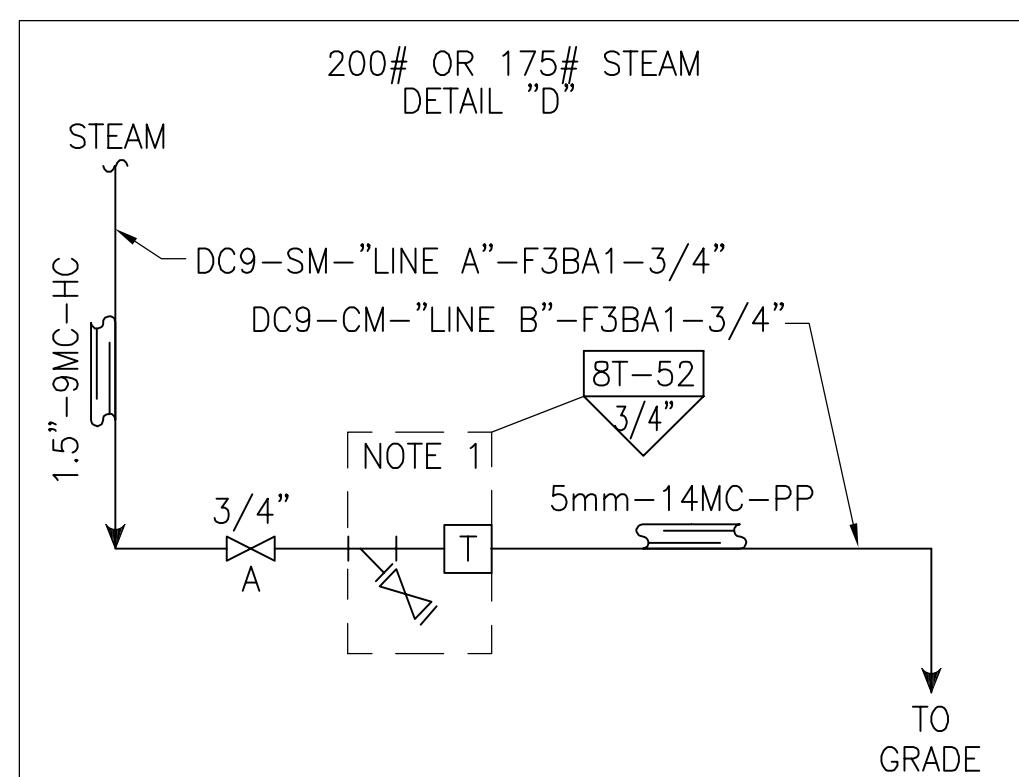
16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

NOTES:

1. THE STEAM TRAP ASSEMBLY CONTAINS AN INTEGRAL STRAINER AND BLOWDOWN.
2. THIS DRAWING INDICATES THE LOCATION OF STEAM TRAPS.
3. THE CONDENSATE FROM TRAPS ST-DC9-36/37/38/39 IS COLLECTED IN COMMON 2" HEADER BEFORE GOING TO GRADE. OUTLET PIPE (3/4") DOWNSTREAM OF TRAP IS ELECTRICAL TRACED DUE TO POCKET.



STEAM TRAP NO	STM LINE "A"	COND LINE "B"	EFD NO.
ST-DC8-B01	DC8-017	DC8-013	DC8-D-2130
ST-DC8-B02	DC8-018	DC8-014	DC9-D-3816
ST-DC9-B02	DC9-036	DC9-027	DC9-D-3211
ST-DC9-B03	DC9-037	DC9-028	DC9-D-3211
ST-DC9-B04	DC9-038	DC9-029	DC9-D-3816
ST-DC9-B05	DC9-039	DC9-030	DC9-D-3816
ST-DC9-B06	DC9-040	DC9-031	DC9-D-3816
ST-DC9-B07	DC9-041	DC9-032	DC9-D-3816
ST-DC9-B08	DC9-042	DC9-033	DC9-D-3816
ST-DC9-B09	DC9-043	DC9-034	DC9-D-3816
ST-DC9-B10	DC9-044	DC9-035	DC9-D-3816
ST-DC9-B11	DC9-045	DC9-036	DC9-D-3816
ST-DC9-B12	DC9-046	DC9-037	DC9-D-3816
ST-DC9-B13	DC9-047	DC9-038	DC9-D-3816
ST-DC9-B16	DC9-050	DC9-041	DC9-D-3816
ST-DC9-B17	DC9-051	DC9-042	DC9-D-3816
ST-DC9-B18	DC9-052	DC9-043	DC9-D-3816
ST-DC9-B19	DC9-053	DC9-044	DC9-D-3817
ST-DC9-B20	DC9-054	DC9-045	DC9-D-3817
ST-DC9-B21	DC9-055	DC9-046	DC9-D-3817
ST-DC9-B22	DC9-056	DC9-047	DC9-D-3817
ST-DC9-B23	DC9-057	DC9-048	DC9-D-3817
ST-DC9-B24	DC9-058	DC9-049	DC9-D-3817
ST-DC9-B25	DC9-059	DC9-050	DC9-D-3817
ST-DC9-B26	DC9-060	DC9-051	DC9-D-3817
ST-DC9-B27	DC9-061	DC9-052	DC9-D-3817
ST-DC9-B28	DC9-062	DC9-053	DC9-D-3818
ST-DC9-B29	DC9-063	DC9-054	DC9-D-3818
ST-DC9-B30	DC9-064	DC9-055	DC9-D-3818
ST-DC9-B31	DC9-065	DC9-056	DC9-D-3818
ST-DC9-B32	DC9-066	DC9-057	DC9-D-3817
ST-DC9-B33	DC7-062	DC7-086	DC7-D-0520
ST-DC9-B34	DC9-067	DC9-059	DC9-D-3816
ST-DC9-B35	DC9-026	DC9-021	DC7-D-0243
ST-DC9-B36	DC9-068	DC9-060	DC9-D-3817
ST-DC9-B37	DC9-069	DC9-061	DC9-D-3817
ST-DC9-B38	DC9-070	DC9-062	DC9-D-3817
ST-DC9-B39	DC9-071	DC9-063	DC9-D-3817
ST-DC9-B40	DC9-072	DC9-064	DC9-D-3816
ST-DC9-B41	DC9-073	DC9-065	DC9-D-3817
ST-DC9-B42	DC9-074	DC9-066	DC9-D-3817



STEAM TRAP NO	STM LINE "A"	COND LINE "B"	EFD NO.
ST-DC9-D01	DC9-014	DC9-006	DC9-D-3212
ST-DC9-D02	DC9-015	DC9-007	DC9-D-3212
ST-DC9-D03	DC9-016	DC9-008	DC9-D-3212
ST-DC9-D04	DC9-017	DC9-009	DC9-D-3212
ST-DC9-D05	DC9-018	DC9-010	DC9-D-3212
ST-DC9-D06	DC9-019	DC9-011	DC9-D-3212
ST-DC9-D07	DC9-020	DC9-012	DC9-D-3212
ST-DC9-D08	DC9-021	DC9-013	DC9-D-3212
ST-DC9-D09	DC9-022	DC9-014	DC9-D-3212
ST-DC9-D10	DC9-023	DC9-015	DC9-D-3212
ST-DC9-D11	DC9-024	DC9-016	DC9-D-3212
ST-DC9-D12	DC9-025	DC9-017	DC9-D-3212
ST-DC9-D13	DC9-026	DC9-018	DC9-D-3212
ST-DC9-D14	DC9-027	DC9-019	DC9-D-3212
ST-DC9-D15	DC9-028	DC9-020	DC9-D-3212
ST-DC9-D16	DC9-029	DC9-021	DC9-D-3212
ST-DC9-D17	DC9-030	DC9-022	DC9-D-3212
ST-DC9-D18	DC9-031	DC9-023	DC9-D-3211
ST-DC9-D19	DC9-032	DC9-024	DC9-D-3211
ST-DC9-D20	DC9-033	DC9-025	DC9-D-3211
ST-DC9-D21	DC9-034	DC9-026	DC9-D-3211
ST-DC9-D22	DC9-035	DC9-027	DC9-D-3212
ST-DC9-D23	DC9-036	DC9-028	DC9-D-3212
ST-DC9-D24	DC9-037	DC9-029	DC9-D-3212
ST-DC9-D25	DC9-038	DC9-030	DC9-D-3212
ST-DC9-D26	DC9-039	DC9-031	DC9-D-3212
ST-DC9-D27	DC9-040	DC9-032	DC9-D-3212

ALL PIPING, INSTRUMENTATION AND EQUIPMENT ON THIS DRAWING IS NEW UNLESS NOTED OTHERWISE.

CONTRACTOR COPY

2	ECC LSR 00057	04/16/2018	ISSUED FOR CONSTRUCTION	AVK
1	ECC LSR 00057	11/13/2017	ISSUED FOR CONSTRUCTION	AVK
0	ECC GKG 00057	04/13/2017	ISSUED FOR CONSTRUCTION	AVK

REV PROJ. BY DATE DESCRIPTION APPD

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MONSANTO PLANT LULING

ENGINEERING FLOW DIAGRAM 200# OR 175# & 45#

STEAM TRAP DETAILS MON11900

RECEIVED	TURNER-INDUSTRIES
6-4-2018	S. STILLWELL

BY	DATE	APPROVED	DATE	APPROVED	DATE
DRAWN	GDB	3-6-17			
CHECKED					
DESIGNED					
		SCALE NONE			
PROJECT NO.	PLANT	ZONE	TYPE	NUMBER	
ECC00057	42	DC9	D	3213	J
SIZE	PLANT DRAWING NO.				
D	ECC00057-DC9-D-3213				
	REV				

JACOBS®

PROJECT NO. 07QJ81XX

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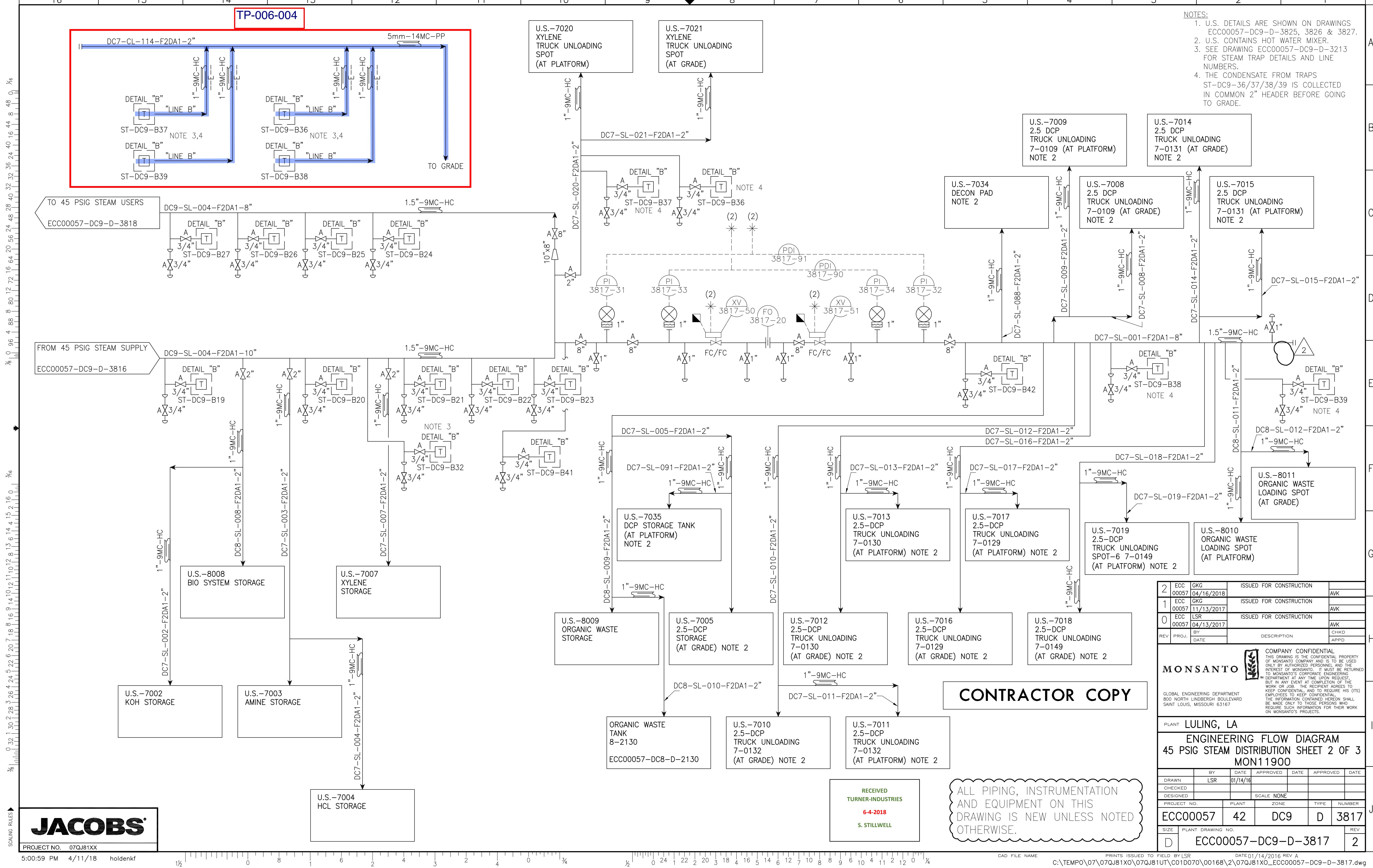
1/2

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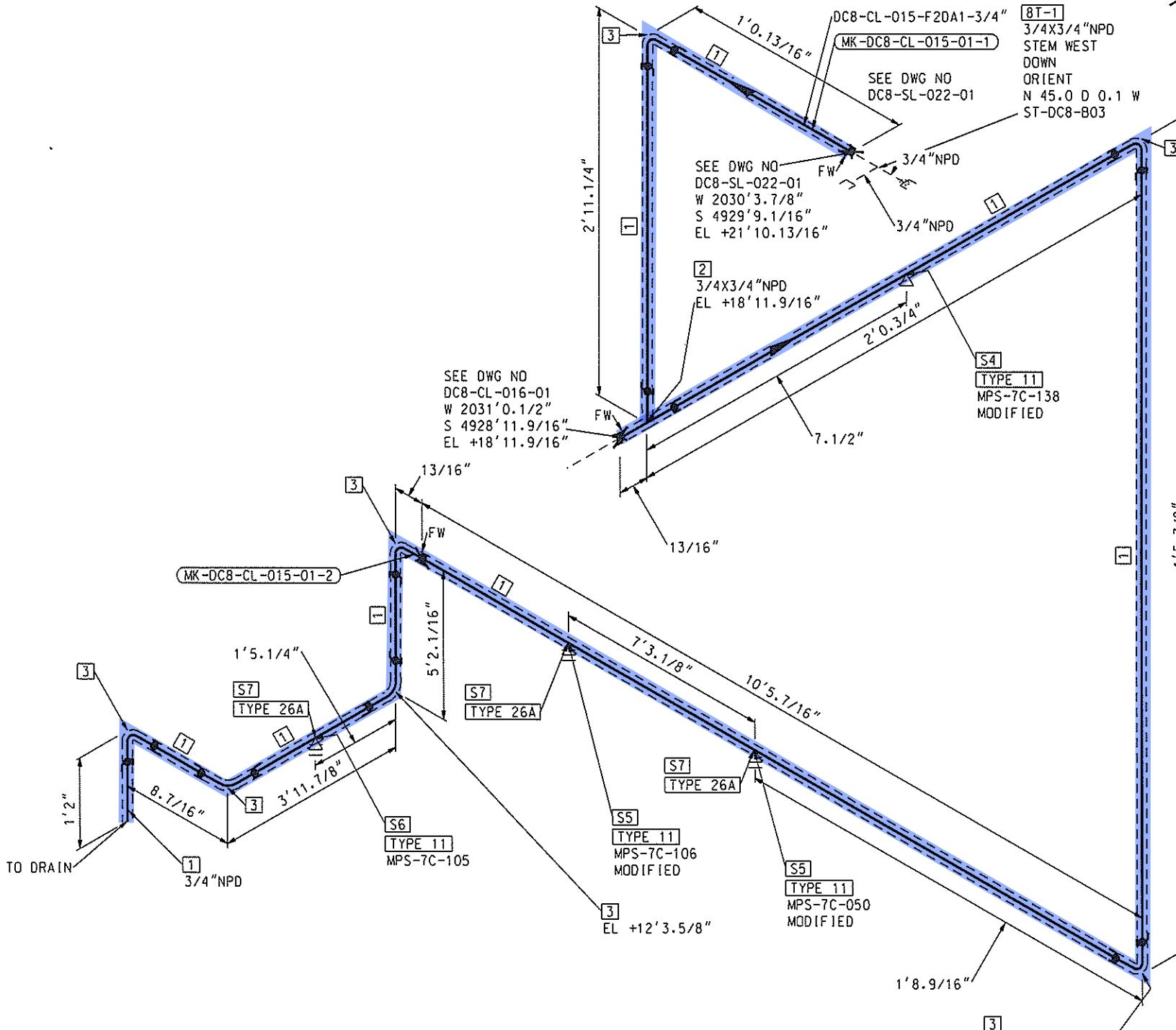
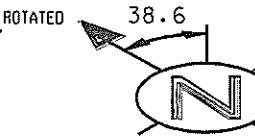
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TP-006-004



TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	28.1'	PADJABCAAM
2	TEE, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4X3/4	1	STAQZZAAA
3	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	7	SLAQZZAAA
	PIPE SUPPORTS			
4	T11-0.75#9-4-0-0-0-CS-M	3/4	1	TYPE 11
5	T11-0.75#12-4-0-0-0-CS-M	3/4	2	TYPE 11
6	T11-0.75#18-4-0-0-0-CS	3/4	1	TYPE 11
	* FIELD MATERIALS *			
7	PIPE SUPPORTS			
7	T26A-0.75#0-3-0-0.13-0	3/4	3	TYPE 26A
	PIECE MARKS			
	MK-DC8-CL-015-01-1 MK-DC8-CL-015-01-2			

RECEIVED
TURNER-INDUSTRIES
7-5-2018
S. STILLWELL

PIPING PLAN REFERENCE:

POS MODEL FILE : PP003126

CONSTRUCTION STATUS:

ECC00057-DC8-D-2130

P&ID NO.

N

N/A

GREY

STRESS RELIEVE

N

N/A

1'-9MC-HC

TRACING

N/A

N/A

K1320I

FINISH COLOR

GREY

N/A

1'-9MC-HC

INSULATION

N/A

N/A

K1320I

COATING SYSTEM

N/A

N/A

K1320I

OPERATING CONDITIONS

TEMP °F

292

PSIG

DESIGN CONDITIONS

TEMP °F

366

PSIG

TEST PRESS

SVC

SVC

V100

TEST MEDIA

SVC

SVC

V100

NOE

N/A

N/A

N/A

JACOBS**MONSANTO**

PROJECT NO. 07QJ81XX

COMMODITY CLASS

CL F2DAI

CONTRACT NO. FAB/CONST. MODEL AREA

DRAWING NO. SHEET REV

MON11900 01 2

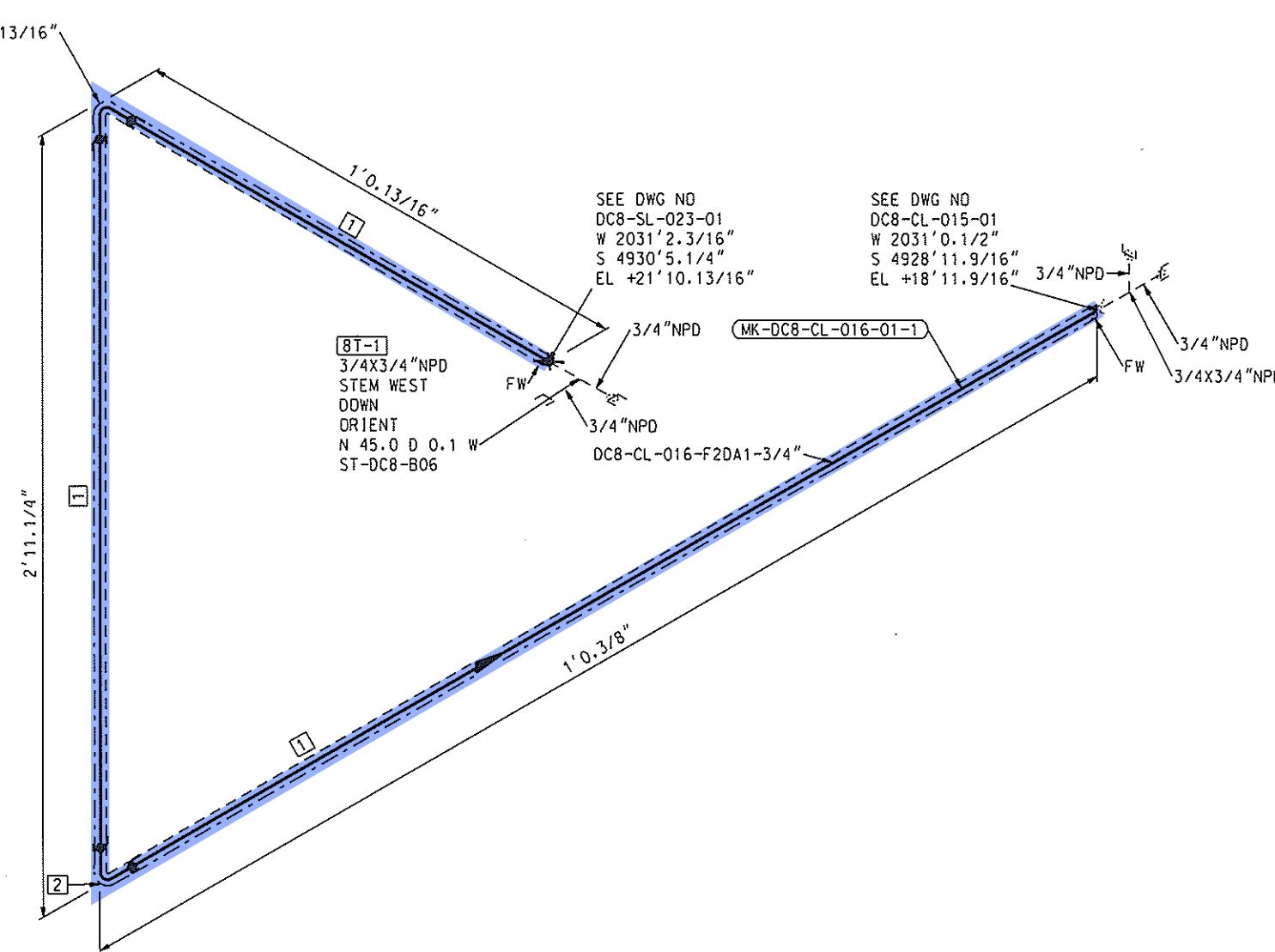
TP-006-007

EXTRACTION NO. : 4

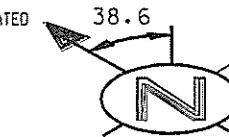
EXTRACTION DATE. : 30-JAN-2018

ISOPEN DETAILS FILE : VARFILE1.F: \070J80\ISREF\MONSANTOR.DEF

ENG-1042



NOTE: NORTH ARROW ROTATED FOR CLARITY



* SHOP MATERIALS *

NO. DESCRIPTION

		SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	4.8'	PADJBCAAM
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	2	SLAQZZAAA

PIECE MARKS

MK-DC8-CL-016-01-1

RECEIVED
TURNER-INDUSTRIES
7-5-2018
S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

PIPING PLAN REFERENCE:
PDS MODEL FILE : PP803126 CONSTRUCTION STATUS
NOTES:

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.
FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS			TEST PRESS	TEST MEDIA	NOE
							TEMP °F	PSIG	TEMP °F			
ECC00057-DC8-D-2130	N	N/A	GREY	1"-9MC-HC	KI328I	292	0	366	150	SVC	SVC	V100
0	26-OCT-2017		ISSUED FOR CONSTRUCTION				MPA	PCB				
1	30-JAN-2018		ISSUED FOR CONSTRUCTION				NMP	PCB				
2	21-JUNE-2018		ADDED COORDINATES				DAP	PAP	N/A	M3		
REV	DATE		REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED		

JACOBS**MONSANTO**

PROJECT NO. 07QJ81 XX

COMMODITY

CL

LINE NO.

DC8-CL-016-F2DA1-3/4"

CLASS

F2DA1

CONTRACT NO.

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

DC8-CL-016-01

SHEET

01

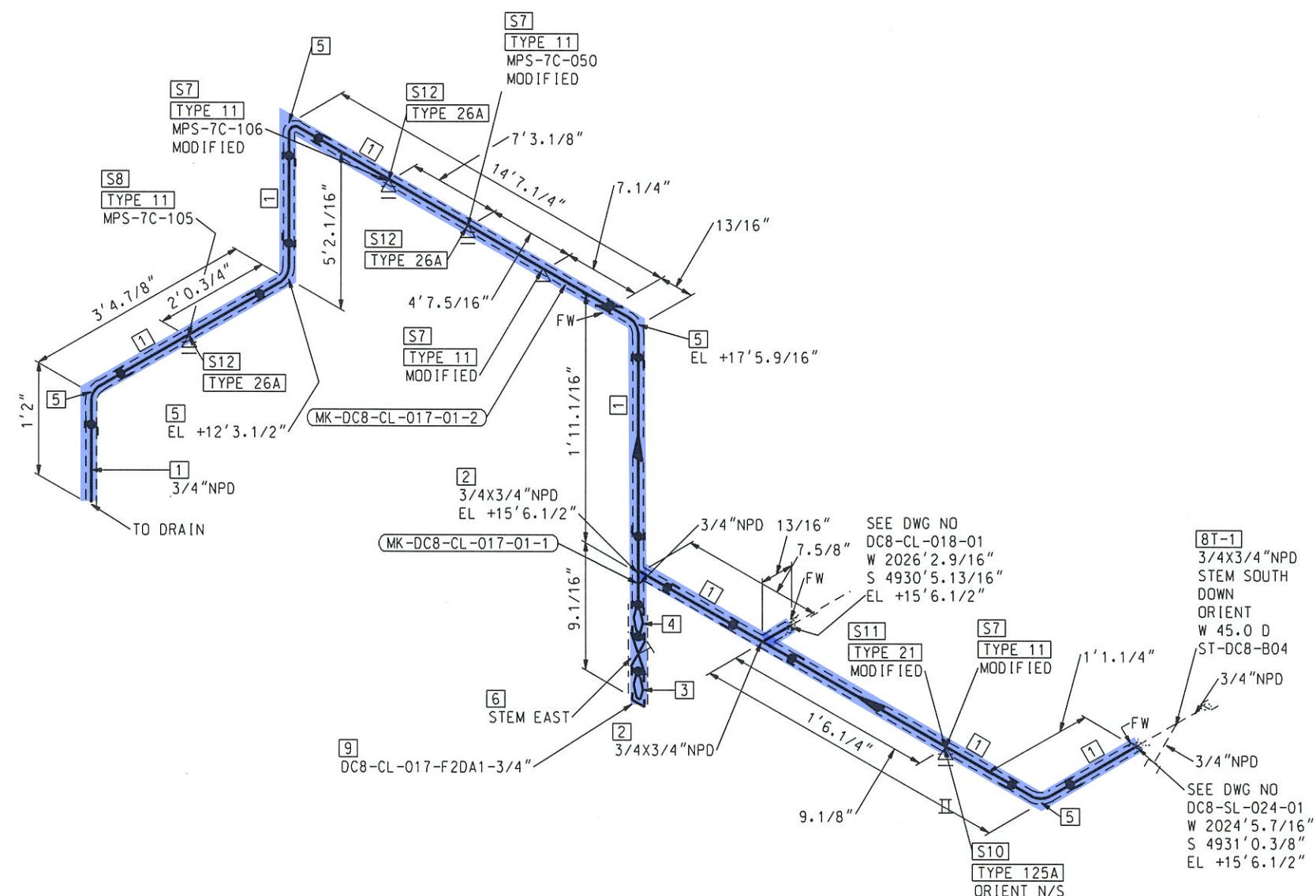
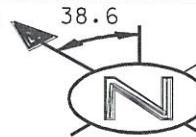
REV

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LIVING PLANT
MONSANTO
LIVING LOUISIANA, PORTO
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PLOTTED ON: 6/26/2018

dileido

TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	3/4	28.7'	PADJABCAAM
2	TEE, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4X3/4	2	STAQZZAAA
3	NIPPLE, PE X MTE, S-XS, 3" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	1	POFAABCAAM
4	NIPPLE, PE, S-XS, 3" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	3/4	1	POCAABCAAM
5	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	3/4	5	SLAQZZAAA
6	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	1	FA233-8

PIPE SUPPORTS

7	T11-0.75#12-4-0-0-0-CS-M	3/4	4	TYPE 11
8	T11-0.75#18-4-0-0-0-CS	3/4	1	TYPE 11

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
9	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	3/4	1	TCAQZZAAA
	PIPE SUPPORTS			
10	T125A-0.75#0-64.5-0-0-3	3/4	1	TYPE 125A
11	T21-0.75#0-0-0-0.75-0-M	3/4	1	TYPE 21
12	T26A-0.75#0-3-0-0.13-0	3/4	3	TYPE 26A

PIECE MARKS

MK-DC8-CL-017-01-1 MK-DC8-CL-017-01-2

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

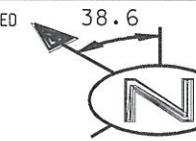
RECEIVED
TURNER-INDUSTRIES

7-2-2018

S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NDE	JACOBS	MONSANTO
POS MODEL FILE :	CONSTRUCTION STATUS	ECC00057-DC8-D-2130	N	N/A	GREY	1'-9MC-HC	KI320I	292 0	366 150	SVC	SVC	V100		
NOTES:	3. FFW = SHOT TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.													
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.													
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	01-NOV-2017	ISSUED FOR CONSTRUCTION				NMP	PCB				
			1	20-JUN-2018	ADDED COORDINATES				DAP	PAP	N/A	MB		
REV	DATE				REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED		
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR														
15GEN DEFAULTS FILE : VARFILE1.F: \070J80\ISOREF\MONSANTO.DRW														
NOTES:														
3. FFW = SHOT TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
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TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

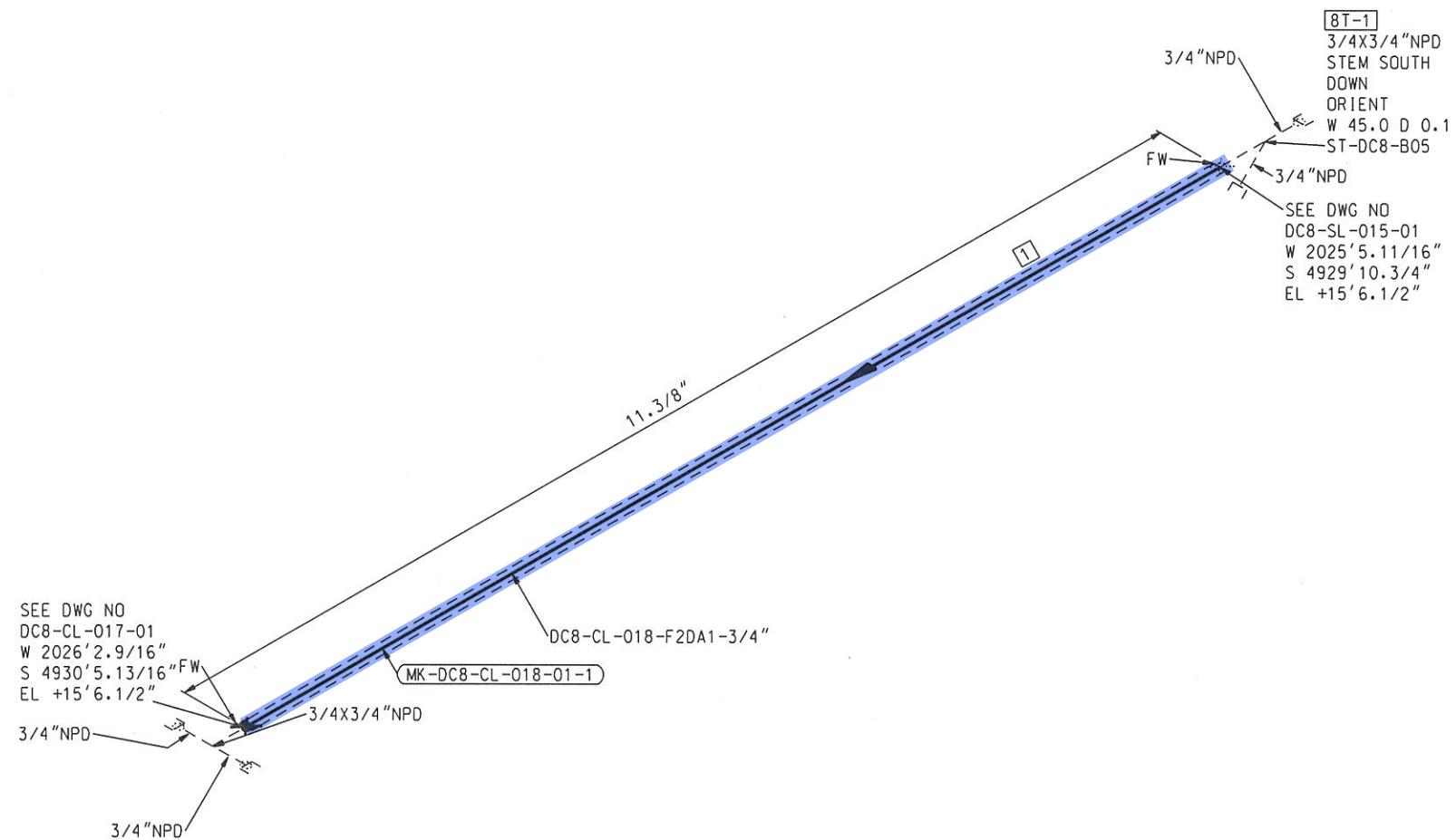
NO. DESCRIPTION

1 PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS. JE GRTR THAN = 0.85

SIZE 3/4 QTY. 1.0' COMMODITY PADJABCAAM

PIECE MARKS

MK-DC8-CL-018-01-1



CWA# 7C

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUCHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPE PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE	
PIPE MODEL FILE :	PP003126	CONSTRUCTION STATUS	ECC00057-DC8-D-2130	N	N/A	GREY	1"-9MC-HC	KI320I	292 0	366 150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.												
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.												
CAD DESIGN FILE :	070J80\\ISOREF\\MONSANTO.BDR												
ENG-1042	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED			

JACOBS**MONSANTO**

PROJECT NO. 07QJ81XX

COMMODITY

CL

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LINE NO.
DC8-CL-018-F2DA1-3/4"
CLASS
F2DA1

CONTRACT NO. FAB/CONST. MODEL AREA
MON11900

DRAWING NO.
DC8-CL-018-01
SHEET REV
01 1

RECEIVED
TURNER-INDUSTRIES

7-2-2018

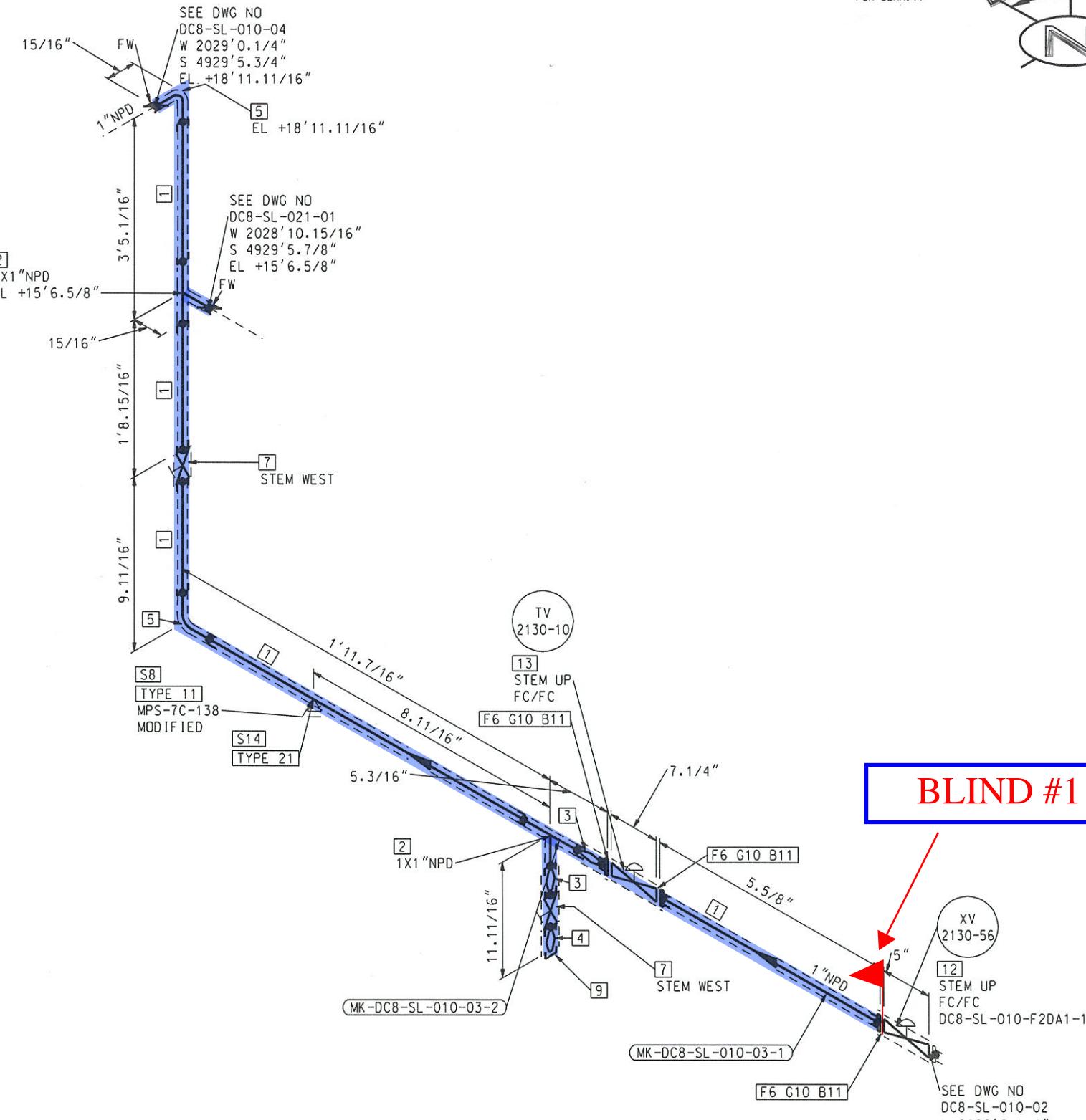
S. STILLWELL

EXTRACTION NO. : 12

EXTRACTION DATE. : 26-OCT-2017

V
ENG-1042 I:\\GEN\\DEFAULTS FILE : VARFILE\\F:\\070J80\\ISOREF\\MONSANTO.R.0F

TP-006-007



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

38.6



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1	7.7'	PADJABCAAM
2	TEE, CL3000, SWE, ASTM-A105, ASME-B16.11	1X1	2	STAQZZAAA
3	NIPPLE, PE, S-XS, 4" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	1	2	POJAABCAAM
4	NIPPLE, PE X MTE, S-XS, 4" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	1	1	POMAABCAAM
5	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	2	SLAQZZAAA
6	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	3	FCAABBAA
7	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1	2	FA233-8

PIPE SUPPORTS

8	T11-1#10-4-0-0-CS-M	1	1	TYPE 11
---	---------------------	---	---	---------

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
9	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	1	1	TCAQZZAAA
10	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1	3	XDSAFZZOSI
11	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	12	YZZZHZZFF

INSTRUMENTS

12	INSTRUMENT XV-2130-56	1	1	XV-2130-56
13	INSTRUMENT TV-2130-10	1	1	TV-2130-10
14	PIPE SUPPORTS T21-1#0-0-0-0.13-0	1	1	TYPE 21

PIECE MARKS

MK-DC8-SL-010-03-1 MK-DC8-SL-010-03-2

RECEIVED
TURNER-INDUSTRIES

7-2-2018

S. STILLWELL

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	DESIGN CONDITIONS TEMP °F	TEST PRESS	TEST MEDIA	NOE
PDS MODEL FILE : PP803126	CONSTRUCTION STATUS	ECC00057-DC9-D-3817	N	N/A	N/A	1"-9MC-HC	NPR	302 45	366 150	SVC SVC	V100
NOTES:											
3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.											
CAD DESIGN FILE : 070J80\\ISOREF\\MONSANTO.BDR											
REV DATE											
REVISION DESCRIPTION											
BY CHECKED BY STRESS APPROVED											

JACOBS'

MONSANTO

PROJECT NO. 07QJ81 XX

COMMODITY

SL

LINE NO.
DC8-SL-010-F2DA1-1*CLASS
F2DA1

CONTRACT NO. FAB/CONST. MODEL AREA

MON11900

DRAWING NO.

DC8-SL-010-03

SHEET REV

03 1

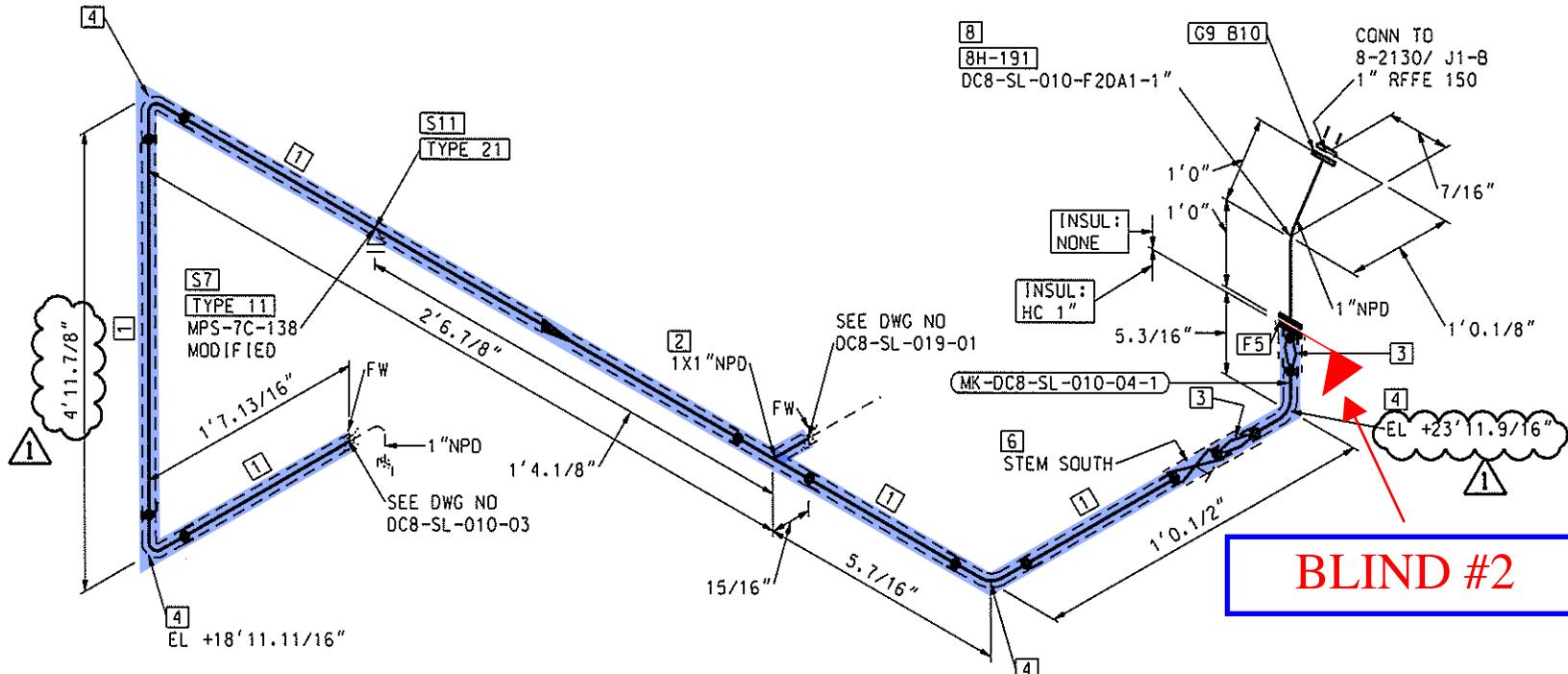
TP-006-007

EXTRACTION NO. : 18

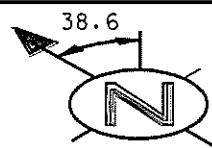
EXTRACTION DATE. : 20-JAN-2018

ISOPEN DEFAULTS FILE : VARFILE\01.F: \070J80\ISOREF\MONSANTO.R.DF

ENG-1842



NOTE: NORTH ARROW ROTATED FOR CLARITY



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1	1	PAQJABCAAM
2	TEE, CL3000, SWE, ASTM-A105, ASME-B16.11	1X1	1	STAQZZAAA
3	NIPPLE, PE, S-XS, 4" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	1	2	POJAABCAAM
4	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	4	SLAQZZAAA
5	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	1	FCAABBAAA
6	GATE VALVE, CS, CL800, SW, DS&Y, WELDED BONNET, HQ, TAG: FA233-ECC00057	1	1	FA233-8

PIPE SUPPORTS

7	T11-1#12-4-0-0-CS-M	1	1	TYPE 11
---	---------------------	---	---	---------

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
8	SPECIALTY ITEM 8H-191	1	1	8H-191
9	SW METALLIC GSKT: ASME B16.20, CL150, 316L MET, WINDING W/FLEX GRAPH FILLER AND IR/CR 304SS CR, 316L INNER RING	1	2	XDSAFZZOSI
10	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX, FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H, MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	8	YZZHZZFFE

PIPE SUPPORTS

11	T21-1#0-0-0-0.13-0	1	1	TYPE 21
----	--------------------	---	---	---------

PIECE MARKS

MK-DC8-SL-010-04-1

RECEIVED
TURNER-INDUSTRIES

6-19-2018

S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	DESIGN CONDITIONS TEMP °F	TEST PRESS	TEST MEDIA	NDE
POS MODEL FILE : PP803L26	CONSTRUCTION STATUS	ECC00057-DC9-D-3817	N	N/A	1'-9MC-HC	NPR	302	45	366	SVC	SVC
NOTES:	3. FFW = SHOT TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.										
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.										
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	0	01-NOV-2017	ISSUED FOR CONSTRUCTION			MPA	PCB			
		1	22-JAN-2018	ISSUED FOR CONSTRUCTION			MSS	PCB	LMB	DAD	
CAD DESIGN FILE :	070J80\ISOREF\MONSANTO.BDR	REV	DATE		REVISION DESCRIPTION		BY	CHECKED BY	STRESS	APPROVED	

JACOBS**MONSANTO**

PROJECT NO. 070J81 XX

COMMODITY

SL

LINE NO.
DC8-SL-010-F2DAI-1"CLASS
F2DAI

CONTRACT NO.

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

DC8-SL-010-04

SHEET

04

REV

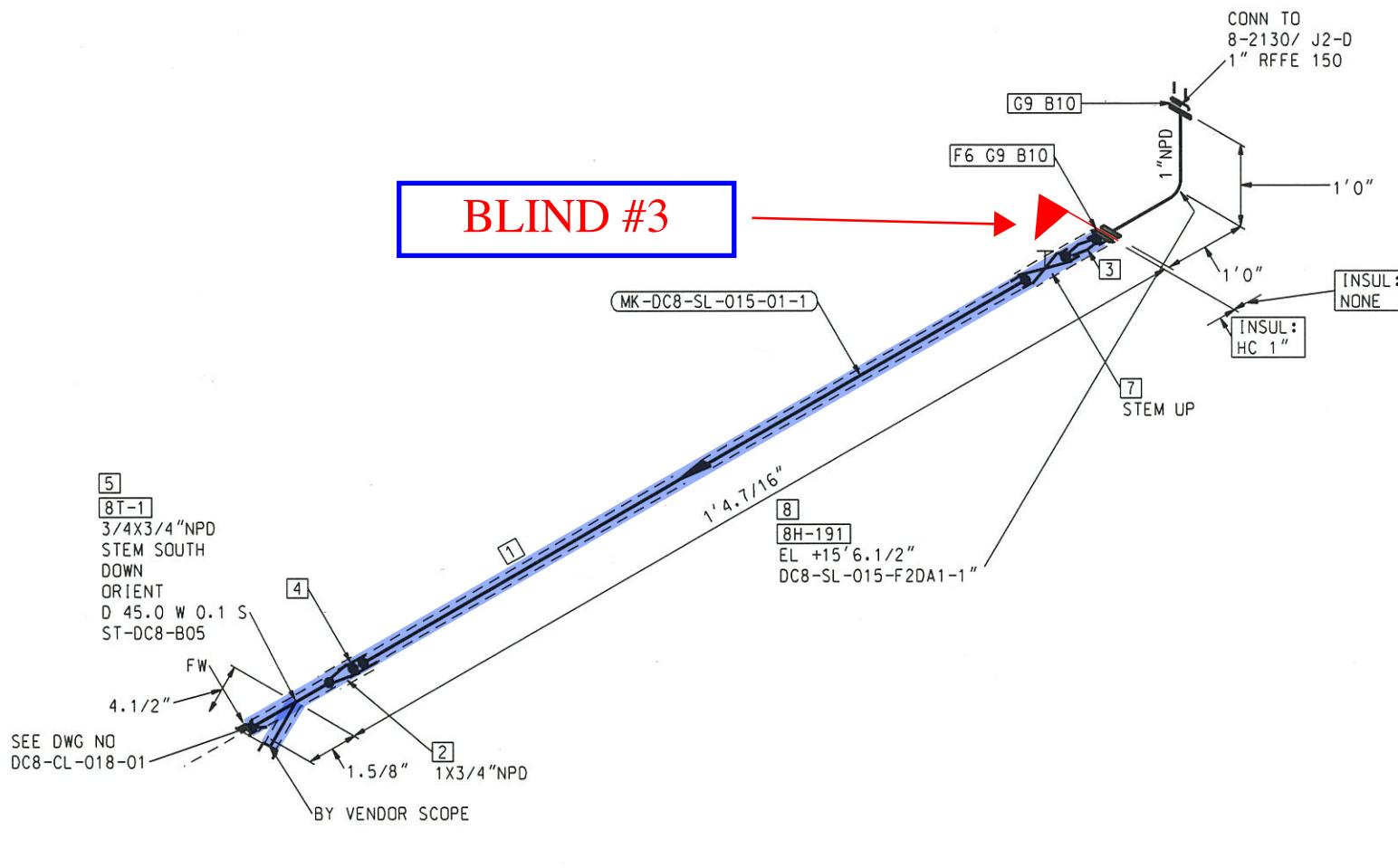
1

UNINCORPORATED COMPANY
LOUISIANA PARISH
HIGHWAY 20
MULING, LOUISIANA 70706
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PLOTTED ON : 21/9/2018

Alb-15

TP-006-007



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

RECEIVED
TURNER-INDUSTRIES

6-19-2018

S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NOE
PDS MODEL FILE : PP803126		ECC00057-DC8-D-2130	N	N/A	N/A	1"-9MC-HC	NPR	292 45	366 150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	01-NOV-2017	ISSUED FOR CONSTRUCTION			MPA	PCB	MC	TD	
CAD DESIGN FILE :	07QJ80\ISOREF\MONSANTO.BDR		REV	DATE	REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED	

JACOBS
 MONSANTO COMPANY
 LULING PLANT
 Hwy 10
 LULING, LOUISIANA 70070
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PROJECT NO. 07QJ81 XX
 COMMODITY
 SL
 LINE NO.
 DC8-SL-015-F2DA1-1*
 CLASS
 F2DA1
 CONTRACT NO.
 FAB/CONST.
 MODEL AREA
 DRAWING NO.
 DC8-SL-015-01
 SHEET REV
 01 0

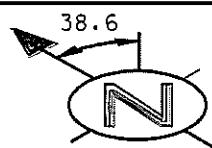
EXTRACTION NO. : 5

EXTRACTION DATE. : 20-JAN-2018

ISOGEN DEFAULT FILE : VARFILE.F : V070J80\ISOREF\MONSANTO.RDR

ENG-1842

TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

NO. DESCRIPTION

		SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1	0.4'	PADJABCAAM
2	NIPPLE, PE, S-XS, 4" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	1	2	POJAABCAAM
3	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	1	SLAQZZAAA
4	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	1	FCAABBAAA
5	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1	1	FA233-8

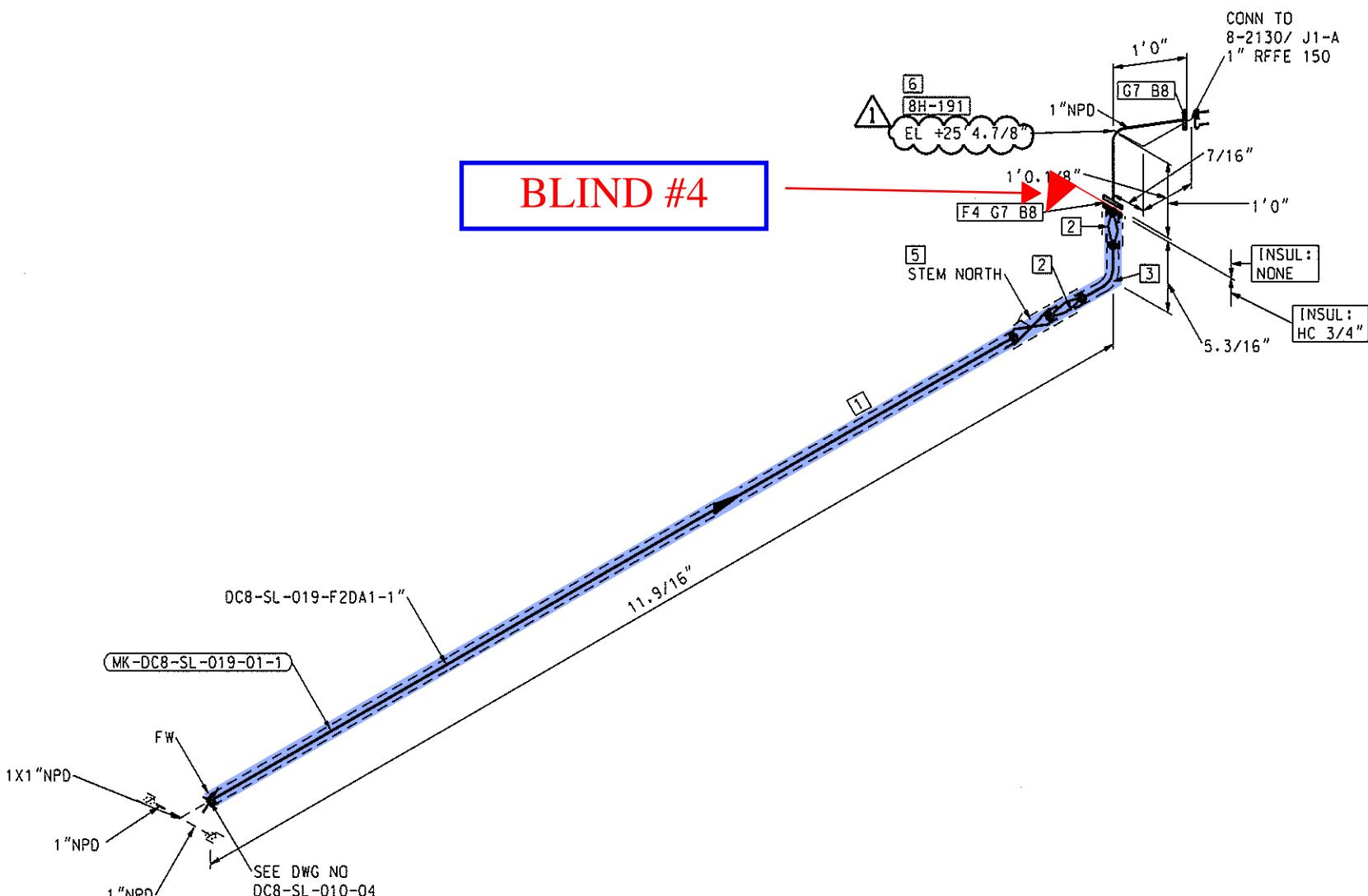
* FIELD MATERIALS *

NO. DESCRIPTION

		SIZE	QTY.	COMMODITY
6	SPECIALTY ITEM 8H-191	1	1	8H-191
7	SW METALLIC CSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1	2	XDSAFZZOSI
8	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. 87 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	8	YZZHZZFFE

PIECE MARKS

MK-DC8-SL-019-01-1



CWA# 7C

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NOE		
POS MODEL FILE : PP803L26	CONSTRUCTION STATUS	ECC00057-0C8-0-2130	N	N/A	N/A	1'-9MC-HC	NPR	TEMP °F 292	PSIG 45	TEMP °F 366	PSIG 150	SVC	SVC	V100
NOTES: 3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL & S UNLESS NOTED.	0	23-OCT-2017	ISSUED FOR CONSTRUCTION					MPA	PCB					
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	1	22-JAN-2018	ISSUED FOR CONSTRUCTION					MSS	PCB	<i>MF</i>	<i>DAD</i>			
CAD DESIGN FILE : 07QJ80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	MON11900	FAB/CONST.	MODEL AREA	

JACOBS

PROJECT NO. 07QJ81 XX

MONSANTOMONSANTO COMPANY
LUDOVIA PLANT
HIGHWAY 20
LUDOVIA, LOUISIANA 70701
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PLOTTED ON : 21/9/2018

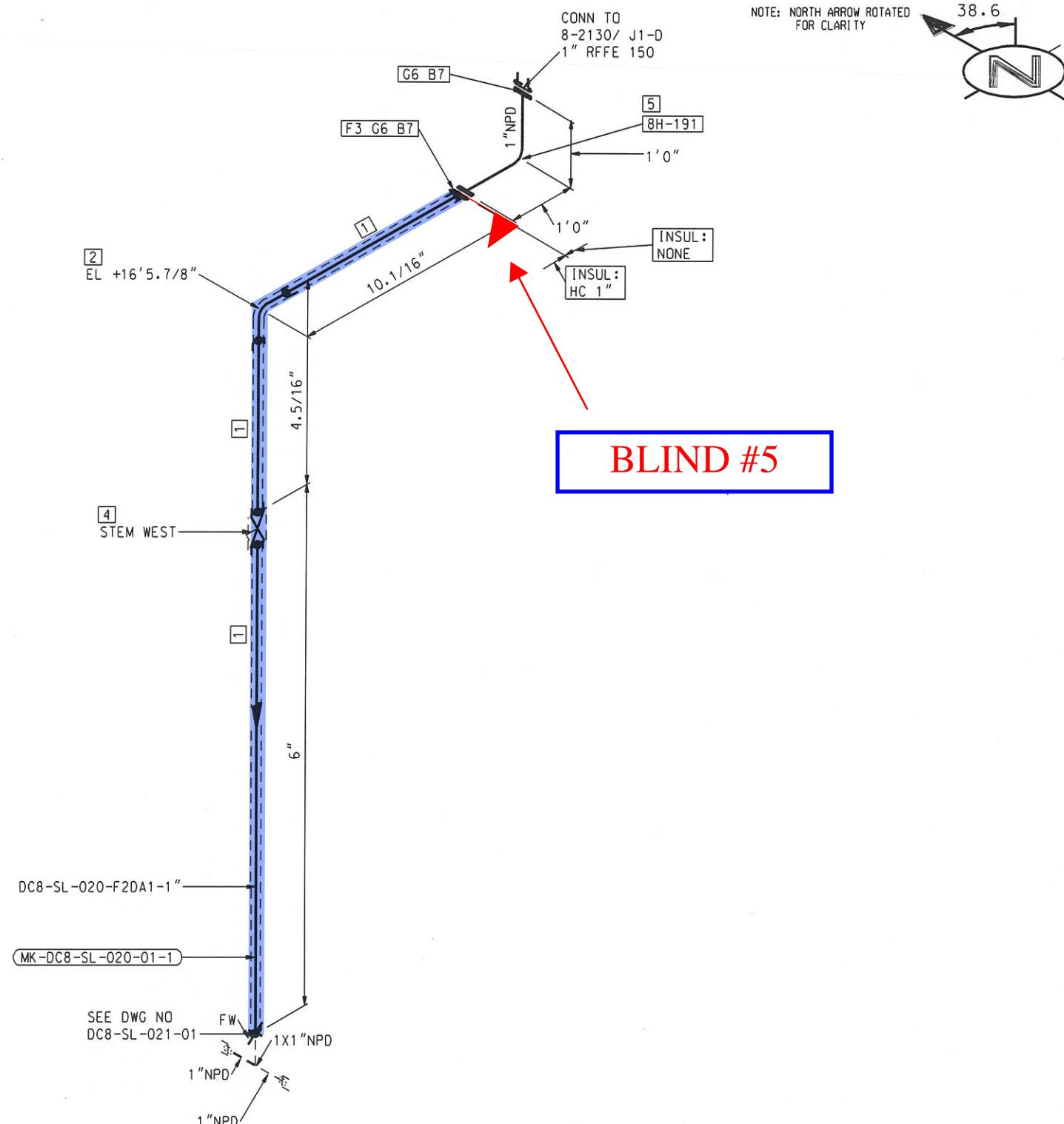
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6-19-2018

S. STILLWELL

Albris

TP-006-007



* SHOP MATERIALS *		
NO.	DESCRIPTION	SIZE
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1
2	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1
3	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1
4	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1

* FIELD MATERIALS *		
NO.	DESCRIPTION	SIZE
5	SPECIALTY ITEM 8H-191	1
6	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1
7	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2

PIECE MARKS		
MK-DC8-SL-020-01-1		

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

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PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE		JACOBS	PROJECT NO. 07QJ81 XX	MONSANTO	LINE NO. DC8-SL-020-F2DA1-1*	CLASS F20A1
PDS MODEL FILE : PP003126	CONSTRUCTION STATUS	ECC00057-DC8-D-210	N	N/A	N/A	1"-9MC-HC	NPR	TEMP °F	PSIG	TEMP °F	PSIG	SVC	SVC	V100							
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.																				
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL &'S UNLESS NOTED.																				
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.																				
REV	DATE		ISSUED FOR CONSTRUCTION					MPA	PCB	TD						CONTRACT NO. MON11900	FAB/CONST.	MODEL AREA	DRAWING NO. DC8-SL-020-01	SHEET 01 REV 0	
ENG-0042	CAD DESIGN FILE : 07QJ80\ISOREF\MONSANTO.BDR		BY	CHECKED BY	STRESS	APPROVED															

EXTRACTION NO. : 3

EXTRACTION DATE. : 26-OCT-2017

LE : VARFILE01:F:\070J80\ISOREF\MONSANTONR.DEF

TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

38.6

BLIND #6

SEE DWG NO
DC8-SL-010-03

(MK-DC8-SL-021-01-1)

DC8-SL-021-F2DA1-1"

1X1 "NPD

1 "NPD

1 ' 13/16 "

2' 5.1/2 "

S6
TYPE 11
MPS-7C-138

FW

SEE DWG NO
DC8-SL-020-01

15/16 "

1X1 "NPD

STEM WEST

6.3/16 "

EL +16' 5.7/8 "

4.5/16 "

6.15/16 "

F4 G8 B9

1 "NPD

1 ' 0 "

INSUL: NONE

INSUL: HC 1"

7
8H-191

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA # 70

DUE TO LOW FOUCLNESS PROBLEMS WITNESSED IN INDUSTRY:																										
ISogen Defaults	Piping Plan Reference:		P&ID No.	Stress Relieve		Tracing	Finish Color	Insulation	Coating System	Operating Conditions		Design Conditions		Test Press	Test Media	NDE										
	PDS Model File : PP803126			Construction Status						Temp °F	PSIG	Temp °F	PSIG													
ECC00057-DC8-D-2130		N		N/A		N/A		1"-9MC-HC		NPR	292	45	366	150	SVC	SVC	V100									
NOTES:		3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.																								
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.																										
2. ± DENOTES AN APPROXIMATE DIMENSION. FIELD CHECK BEFORE FABRICATION.																										
		0		26-OCT-2017		ISSUED FOR CONSTRUCTION										MPA	PCB	MC	BJZ	TD						
CAD DESIGN FILE : 07DJ80\ISOREF\MONSOANTO.BDR		REV		DATE		REVISION DESCRIPTION										BY	CHECKED BY	STRESS	APP							

JACOBS

1

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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6-19-2018
S. STILLWELL

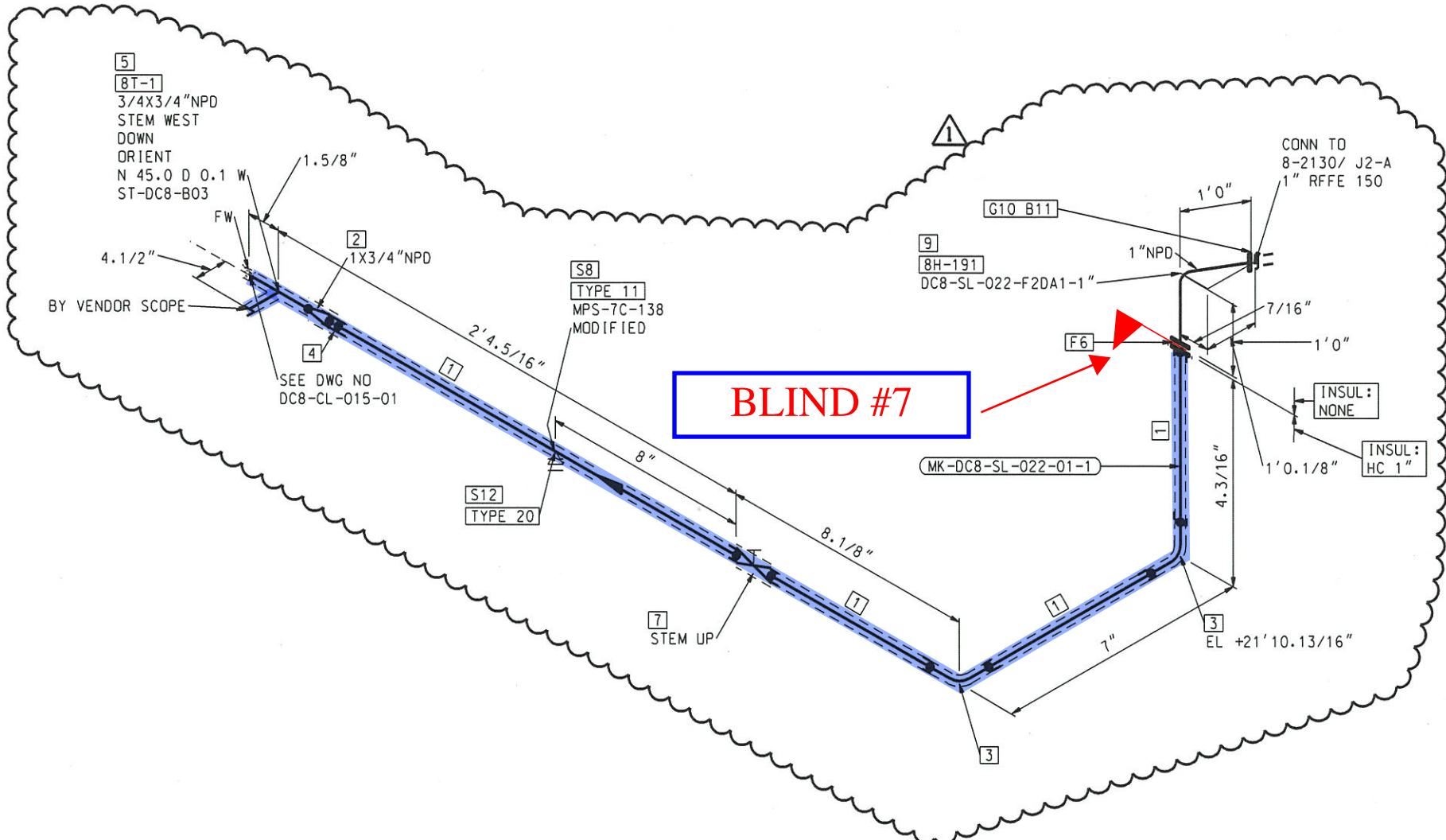
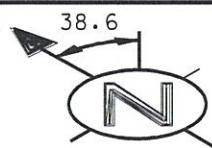
SCANNED ON : 10/30/2017

EXTRACTION NO. : 6

EXTRACTION DATE. : 30-JAN-2018

MATERIALS FILE : VARFL01.F: 070J801.SOREF\MONSANTO.R

TP-006-007

NOTE: NORTH ARROW ROTATED
FOR CLARITY

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	1	1	PADJABCAAM
2	CONCENTRIC SWAGE, S-XS, PBE, ASTM-A234-WPB, WROUGHT, MSS SP-95	1X3/4	1	WSABABCaaa
3	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	2	SLAQZZAAA
4	COUPLING, CL3000, SWE, ASTM-A105, ASME-B16.11	1	1	SAAQZZAAA

5 SPECIALTY ITEM 8T-1

6	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	1	FCAABBAAA
7	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1	1	FA233-8

PIPE SUPPORTS

8	T11-1#12-4-0-0-CS-M	1	1	TYPE 11
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* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
9	SPECIALTY ITEM 8H-191	1	1	8H-191
10	SW METALLIC GSKT: ASME B16.20, CL150, 316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1	2	XDSAFZZQS1
11	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX, FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H, MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	8	YZZZHZZFFE

PIPE SUPPORTS

12	T20-1#0-0-0-0.13-0.5	1	1	TYPE 20
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PIECE MARKS

MK-DC8-SL-022-01-1	1
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6-19-2018

S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7C

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	OPERATING CONDITIONS PSIG	DESIGN CONDITIONS TEMP °F	DESIGN CONDITIONS PSIG	TEST PRESS	TEST MEDIA	NOE
PSD MODEL FILE : PP080126	CONSTRUCTION STATUS	ECC00057-DC8-D-2130	N	N/A	1'-9MC-HC	NPR	292	45	366	150	SVC	SVC	V100

NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.	
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	

CAD DESIGN FILE :	REV	DATE	REVISION DESCRIPTION	BY	CHECKED BY	STRESS	APPROVED
07QJ801.SOREF\MONSANTO.BDR							

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LULING, LOUISIANA 70070
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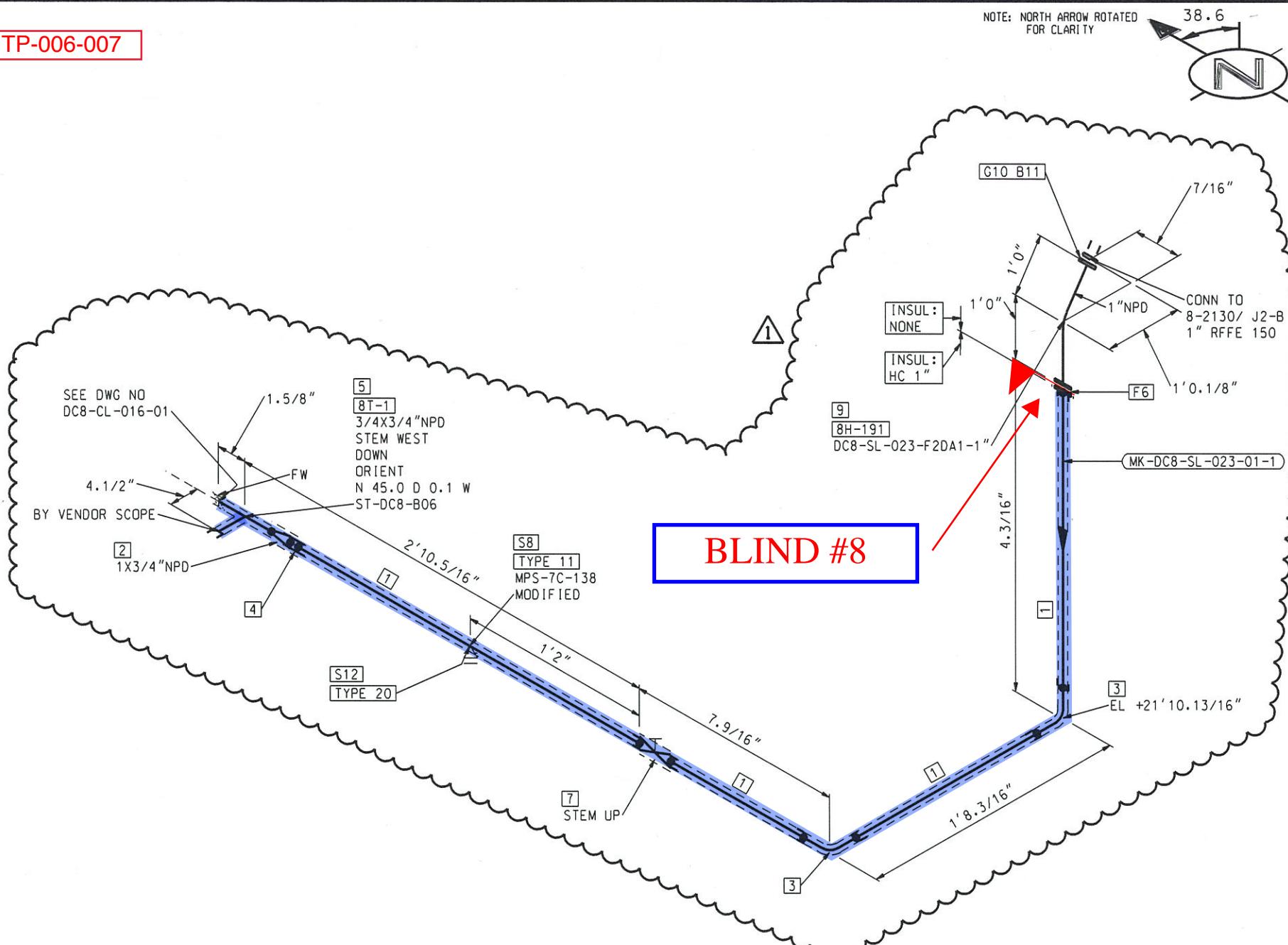
PROJECT NO. 07QJ81XX

COMMODITY	LINE NO.	CLASS
SL	DC8-SL-022-F2DAI-1"	F2DAI
CONTRACT NO.	FAB/CONST.	MODEL AREA
MON11900		DRAWING NO.
		DC8-SL-022-01
		SHEET REV
		01 1

PLOTTED ON : 17/30/2018

holenkf

TP-006-007



CWA# 7C

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUCHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:

POS MODEL FILE : PP803126

CONSTRUCTION STATUS

P&ID NO. STRESS RELIEVE TRACING FINISH COLOR INSULATION COATING SYSTEM OPERATING CONDITIONS DESIGN CONDITIONS TEST PRESS TEST MEDIA NDE

ECC0057-DC8-D-2130 N N/A N/A 1'-9MC-HC NPR 292 45 366 150 SVC SVC V100

NOTES:

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.
FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH

AND/OR VERTICAL C'S UNLESS NOTED.

2. ± DENOTES AN APPROXIMATE DIMENSION,

FIELD CHECK BEFORE FABRICATION.

CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR

REV DATE

REVISION DESCRIPTION

BY CHECKED BY STRESS APPROVED

* SHOP MATERIALS *

NO. DESCRIPTION

1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 SP-95	1	4.6'	PADJABCAAM
2	CONCENTRIC SWAGE, S-XS, PBE, ASTM-A234-WPB, WROUGHT, MSS	1X3/4	1	WSABABC
3	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	2	SLAOZZZAAA
4	COUPLING, CL3000, SWE, ASTM-A105, ASME-B16.11	1	1	SAAOZZZAAA
5	SPECIALTY ITEM 8T-1	3/4X3/4	1	8T-1
6	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	1	FCAABB
7	GATE VALVE, CS, CL800, SW, DS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1	1	FA233-8

PIPE SUPPORTS

8 T11-1#12-4-0-0-CS-M

* FIELD MATERIALS *

NO. DESCRIPTION

9	SPECIALTY ITEM 8H-191	1	1	8H-191
10	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1	2	XDSAFZZQS
11	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	8	YZZHZZZFFE

PIPE SUPPORTS

12 T20-1#0-0-0-0.13-0.5

PIECE MARKS

MK-DC8-SL-023-01-1

RECEIVED
TURNER-INDUSTRIES

6-19-2018

S. STILLWELL

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LULING, LOUISIANA 70070
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PROJECT NO. 070J81XX

COMMODITY

SL

LINE NO.

DC8-SL-023-F2DA1-1"

CLASS

F2DA1

CONTRACT NO.

MON11900

FAB/CONST.

DRAWING NO.

DC8-SL-023-01

MODEL AREA

SHEET

01

REV

1

TP-006-007

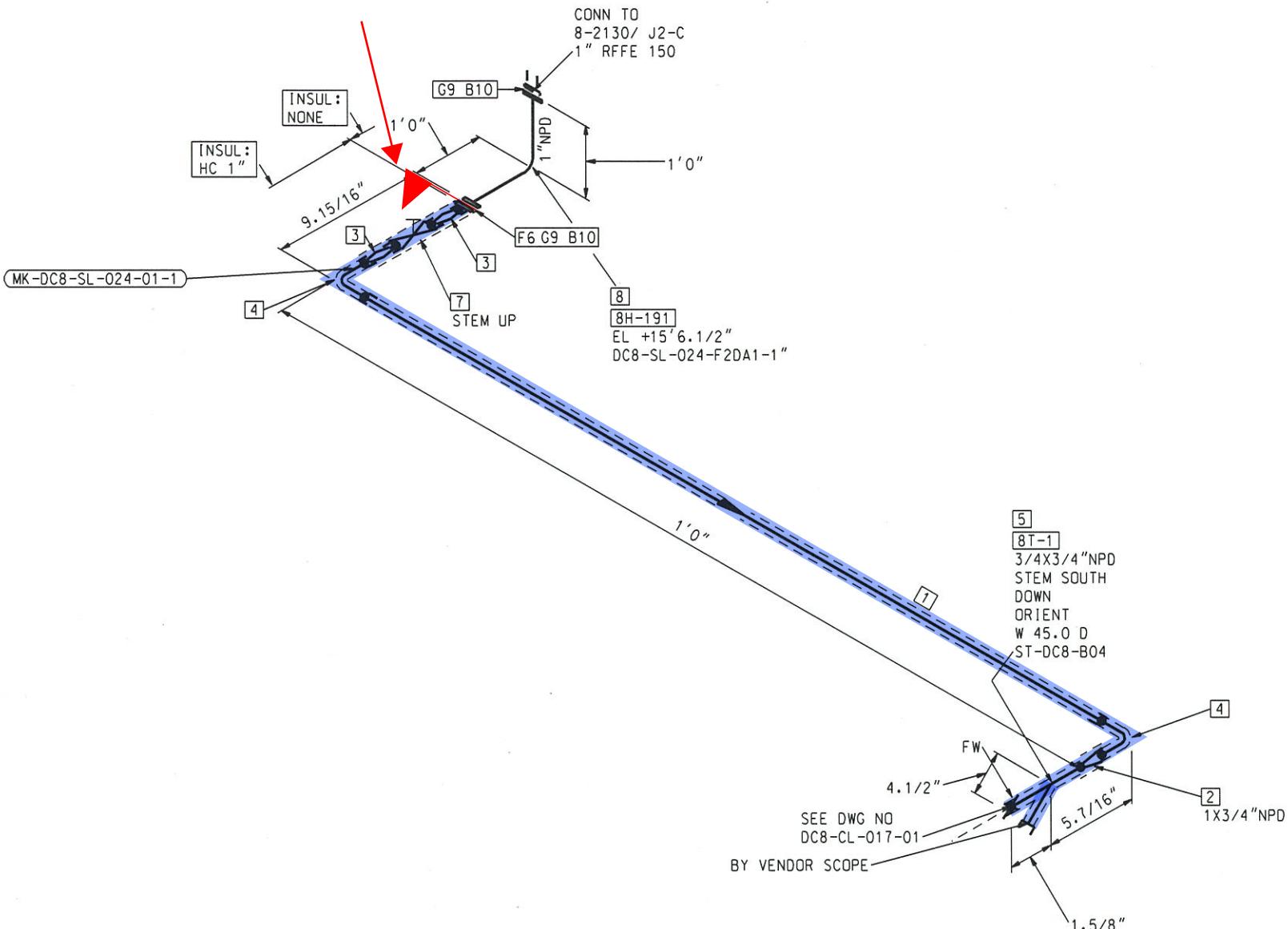
EXTRACTION NO. : 7

EXTRACTION DATE. : 01 - NOV - 2017

ISOCEN DEFAULTS FILE : VARFILE\01\ff:\070J80\ISOREF\MONSANTO.DEF

ENG-1042

BLIND #9



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-XS, PE, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 SP-95	1	0.9'	PADJABCAAM
2	CONCENTRIC SWAGE, S-XS, PBE, ASTM-A234-WPB, WROUGHT, MSS	1X3/4	1	WSABABCAA
3	NIPPLE, PE, S-XS, 3" LONG, ASTM: A53, TYPE E GR. B, OR A53, TYPE S GR. B OR A106 GR. B, ERW OR SMLS	1	2	POCAABCAM
4	90 DEG ELBOW, CL3000, SWE, ASTM-A105, ASME-B16.11	1	2	SLAQZZAAA
5	SPECIALTY ITEM 8T-1	3/4X3/4	1	8T-1
6	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1	1	FCAABBAAA
7	GATE VALVE, CS, CL800, SW, DS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	1	1	FA233-8

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
8	SPECIALTY ITEM 8H-191	1	1	8H-191
9	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1	2	XDSAFZZOSI
10	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.5" BOLT LENGTH	1/2	8	YZZZHZZFFE

PIECE MARKS

MK-DC8-SL-024-01-1

CWA# 7C

RECEIVED
TURNER-INDUSTRIES
6-19-2018
S. STILLWELL

PLOTTED ON : 11/2/2017

holder

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	PSIG	DESIGN CONDITIONS TEMP °F	PSIG	TEST PRESS	TEST MEDIA	NOE
PDS MODEL FILE : PP803126	ECC00057-DC8-D-2130	N	N/A	N/A	1"-9MC-HC	NPR	292	45	366	150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.													
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	0	01-NOV-2017	ISSUED FOR CONSTRUCTION				MPA	PCB					
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION		BY	CHECKED BY	STRESS	APPROVED					
JACOBS	MONSANTO	MONSANTO COMPANY LULING PLANT LULING, LOUISIANA 70070 THIS DRAWING IS THE PRIVATE PROPERTY OF MONSANTO COMPANY AND MUST BE RETURNED UPON REQUEST. OTHERWISE, IT MAY NOT BE COPIED OR REPRODUCED, IN WHOLE OR PART, WITHOUT THE EXPRESSED WRITTEN CONSENT OF MONSANTO COMPANY.	PROJECT NO. 070J81 XX	COMMODITY	LINE NO.	CLASS							
			SL	DC8-SL-024-F2DA1-1*	F2DA1								
			CONTRACT NO.	FAB/CONST.	MODEL AREA	DRAWING NO.							
			MON11900			DC8-SL-024-01	SHEET	REV					
							01	0					

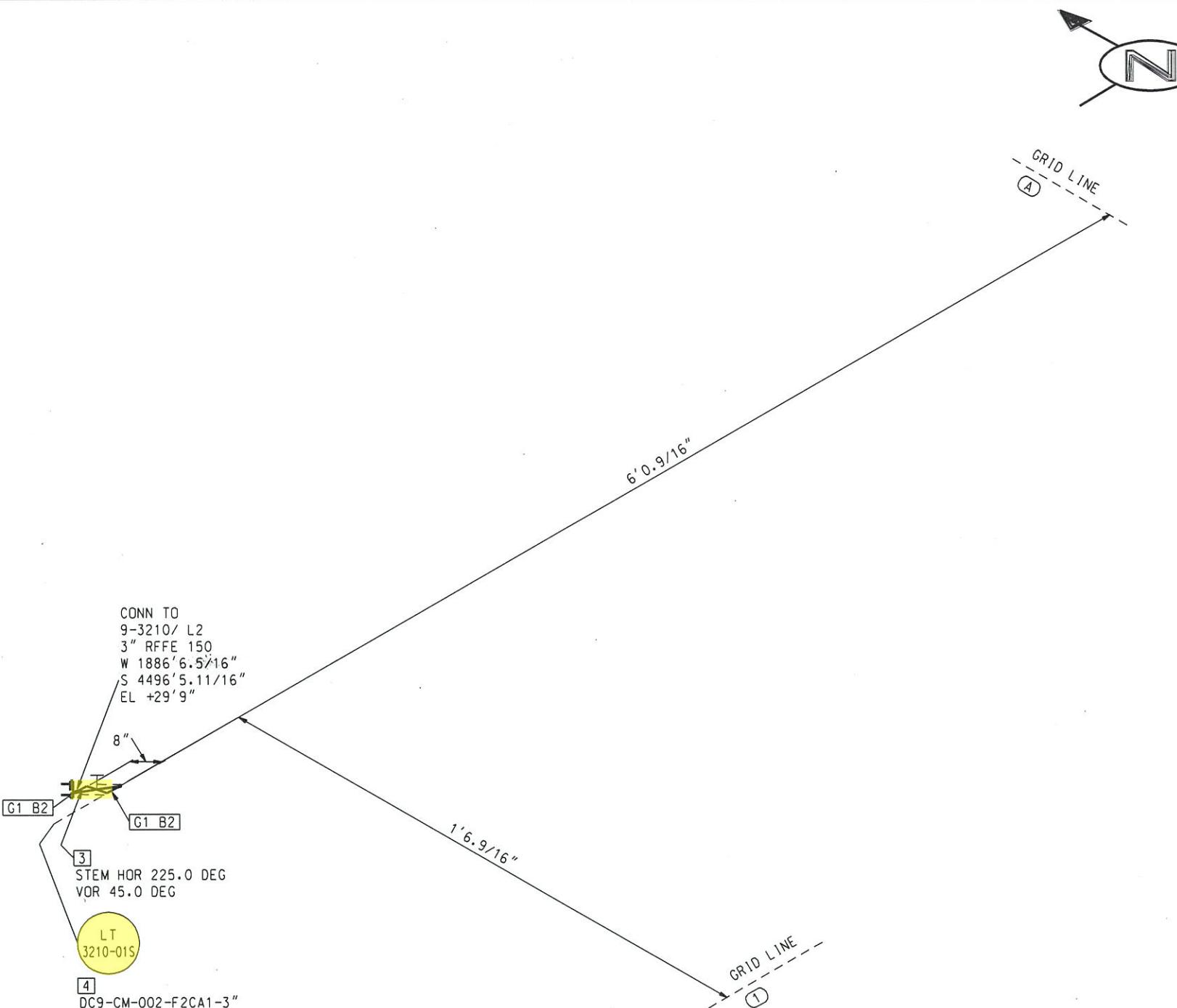
0016-PIPE-006-000

EXTRACTION NO. : 7

EXTRACTION DATE. : 07-DEC-2017

ISOCEN DEFAULTS FILE : VARFILE.F : \070J80\ISOREF\MONSANTO.DEF

ENG-1042 CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUCHNESS PROBLEMS WITNESSED IN INDUSTRY.

VISUAL CWA# 9B

* FIELD MATERIALS *	
NO. DESCRIPTION	
1	SW METALLIC GSKT: ASME B16.20, CL150, 316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING
2	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX, FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H, MONSANTO STD P34101, 3.5" BOLT LENGTH
3	GATE VALVE, CS, CL150, RF, DS&Y, BOLTED BONNET, HO, TAG: FA245-ECC00057
INSTRUMENTS	
4	INSTRUMENT LT-3210-01S

SIZE	QTY.	COMMODITY
3	2	XDSAFZZOSI
5/8	8	YZZHZZFFE
3	1	FA245-1
3	1	LT-3210-01S

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803454		ECC00057-DC9-D-3210	N	ET	GREY	1"-9MC-HC	KI320I	292 50	366 150	450	WATER	R5, V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	07-DEC-2017	ISSUED FOR CONSTRUCTION				HJP	RNT ME	Bob	Bob
CAD DESIGN FILE :	070J80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	
JACOBS	MONSANTO		MONSANTO COMPANY LULING PLANT HOUSSIER, LOUISIANA 70070 THIS DRAWING IS THE PRIVATE PROPERTY OF MONSANTO COMPANY AND MUST BE RETURNED WHEN REQUESTED. NO COPIES MAY NOT BE MADE OR REPRODUCED, IN WHOLE OR PART, WITHOUT THE EXPRESSED WRITTEN CONSENT OF MONSANTO COMPANY.		PROJECT NO. 07QJ81 XX	LINE NO. DC9-CM-002-F2CA1-3*	CLASS F2CA1					
ENG-1042	ISOCEN	DEF	PLOTTED ON : 12/7/2017	COMMODITY CM	CONTRACT NO. MON11900	FAB/CONST.	MODEL AREA	DRAWING NO. DC9-CM-002-01	SHEET 01	REV 0	holder	

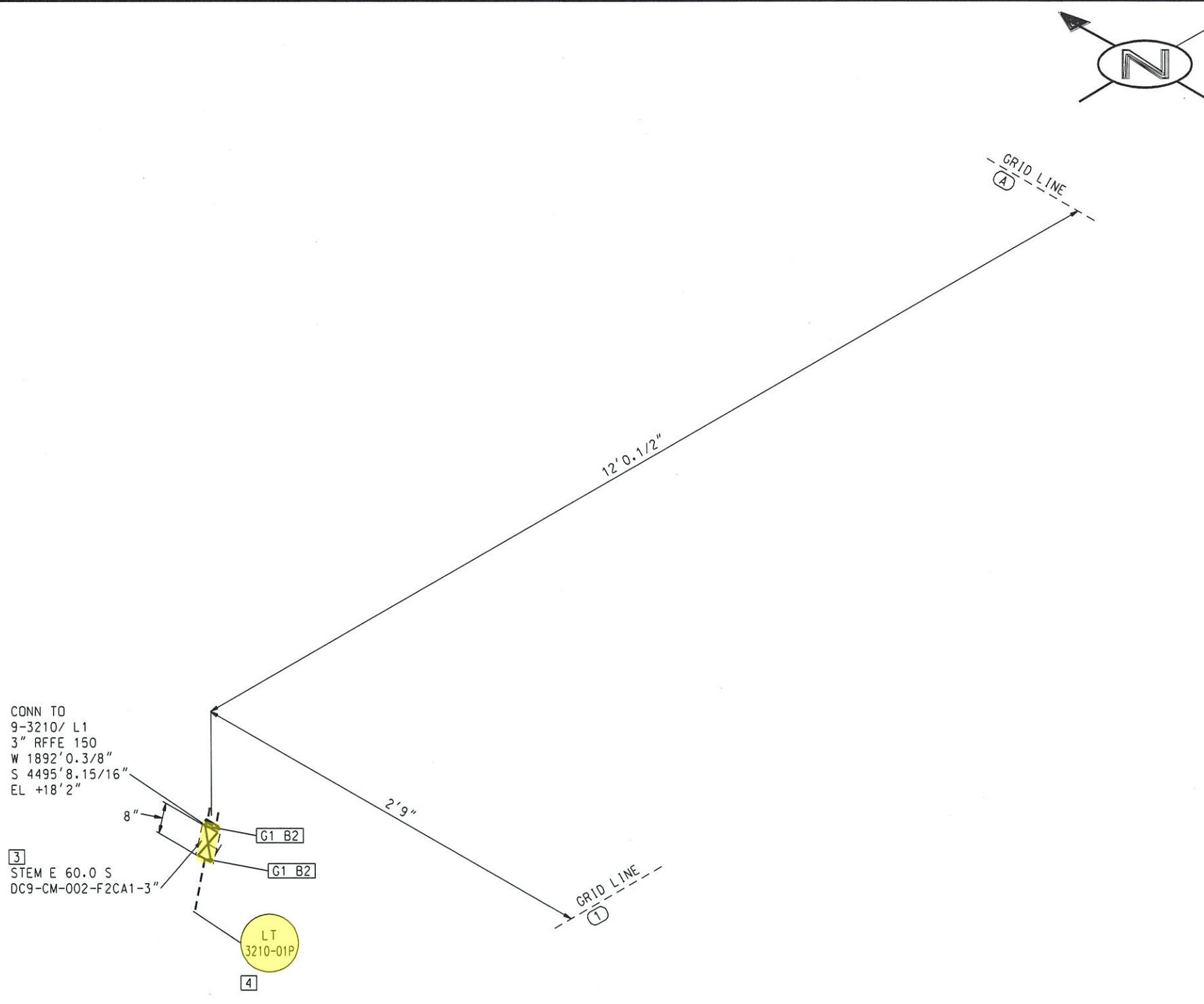
0016-PIPE-006-000

EXTRACTION NO. : 7

EXTRACTION DATE. : 07-DEC-2017

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ENG-1042



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

VISUAL CWA# 9B

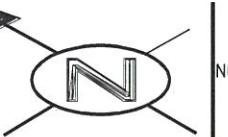
PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NOE
PDS MODEL FILE : PP03454	CONSTRUCTION STATUS	ECC00057-DC9-D-3210	N	ET	GREY	1"-9MC-HC	KI3201	292 50	366 150	450	WATER	R5. V100
NOTES: 3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.												
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			0	07-DEC-2017	ISSUED FOR CONSTRUCTION		HJP	RNT NF	MJS	JL		
			REV	DATE	REVISION DESCRIPTION		BY	CHECKED BY	STRESS	APPROVED		

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PLOTTED ON : 12/7/2017

holder

0016-PIPE-006-000



* FIELD MATERIALS *

NO. DESCRIPTION

	SIZE	QTY.	COMMODITY
1 SW METALLIC GSKT: ASME B16.20, CL150, 316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR. 316L INNER RING	2	1	XDSAFZZOSI
2 ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX, FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H, MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	4	YZZZHZZFFE

INSTRUMENTS

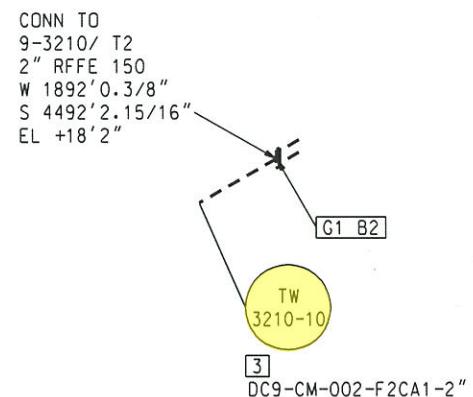
3 INSTRUMENT TW-3210-10	2	1
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EXTRACTION NO. : 4

EXTRACTION DATE. : 10-OCT-2017

ISGEN DEFAULTS FILE : VARFILE\070J80\ISOREF\MONSANTO.DEF

ENG-1042



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
 (JACOBS STANDARD 07QJ81XX-E02-D030-00002)
 , PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
 FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
 DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

VISUAL CWA# 9B

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE
PDG MODEL FILE : PP803454	CONSTRUCTION STATUS	ECC00057-DC9-D-3210	N	ET	GREY	1"-9MC-HC	K13201	292	50	366	150	450	WATER	R5, V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.													
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.														
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.			0	10-OCT-2017	ISSUED FOR CONSTRUCTION				HJP	PAP	MW			
CAO DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	MON11900	

JACOBS
 MONSANTO 
 PROJECT NO. 07QJ81 XX
 COMMODITY CM
 LINE NO. DC9-CM-002-F2CA1-2* CLASS F2CA1
 CONTRACT NO. DRAWING NO. SHEET REV
 MON11900 DC9-CM-002-03 03 0

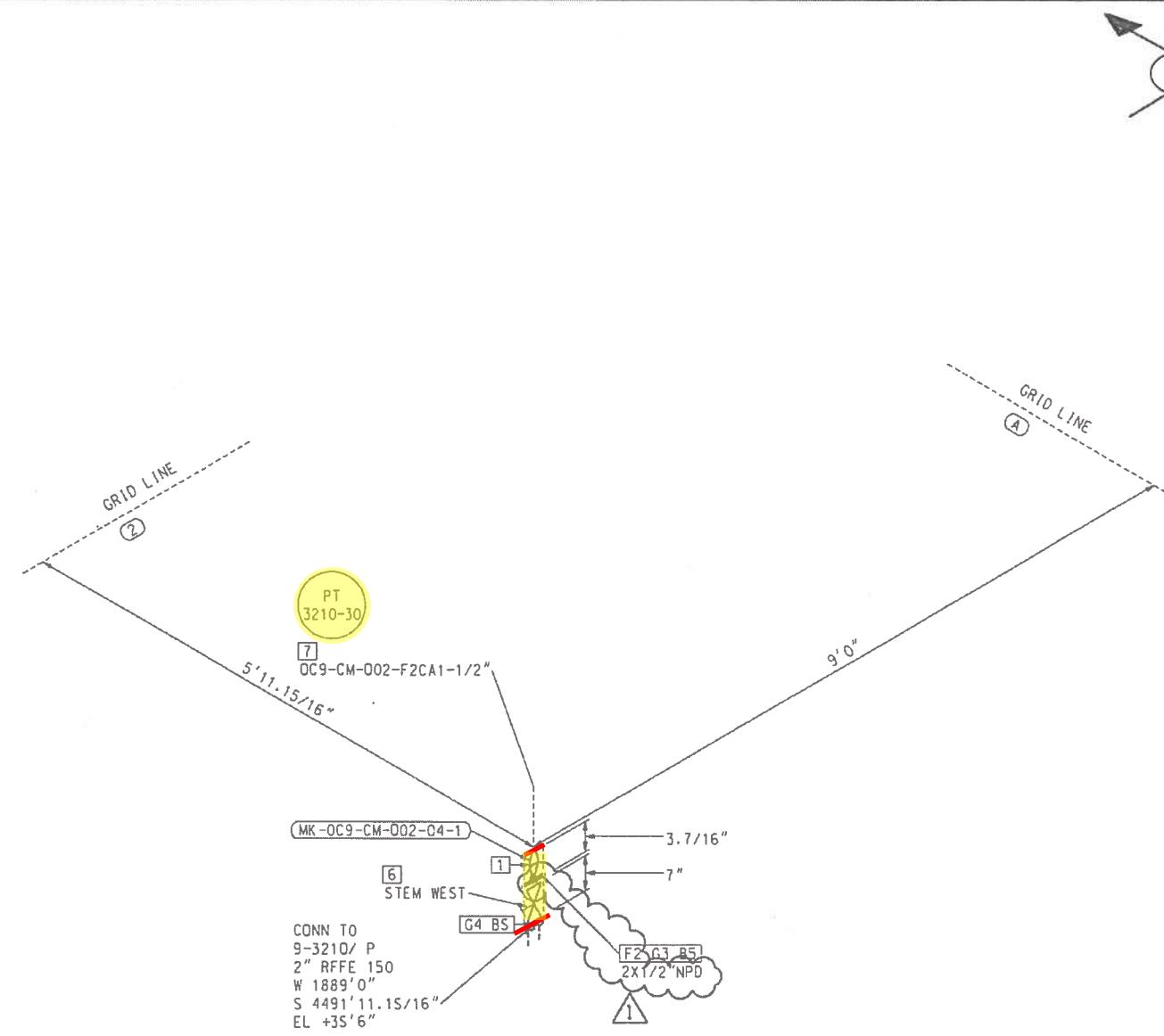
PLOTTED ON : 10/10/2017

holdenkf

ENG-1242 150GEN DEFALTS FILE : VARFL01:F:\070JBB\150REF\MONSANTO.DF

EXTRACTION DATE. : 29-MAR-2018

EXTRACTION NO. : 5



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

BENCH TEST

CWA# 9

DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.														
PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NOE		
POS MODEL FILE : PPB03454		ECC00057-DC9-D-3210	N	ET	GREY	1"-9MC-HC	K13201	292	50	366	150	450	WATER	R5, V120
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.													
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL & S UNLESS NOTED.		0	18-OCT-2017	ISSUED FOR CONSTRUCTION					HJP	PAP				
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		1	29-MAR-2018	ISSUED FOR CONSTRUCTION					RJP	PAP ME				
DAD DESIGN FILE : 07DJ60\ISOREF\MONSANTO.BDR		REV	DATE	REVISION DESCRIPTION						BY	CHECKED BY	STRESS	APPROVED	

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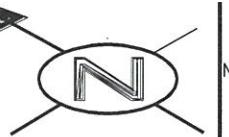
MONSANTO COMPANY
LILLO PLANT
NEWELL RD
LILLING, LOUISIANA 70453

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PLOTE

卷之三

100



* FIELD MATERIALS *

NO. DESCRIPTION

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	SW METALLIC GSKT: ASME B16.20, CL150, 316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR. 316L INNER RING	2	1	XDSAFZZOSI
2	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX. FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H. MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	4	YZZZHZZFF

INSTRUMENTS

3 INSTRUMENT TW-3210-11

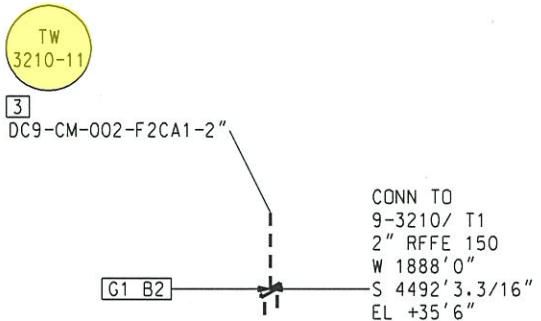
SIZE	QTY.	COMMODITY
2	1	TW-3210-11

EXTRACTION NO. : 3

EXTRACTION DATE. : 10-OCT-2017

ISOCEN DEFAULTS FILE : VARFILE1.F: \070J80\ISOREF\MONSANTO.DEF

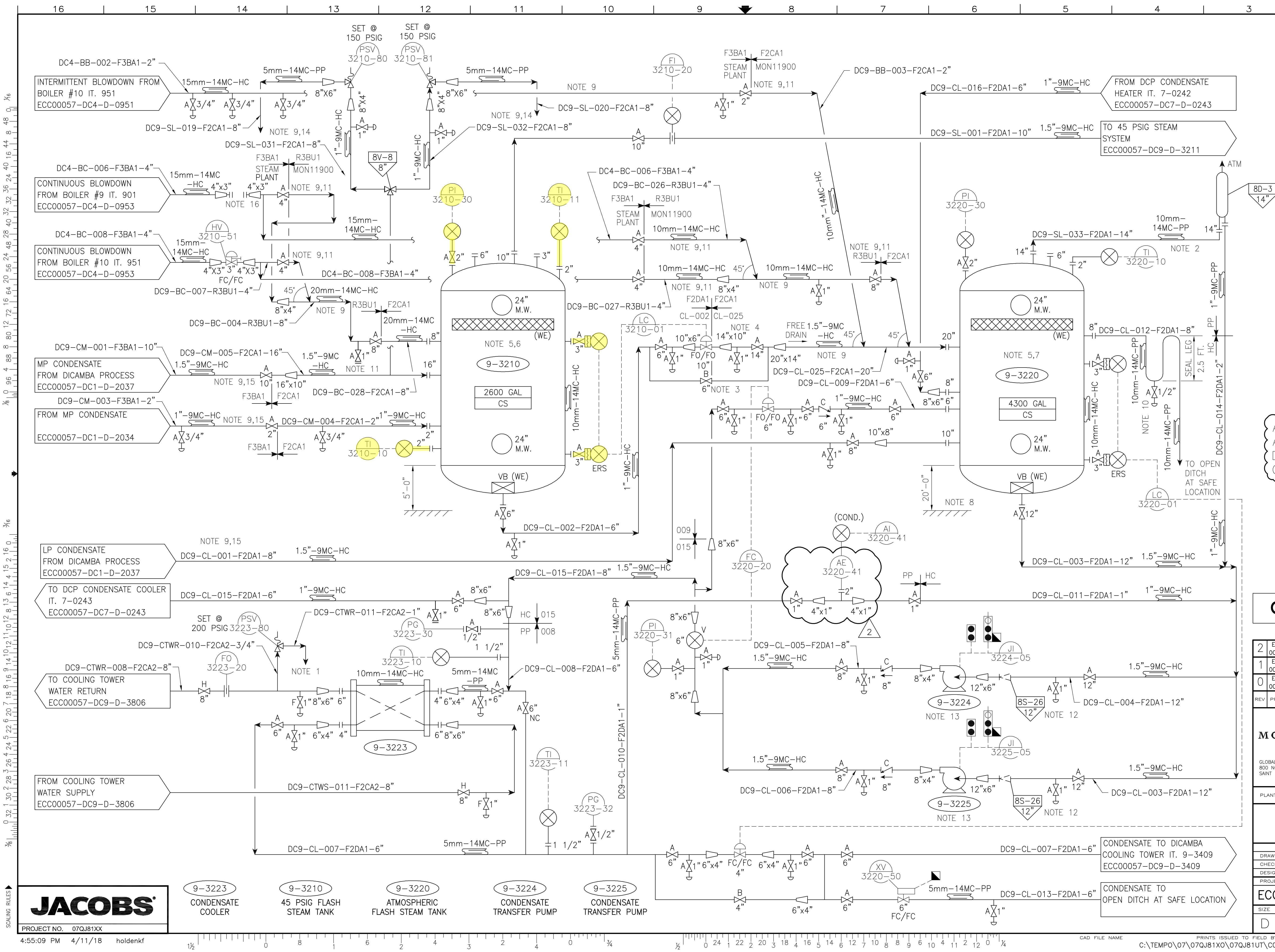
ENG-1042



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

VISUAL CWA# 9B

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
POS MODEL FILE : PP803454	CONSTRUCTION STATUS	ECC00057-DC9-D-3210	N	ET	GREY	1"-9MC-HC	KI 3201	292 PSIG	50	366 PSIG	150
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.										
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	10-OCT-2017	ISSUED FOR CONSTRUCTION			HJP	PAP MB 11/18			
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE		REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED	
JACOBS	MONSANTO	MONSANTO COMPANY LULING PLANT LULING, LOUISIANA 70070 THIS DRAWING IS THE PRIVATE PROPERTY OF MONSANTO COMPANY, AND MUST BE Held in Confidence. It may not be copied WHOLE OR PART, WITHOUT THE EXPRESSED WRITTEN CONSENT OF MONSANTO COMPANY.	PROJECT NO. 07QJ81 XX	COMMODITY	LINE NO.	CLASS					
			CM	DC9-CM-002-F2CA1-2*	F2CA1	DRAWING NO.	SHEET	REV			
				MON11900	05	DC9-CM-002-05	05	0			



2	ECC LSR 00057 04/16/2018	ISSUED FOR CONSTRUCTION	AVK			
1	ECC LSR 00057 11/30/2017	ISSUED FOR CONSTRUCTION	AVK			
0	ECC GKG 00057 04/13/2017	ISSUED FOR CONSTRUCTION	AVK			
REV	PROJ.	BY DATE	CHKD APPD			
COMPANY CONFIDENTIAL	THIS DRAWING IS THE CONFIDENTIAL PROPERTY OF MONSANTO COMPANY AND IS TO BE USED ONLY BY AUTHORIZED PERSONNEL AND IN THE INTEREST OF MONSANTO. IT MUST BE RETURNED TO MONSANTO'S CORPORATE ENGINEERING DEPARTMENT OR DESTROYED WHEN NO LONGER NEEDED, BUT IN ANY EVENT AT COMPLETION OF THE PROJECT. THIS DRAWING CONTAINS TRADE SECRETS TO KEEP CONFIDENTIAL, AND TO REQUIRE HIS (ITS) EMPLOYEES TO KEEP CONFIDENTIAL. THE INFORMATION CONTAINED HEREIN SHALL BE MADE KNOWN ONLY TO PERSONS WHO REQUIRE SUCH INFORMATION FOR THEIR WORK ON MONSANTO'S PROJECTS.					
MONSANTO	GLOBAL ENGINEERING DEPARTMENT 800 NORTH LINDBERGH BOULEVARD SAINT LOUIS, MISSOURI 63167					
LULING, LA						
ENGINEERING FLOW DIAGRAM						
STEAM & CONDENSATE SYSTEM						
MON11900						
DRAWN	BY	DATE	APPROVED	DATE	APPROVED	DATE
RJW		9/3/15				
CHECKED	JS					
DESIGNED						
PROJECT NO.	PLANT	ZONE	TYPE	NUMBER		
ECC00057	42	DC9	D	3210		
SIZE	PLANT DRAWING NO.	REV				
D	ECC00057-DC9-D-3210	2				

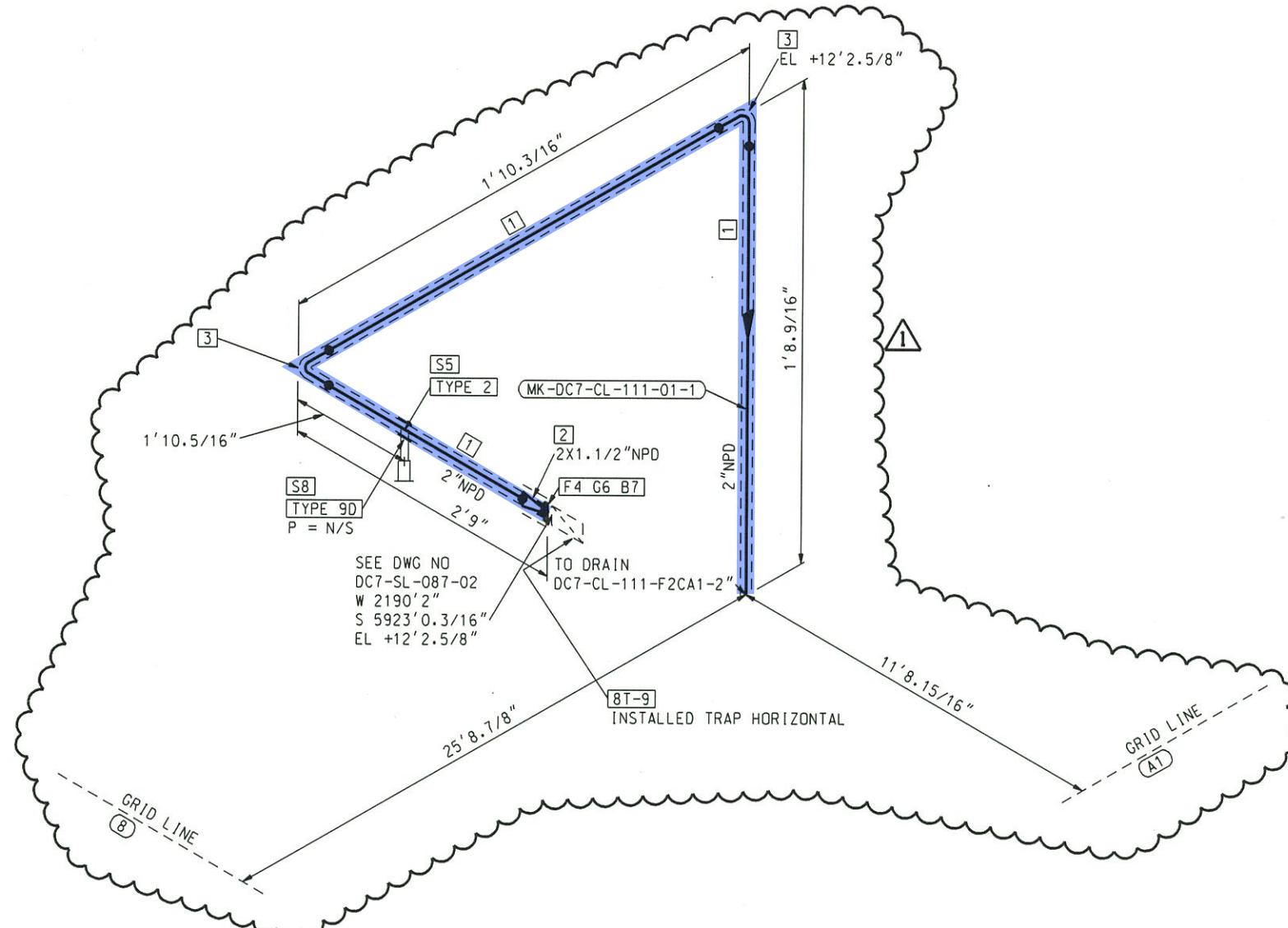
TP-007-005

EXTRACTION NO. : 2

EXTRACTION DATE. : 09-JAN-2018

ISOCEN DEFAULTS FILE : VARFILE\01\FI:\V070J80\ISOREF\MONSANTO.DBF

ENG-1042



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7A

* SHOP MATERIALS *

NO. DESCRIPTION

- 1 PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GTR THAN = 0.85
- 2 CONCENTRIC SWAGE, S-STD X S-XS, BLE X PSE, ASTM-A234-WPB, WROUGHT, MSS SP-95
- 3 90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9
- 4 FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE

SIZE	QTY.	COMMODITY
2	1	PAAJABBAAM
2X1.1/2	1	WSACGWBAAA
2	2	WAAAABBAAA
1.1/2	1	FCAABBAAA

PIPE SUPPORTS

- 5 T2-2#22.06-25.06-0-0-1.5-CS

2	1	TYPE 2
---	---	--------

* FIELD MATERIALS *

NO. DESCRIPTION

- 6 SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR-304SS CR, 316L INNER RING
- 7 ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.75" BOLT LENGTH

SIZE	QTY.	COMMODITY
1.1/2	1	XDSAFZZQS1
1/2	4	YZZZHZZFFE

PIPE SUPPORTS

- 8 T9D-2#0-0-0-0.13-1

2	1	TYPE 9D
---	---	---------

PIECE MARKS

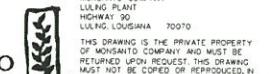
MK-DC7-CL-111-01-1

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5-31-2018

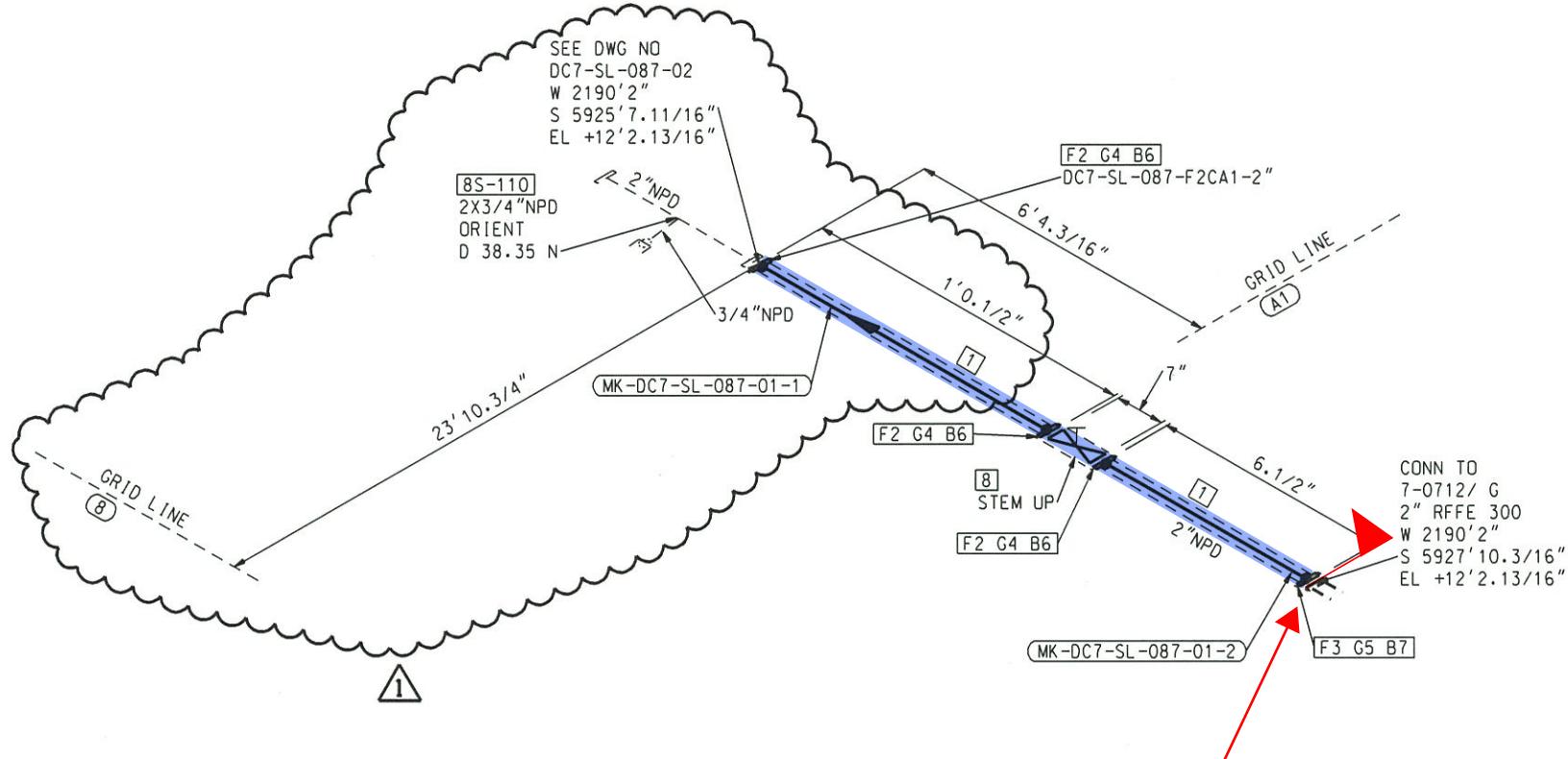
S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	PSIG	DESIGN CONDITIONS TEMP °F	PSIG	TEST PRESS	TEST MEDIA	NDE
POD MODEL FILE :	CONSTRUCTION STATUS	ECC00057-DC7-D-0710	N	N/A	GREY	5MM-14MC-PP	KI3201	211	0	366	150	SVC	SVC	R5, VI00
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.													
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.													
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	06-JUL-2017	ISSUED FOR CONSTRUCTION					MPA	PCB			
				1	09-JAN-2018	ISSUED FOR CONSTRUCTION					MPA	PCB	MF	QD
CAD DESIGN FILE :	07QJ80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION					BY	CHECKED BY	STRESS	APPROVED		

JACOBS**MONSANTO**

PROJECT NO. 07QJ81 XX	COMMODITY CL	LINE NO. DC7-CL-111-F2CA1-2*	CLASS F2CA1

TP-007-005



BLIND #1

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7A

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	1	PAAJABBAAM
2	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	3	FEABZZAA
3	FLANGE, CL300, RFFE/SO, ASTM-A105, ASME-B16.5	2	1	FEABBZAA

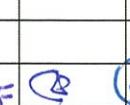
* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
4	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	3	XDSAFZZORG
5	SW METALLIC GSKT:ASME B16.20,CL300,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR. 316L INNER RING	2	1	XDSBFZZOSI
6	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. B7 2H.MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	12	YZZHZZZFFE
7	ALLOY CONT THD STUDS: ASTM A193,GR.B7 HVY HEX,NUTS: ASTM A194,GR. 2H.USE LOCTITE LB 771 NICKEL ANTI-SEIZE WHEN INSTALLING STUDS & NUTS, 3.5" BOLT LENGTH	5/8	8	YZZHZZZFGC
8	GATE VALVE, CS, CL150, RF, OS&Y, BOLTED BONNET, HO, TAG: FA245-ECC00057	2	1	FA245-1

PIECE MARKS

MK-DC7-SL-087-01-1 MK-DC7-SL-087-01-2

RECEIVED
TURNER-INDUSTRIES
5-31-2018
S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F PSIG	DESIGN CONDITIONS TEMP °F PSIG	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803119	CONSTRUCTION STATUS	ECC00057-0C7-D-0710	N	N/A	N/A	1"-9MC-HC	NPR	350 118	450 185	450	WATER	R5, V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.		0	05-MAY-2017		ISSUED FOR CONSTRUCTION					MPA	PCB	
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		1	09-JAN-2018		ISSUED FOR CONSTRUCTION					MPA	PCB NF  	
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR			REV	DATE		REVISION DESCRIPTION				BY	CHECKED BY	STRESS
											APPROVED	

JACOBS

MONSANTO

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PROJECT NO. 070J81 XX

COMMODITY

LINE NO. DC7-SL-087-F2CA1-2*

SL

CLASS F2CA1

CONTRACT NO. MON11900

MODEL AREA

DRAWING NO. DC7-SL-087-01

SHEET 01

REV I

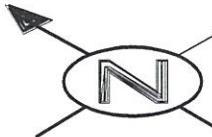
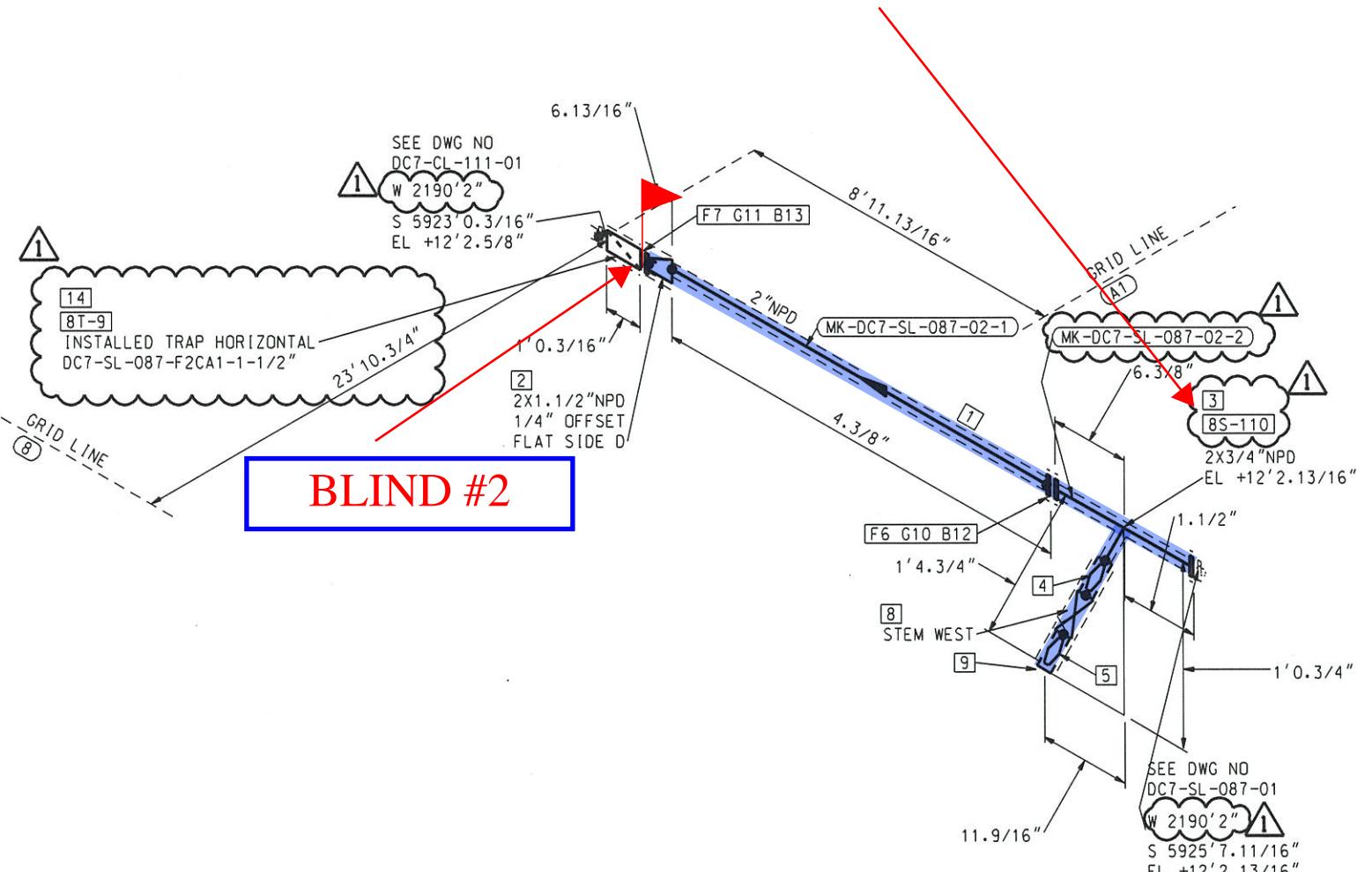
TP-007-005

EXTRACTION NO. : 7

EXTRACTION DATE : 01-FEB-2018

MATERIALS FILE : VARFILE\070J80\ISOREF\MONSANTO.DEF

ENG-1042



8S-110 APPROVED TO HYDRO THROUGH

* SHOP MATERIALS *				
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	0.4'	PAAJABBAAM
2	ECCENTRIC SWAGE, S-STD X S-XS, BLE X PSE, ASTM-A234-WPB, WROUGHT, MSS SP-95	2X1.1/2	1	WSBCGWBAAA
3	SPECIALTY ITEM 8S-110	2X3/4	1	8S-110
4	NIPPLE, PE, S-160, 4" LONG, ASTM-A106-B, SMLS	3/4	1	POJAAAOAE
5	NIPPLE, MTE/PE, S-160, 3" LONG, ASTM-A106-B, SMLS	3/4	1	POFAAAOAEE
6	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	1	FEAABZZAAA
7	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1.1/2	1	FCAABBAAA
8	GATE VALVE, CS, CL800, SW, OS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	1	FA233-8

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
9	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	3/4	1	TCA0ZZZAA
10	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	1	XDSAFZZORG
11	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1.1/2	1	XDSAFZZQS1
12	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	4	YZZZHZZFFE
13	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.75" BOLT LENGTH	1/2	4	YZZZHZZFFE
14	SPECIALTY ITEM 8T-9	1.1/2	1	8T-9

PIECE MARKS

MK-DC7-SL-087-02-1 MK-DC7-SL-087-02-2 1

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5-31-2018
S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7A

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	PSIG	DESIGN CONDITIONS TEMP °F	PSIG	TEST PRESS	TEST MEDIA	NOTE
POS MODEL FILE : PP803119	CONSTRUCTION STATUS	ECC00057-DC7-0-0710	N	N/A	N/A	1'-9MC-HC	350	118	450	185	450	WATER	R5, VI00
NOTES:													
3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.													
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.	0	05-MAY-2017	ISSUED FOR CONSTRUCTION				MPA	PCB					
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	1	01-FEB-2018	ISSUED FOR CONSTRUCTION				MSS	PCB	M	D			
CAD DESIGN FILE : 07QJ80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION	BY	CHECKED BY	STRESS	APPROVED						

JACOBS**MONSANTO**

PROJECT NO. 07QJ81 XX

COMMODITY

SL

CONTRACT NO. MON11900

FAB/CONST.

MODEL AREA

DRAWING NO. DC7-SL-087-02

SHEET

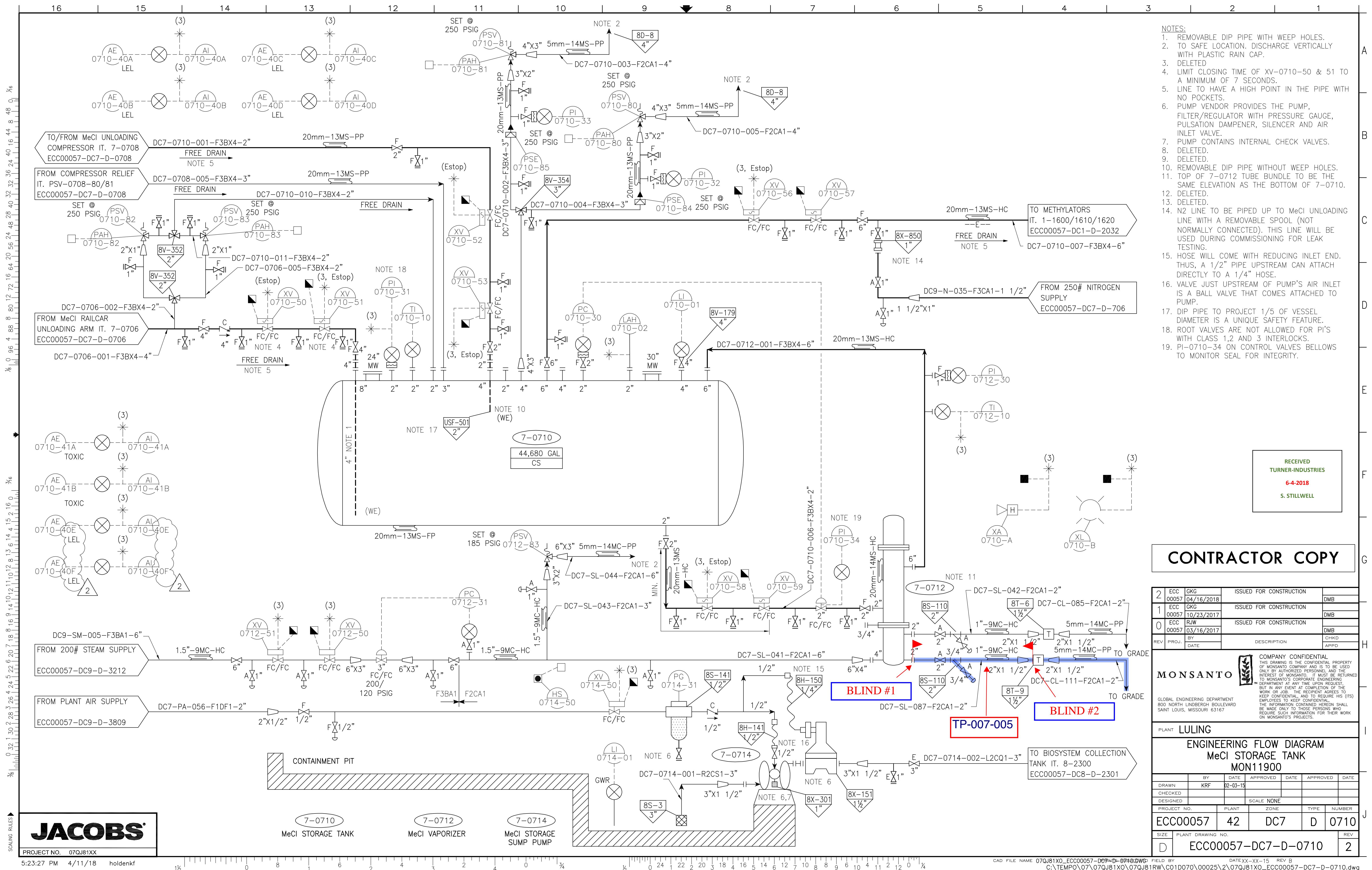
02

REV

MONSANTO COMPANY
LULING, LA 70701
HIGHWAY 90
LULING, LOUISIANA 70701
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PLOTTED ON 12/1/2018

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PROJECT NO. 07QJ81XX

7-0710
MeCl STORAGE TAN

7-0712
MeCl VAPORIZER

7-0714

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6-4-2018
S. STILLWELL

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ECC 00057	GKG 04/16/2018	ISSUED FOR CONSTRUCTION	DMB
ECC 00057	GKG 10/23/2017	ISSUED FOR CONSTRUCTION	DMB
ECC 00057	RJW 03/16/2017	ISSUED FOR CONSTRUCTION	DMB

PROC.	DATE	DESCRIPTION	APPD
 MONSANTO GLOBAL ENGINEERING DEPARTMENT 100 NORTH LINDBERGH BOULEVARD ST. LOUIS, MISSOURI 63167			
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REQUIRE SUCH INFORMATION FOR THEIR WORK
ON MONSANTO'S PROJECTS.

ENGINEERING FLOW DIAGRAM MeCl STORAGE TANK

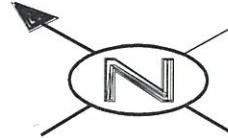
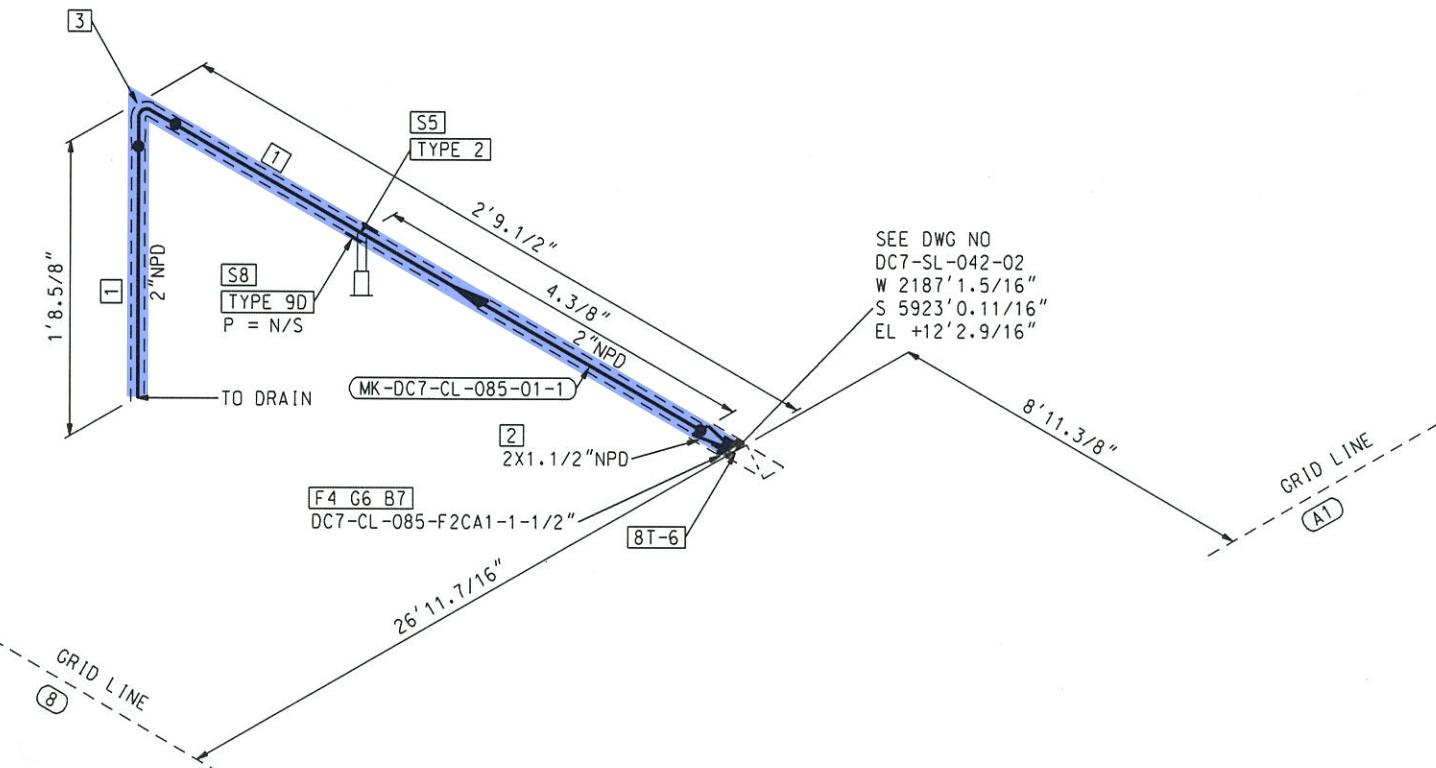
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	BY	DATE	APPROVED	DATE	APPROVED	DATE
RAWN	KRF	02-03-15				
HECKED						
ESIGNED			SCALE NONE			
ROJECT NO.	PLANT	ZONE		TYPE	NUMBER	
CC00057	42	DC7		D	0710	
ZE	PLANT DRAWING NO.					REV
O	ECC00057-DC7-D-0710					2

TP-007-006

EXTRACTION NO. : 1

EXTRACTION DATE. : 06-JUL-2017

ISogen Defaults File : VARFILE\07QJ80\ISOREF\MONSANTO.DEEF



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	3.5'	PAAJABBAAM
2	CONCENTRIC SWAGE, S-STD X S-XS, BLE X PSE, ASTM-A234-WPB, WROUGHT, MSS SP-95	2X1.1/2	1	WSACGBAAM
3	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	2	1	WAAAABBAAA
4	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1.1/2	1	FCAABBAA

PIPE SUPPORTS

5	T2-2#22.06-25.06-0-0-1.5-CS	2	1	TYPE 2
---	-----------------------------	---	---	--------

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
6	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR. 316L INNER RING	1.1/2	1	XDSAFZZOSI
7	ALLOY CONT THD STUDS: ASTM A193, GR. B7 HVY HEX. NUTS: ASTM A194, GR. 2H, 2.75" BOLT LENGTH	1/2	4	YZZZHZZFFF

PIPE SUPPORTS

8	T90-2#0-0-0-0.13-1	2	1	TYPE 9D
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PIECE MARKS

MK-DC7-CL-085-01-1

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TURNER-INDUSTRIES

5-31-2018

S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7A

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
POS MODEL FILE :	CONSTRUCTION STATUS	ECC00057-0C7-D-0710	N	N/A	GREY	5MM-14MC-PP	K1320I	TEMP °F	PSIG	TEMP °F	PSIG	SVC
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	06-JUL-2017	ISSUED FOR CONSTRUCTION			MPA	PCB MF	C20	DAD	
CAD DESIGN FILE :	07QJ80\ISOREF\MONSANTO.BDR		REV	DATE	REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED	

JACOBS**MONSANTO**

PROJECT NO. 07QJ81XX

COMMODITY

CL

CLASS

F2CAI

CONTRACT NO. MON11900

FAB/CONST.

MODEL AREA

DRAWING NO. DC7-CL-085-01

SHEET 01

REV 0

TP-007-006

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BLIND #1

EXTRACTION NO. : 6

EXTRACTION DATE : 15-JUN-2017

M

NOTEFILE : V:\REF\01\F:\070J80\ISOREF\MONSANTO.DEF

I

SUGEN

DEFINITS

FILE :

PP03119

CONSTRUCTION

STATUS

ECC00057-DC7-0-0710

P&ID NO.

STRESS RELIEVE

TRACING

FINISH COLOR

INSULATION

COATING SYSTEM

OPERATING CONDITIONS

DESIGN CONDITIONS

TEST PRESS

TEST MEDIA

NDE

POS MODEL FILE :

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.

FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

NOTES:

1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH

AND/OR VERTICAL C'S UNLESS NOTED.

2. ± DENOTES AN APPROXIMATE DIMENSION.

FIELD CHECK BEFORE FABRICATION.

CAD DESIGN FILE :

070J80\ISOREF\MONSANTO.BDR

REV

DATE

REVISION DESCRIPTION

BY

CHECKED BY

STRESS

APPROVED

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

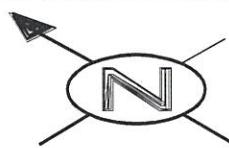
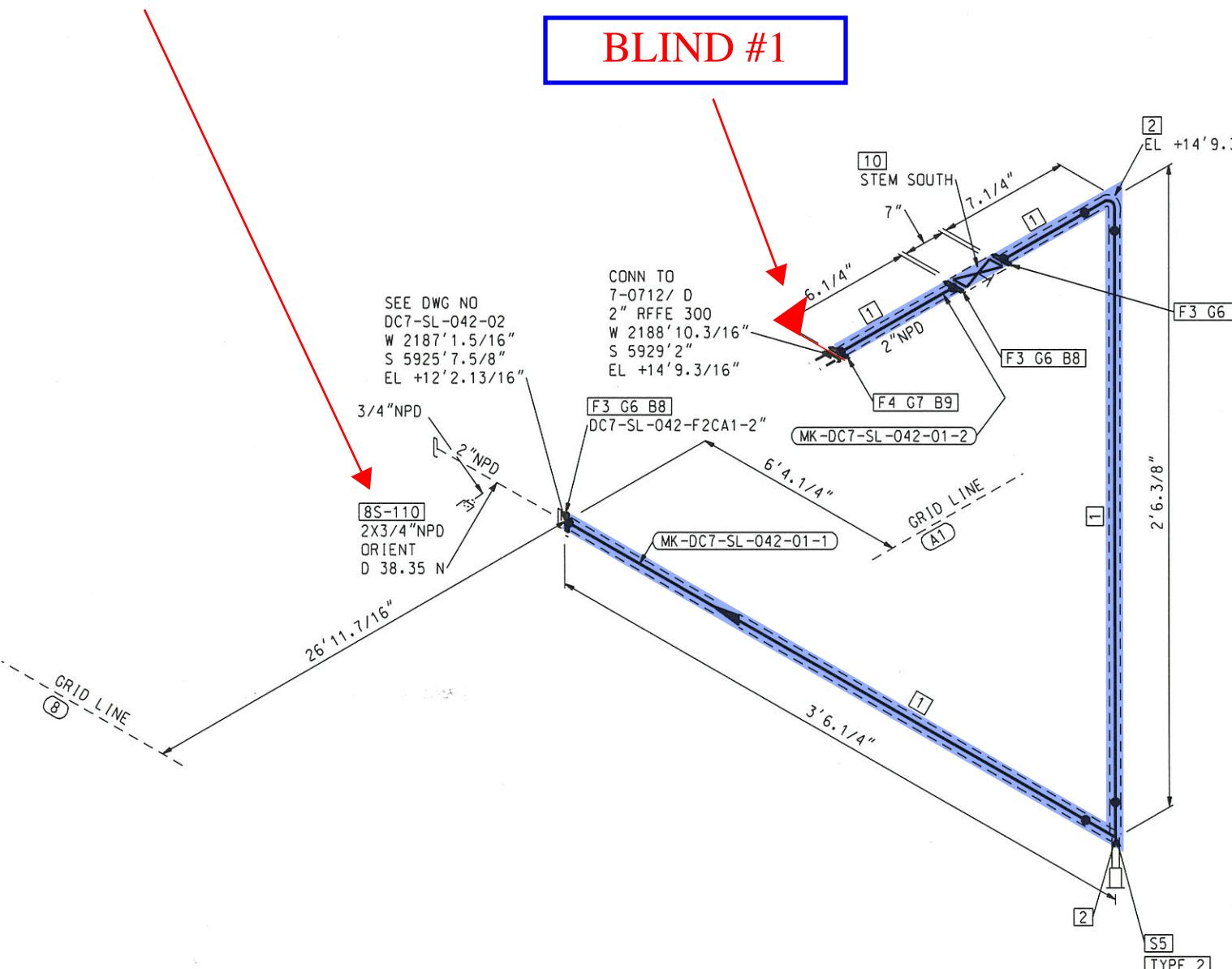
DC7-042-01

SHEET

01

REV

0



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 ASME-B16.9	2	2	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT,	2	2	WAAAABBAAA
3	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	3	FEaabzzaaa
4	FLANGE, CL300, RFFE/SO, ASTM-A105, ASME-B16.5	2	1	FEabbzzaaa

PIPE SUPPORTS

5	T2-2#25.5-28.5-0-0-1.5-CS	2	1	TYPE 2
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* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
6	SW METALLIC GSKT:ASME B16.20,CL150-316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	3	XDSAFZZORG
7	SW METALLIC GSKT:ASME B16.20,CL300.316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	1	XDSBFZZQRG
8	ALLOY CONT THD STUDS: ASTM A193, GR. B7 HVY HEX, NUTS: ASTM A194, GR. 2H, 3.25" BOLT LENGTH	5/8	12	YZZZHZZFFF
9	ALLOY CONT THD STUDS: ASTM A193, GR. B7 HVY HEX, NUTS: ASTM A194, GR. 2H, 3.5" BOLT LENGTH	5/8	8	YZZZHZZFFF
10	GATE VALVE, CS, CL150, RF, OS&Y, BOLTED BONNET, HO, TAG: FA245-ECC00057	2	1	FA245-1

PIECE MARKS

MK-DC7-SL-042-01-1 MK-DC7-SL-042-01-2

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TURNER-INDUSTRIES

5-31-2018

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5-31-2018
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NOTE: REFER TO THE PIPING MATERIALS NARRATIVE

(JACOBS STANDARD 07QJ81XX-E02-D030-00002)

, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS

FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS

DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 7A

PIPING PLAN REFERENCE:

POS MODEL FILE : PP03119

CONSTRUCTION STATUS

ECC00057-DC7-0-0710

P&ID NO.

STRESS RELIEVE

TRACING

FINISH COLOR

INSULATION

COATING SYSTEM

OPERATING CONDITIONS

DESIGN CONDITIONS

TEST PRESS

TEST MEDIA

NDE

N

N/A

N/A

1'-9MC-HC

NPR

350

118

450

185

450

WATER

RS, VI00

3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.

FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.

JACOBS**MONSANTO**

PROJECT NO. 07QJ81 XX

LINE NO. DC7-SL-042-F2CA1-2*

CLASS F2CA1

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LULING PLANT
HIGHWAY 20
LULING, LOUISIANA 70070
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PLOTTED ON : 6/15/2017

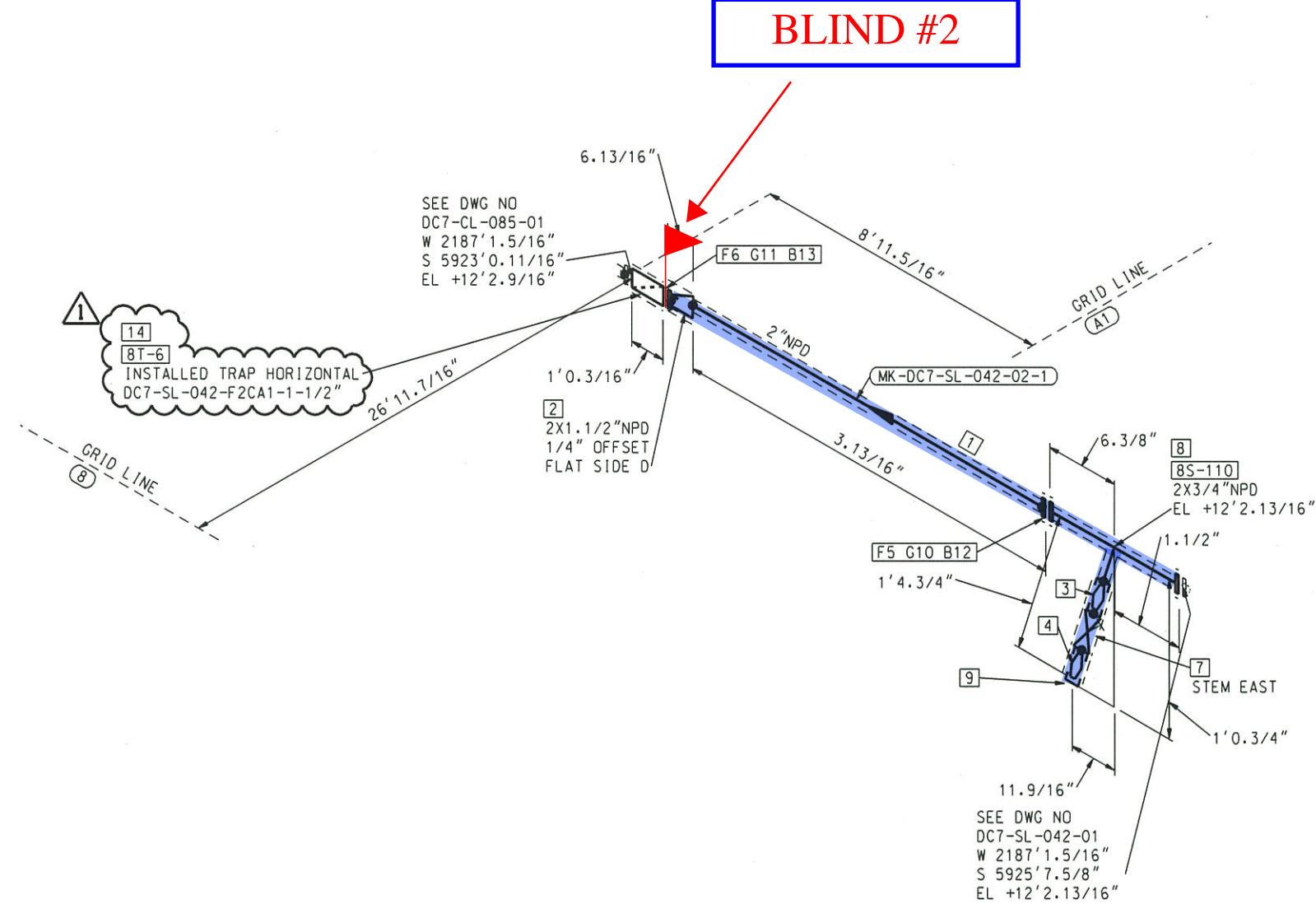
ENG-1042

TP-007-006

EXTRACTION NO. : 8

EXTRACTION DATE : 09-JAN-2018

ENG-1042 ISOGEN DEFAULTS FILE : VARFILE1:F:\070JB0\ISOREF\MONSAMTOHO.DEF



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
.PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:		P&ID NO. ECC00057-DC7-D-0710	STRESS RELIEVE		TRACING N/A	FINISH COLOR N/A	INSULATION 1'-9MC-HC	COATING SYSTEM NPR	OPERATING CONDITIONS		DESIGN CONDITIONS TEMP °F 450	TEST PRESS 450	TEST MEDIA WATER	NOE R5, V100
PDS MODEL FILE : PP803119	CONSTRUCTION STATUS		N	PSIG 118					PSIG 185					
NOTES: 3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		Ø	15-JUN-2017	ISSUED FOR CONSTRUCTION						MPA	PCB			
CAD DESIGN FILE : 070J80\ISOREFMONSANTO.BDR		1	09-JAN-2018	ISSUED FOR CONSTRUCTION						MPA	PCB NF	CLO		
		REV	DATE	REVISION DESCRIPTION						BY	CHECKED BY	STRESS	APPROVED	

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	2	0.3'	PAAJABBAAM
2	ECCENTRIC SWAGE, S-STD X S-XS, BLE X PSE, ASTM-A234-WPB, WROUGHT, MSS SP-95	2X1.1/2	1	WSBCGWBAAA
3	NIPPLE, PE, S-160, 4" LONG, ASTM-A106-B, SMLS	3/4	1	POJAAAQAAE
4	NIPPLE, MTE/PE, S-160, 3" LONG, ASTM-A106-B, SMLS	3/4	1	POFAAAQAAE
5	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	2	1	FEAABZZAAA
6	FLANGE, CL150, RFFE/SWE, ASTM-A105, ASME-B16.5, SW, S-XS BORE	1.1/2	1	FCAABBAAA
7	GATE VALVE, CS, CL800, SW, DS&Y, WELDED BONNET, HO, TAG: FA233-ECC00057	3/4	1	FA233-8

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
8	SPECIALTY ITEM 8S-110	2X3/4	1	8S-110
9	CAP, CL3000, FTE, ASTM-A105, ASME-B16.11	3/4	1	TCAQZZZAAA
10	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER & CR.304SS CR	2	1	XDSAFZZORG
11	SW METALLIC GSKT:ASME B16.20,CL150,316L MET. WINDING W/FLEX GRAPH FILLER AND IR/CR.304SS CR, 316L INNER RING	1.1/2	1	XDSAFZZOSI
12	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 3.25" BOLT LENGTH	5/8	4	YZZZHZZFFE
13	ALLOY CONT THD FLUOROCARBON CTD STUDS: ASTM A193, GR. B7 HVY HEX,FLUOROCARBON CTD NUTS: ASTM A194, GR. 2H,MONSANTO STD P34101, 2.75" BOLT LENGTH	1/2	4	YZZZHZZFFE
14	SPECIALTY ITEM 8T-6	1.1/2	1	8T-6

PIECE MARKS

MK-DC7-SL-042-02-1

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-31-2018

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JACOBS

MONSANTO

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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PLOTTED ON : 1/15/2018

PLOTTED ON : 1/15/2018

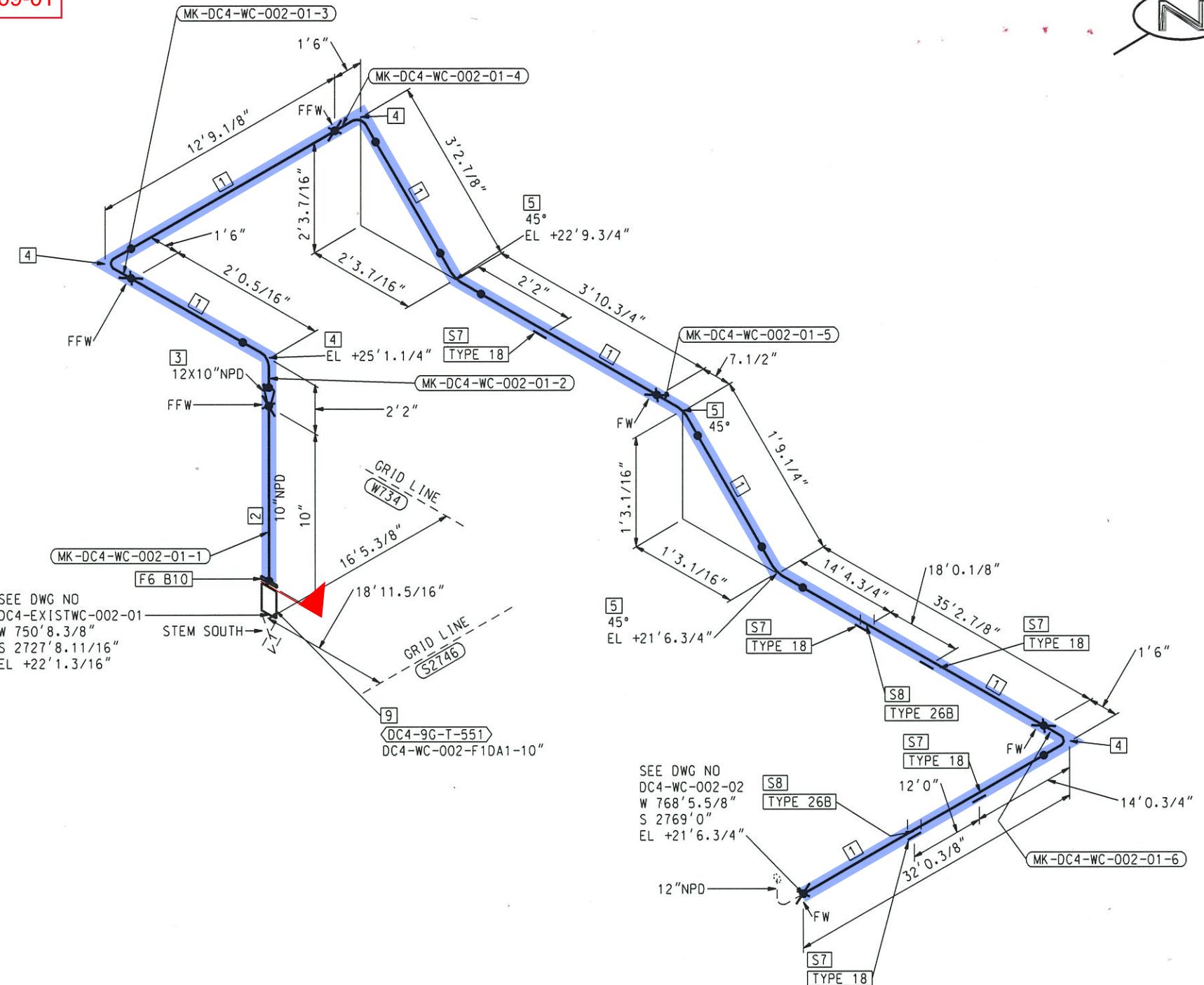
AlbrittJS

EXTRACTION NO. : 1

EXTRACTION DATE. : 30-AUG-2017

ISOCEN DETAILS FILE : VARFL01.FLW:070J80\ISOREF\MONSANTO.DEF

TP-09-01



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	82.9'	PAAJABBAAM
2	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	10	1.4'	PAAJABBAAM
3	CONCENTRIC REDUCER, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12X10	1	WRRAABBAAA
4	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	4	WAAAABBAAA
5	45 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	3	WADAABBAAA
6	FLANGE, CL150, RFFE/SO, ASTM-A105, ASME B16.5	10	1	FEAABZZAAA

PIPE SUPPORTS

7	T18-12#20-0-38-0-0-0-CS	12	5	TYPE 18
8	T26B-12#0-3-16-0-13-0-CS	12	2	TYPE 26B

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
9	SELF CENTERING FLAT RING GSKT, CL150, 0.125" THK GARLOCK BLUE-GARD 3000, ASME B16.21, ASME B16.5	10	1	XCAAGZZQVO
10	ALLOY CONT THD STUDS: ASTM A193, GR. B7 HVY HEX. NUTS: ASTM A194, GR. 2H, 4.75" BOLT LENGTH	7/8	12	YZZZHZZFFF

PIECE MARKS

MK-DC4-WC-002-01-1 MK-DC4-WC-002-01-2 MK-DC4-WC-002-01-3 MK-DC4-WC-002-01-4 MK-DC4-WC-002-01-5
MK-DC4-WC-002-01-6

RECEIVED
TURNER-INDUSTRIES

5-22-2018

S. STILLWELL

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS TEMP °F	PSIG	DESIGN CONDITIONS TEMP °F	PSIG	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803462	CONSTRUCTION STATUS	300900078	N	N/A	GREY	N/A	KI3104	70	110	150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.												
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	0	30-AUG-2017	ISSUED FOR CONSTRUCTION				CMP	DBJ NT					
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED			

JACOBS

MONSANTO

PROJECT NO. 070J81 XX

COMMODITY

WC

LINE NO. 0C4-WC-002-F1DA1-10*

CLASS F1DA1

CONTRACT NO.

FAB/CONST.

MODEL AREA

DRAWING NO. 0C4-WC-002-01

SHEET REV 01 0

PLOTTED ON : 8/30/2017

AlbriJS

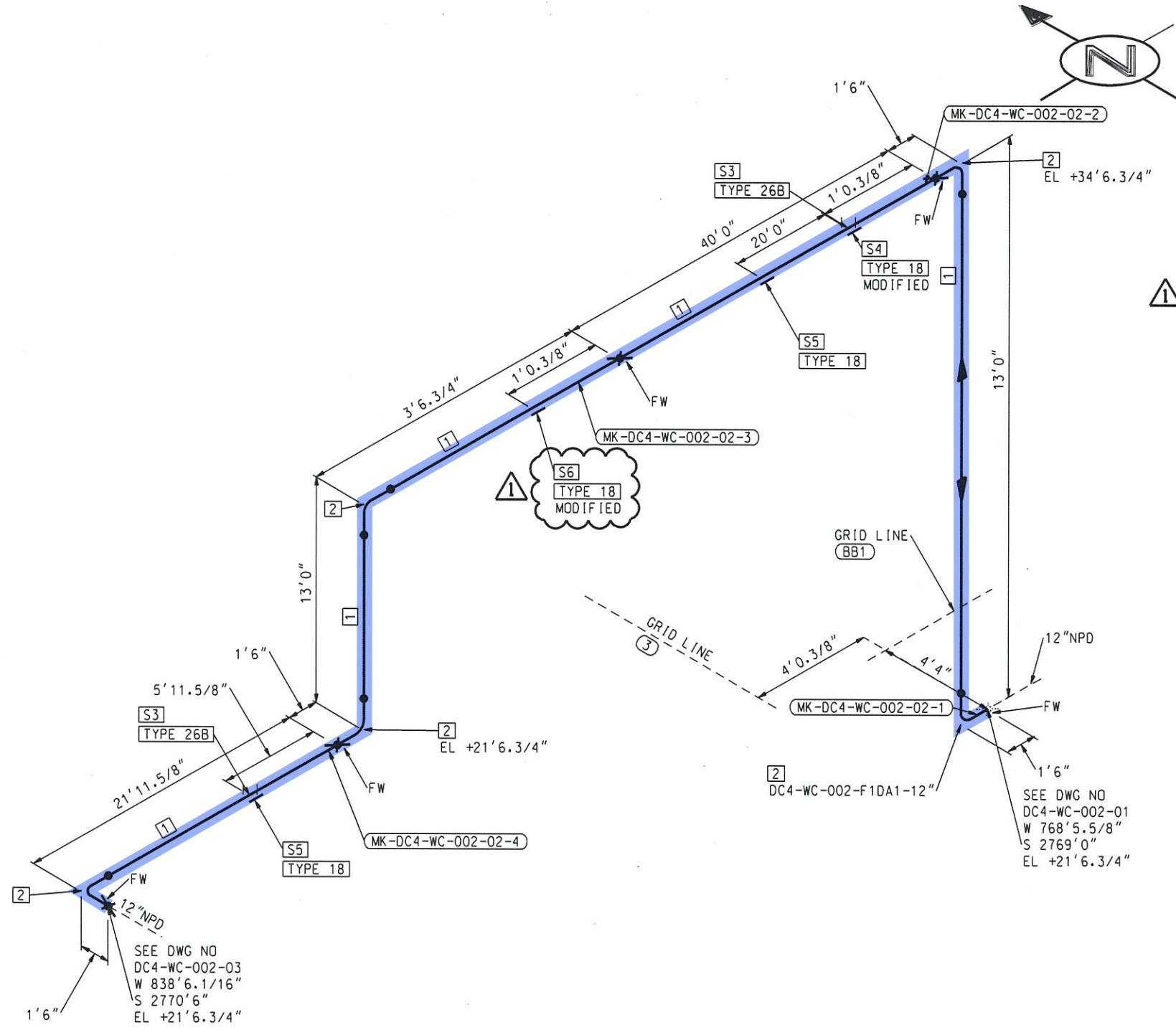
TP-09-01

EXTRACTION NO. : 2

EXTRACTION DATE : 08-MAR-2018

LISGEN DEFAULTS FILE : VARFILE1.FLW\070J80\ISOREF\MONSANTO.DBF

ENG-1042



* SHOP MATERIALS *		SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	82.6'	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	5	WAAAABBAAA
PIPE SUPPORTS				
3	T26B-12#0-3-16-0.13-0-CS	12	2	TYPE 26B
4	T18-12#12-0.38-0-0-0-CS-M	12	1	TYPE 18
5	T18-12#20-0.38-0-0-0-CS	12	2	TYPE 18
6	T18-12#16-0.38-0-0-0-CS-M	12	1	TYPE 18

PIECE MARKS
MK-DC4-WC-002-02-1 MK-DC4-WC-002-02-2 MK-DC4-WC-002-02-3 MK-DC4-WC-002-02-4

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5-22-2018

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NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS		DESIGN CONDITIONS		TEST PRESS	TEST MEDIA	NDE
POS MODEL FILE :	CONSTRUCTION STATUS	300900078	N	N/A	GREY	N/A	K13104	TEMP OF	PSIG	TEMP OF	PSIG	SVC	SVC	V100	
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.	Ø	30-AUG-2017	ISSUED FOR CONSTRUCTION				CMP	DBJ						
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	I	08-MAR-2018	ISSUED FOR CONSTRUCTION				PAP	PAP	M	Q				
CAD DESIGN FILE :	07QJ80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	MON11900	FAB/CONST.	MODEL AREA	
ENG-1042												DRAWING NO. DC4-WC-002-02	SHEET 02	REV 1	

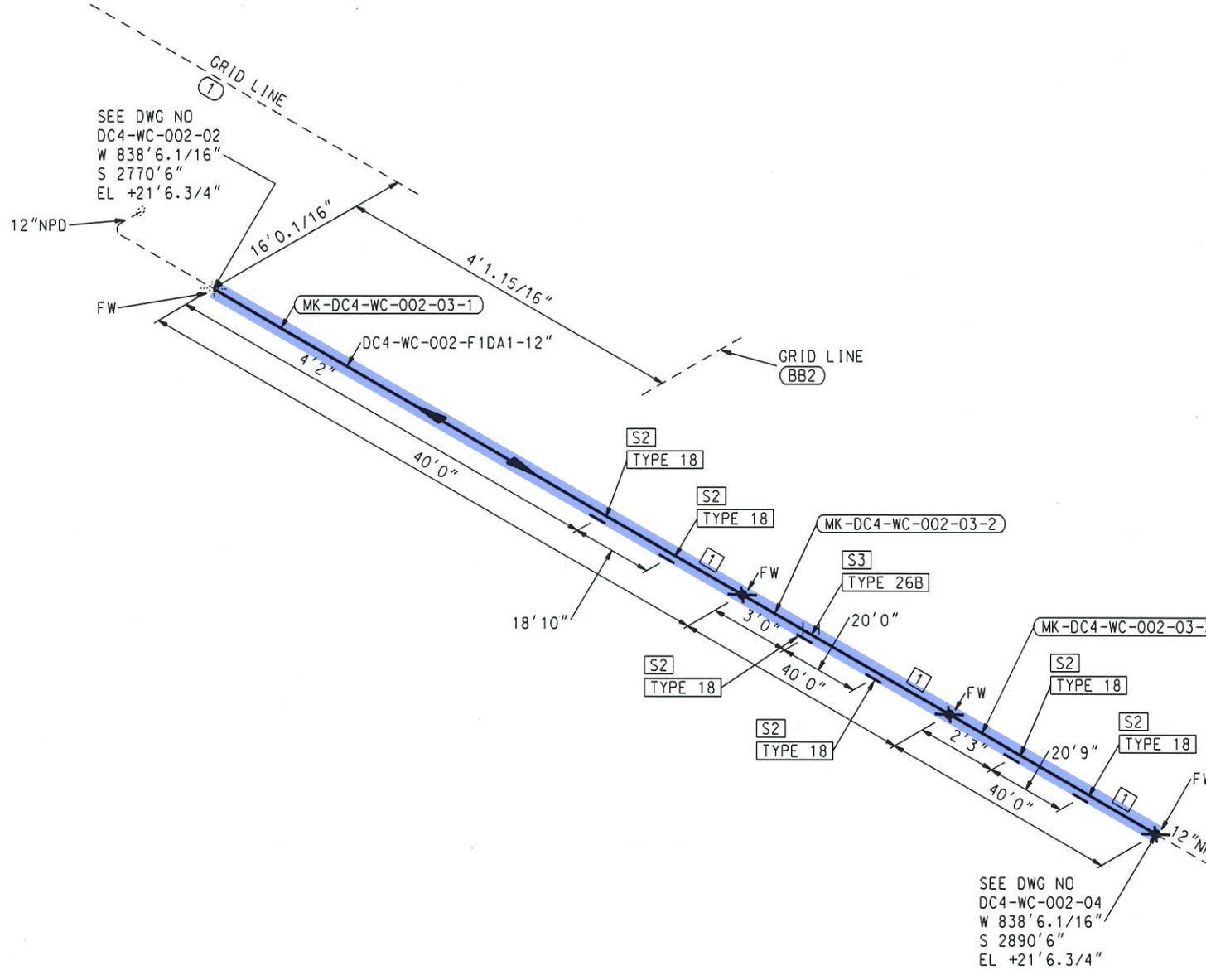
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LULING, TEXAS 77656
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PLOTTED ON : 3/12/2018

arbitus

TP-09-01



CWA# 9G

* SHOP MATERIALS *

NO. DESCRIPTION

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	120.0'	PAAJABBAAM

PIPE SUPPORTS

2	T18-12#20-0.38-0-0-0-CS	12	6	TYPE 18
3	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B

PIECE MARKS

MK-DC4-WC-002-03-1 MK-DC4-WC-002-03-2 MK-DC4-WC-002-03-3

12	6	TYPE 18
12	1	TYPE 26B

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TURNER-INDUSTRIES

5-22-2018

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NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)

, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS

DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:
PDS MODEL FILE : PP0803461

CONSTRUCTION STATUS

P&ID NO.
300900078

STRESS RELIEVE
N

TRACING
N/A

FINISH COLOR
GREY

INSULATION
N/A

COATING SYSTEM
K13104

OPERATING CONDITIONS
TEMP °F
70

PSIG
110

DESIGN CONDITIONS
TEMP °F
150

PSIG
150

TEST PRESS
SVC

TEST MEDIA
SVC

NDE
V100

NOTES:
3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.
FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH
AND/OR VERTICAL C'S UNLESS NOTED.
2. ± DENOTES AN APPROXIMATE DIMENSION,
FIELD CHECK BEFORE FABRICATION.

0 30-AUG-2017 ISSUED FOR CONSTRUCTION
REV DATE
BY CHECKED BY STRESS APPROVED

CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR

JACOBS

PROJECT NO. 070J81 XX

COMMODITY

WC

MONSANTOLINE NO.
DC4-WC-002-F1DA1-12"MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070
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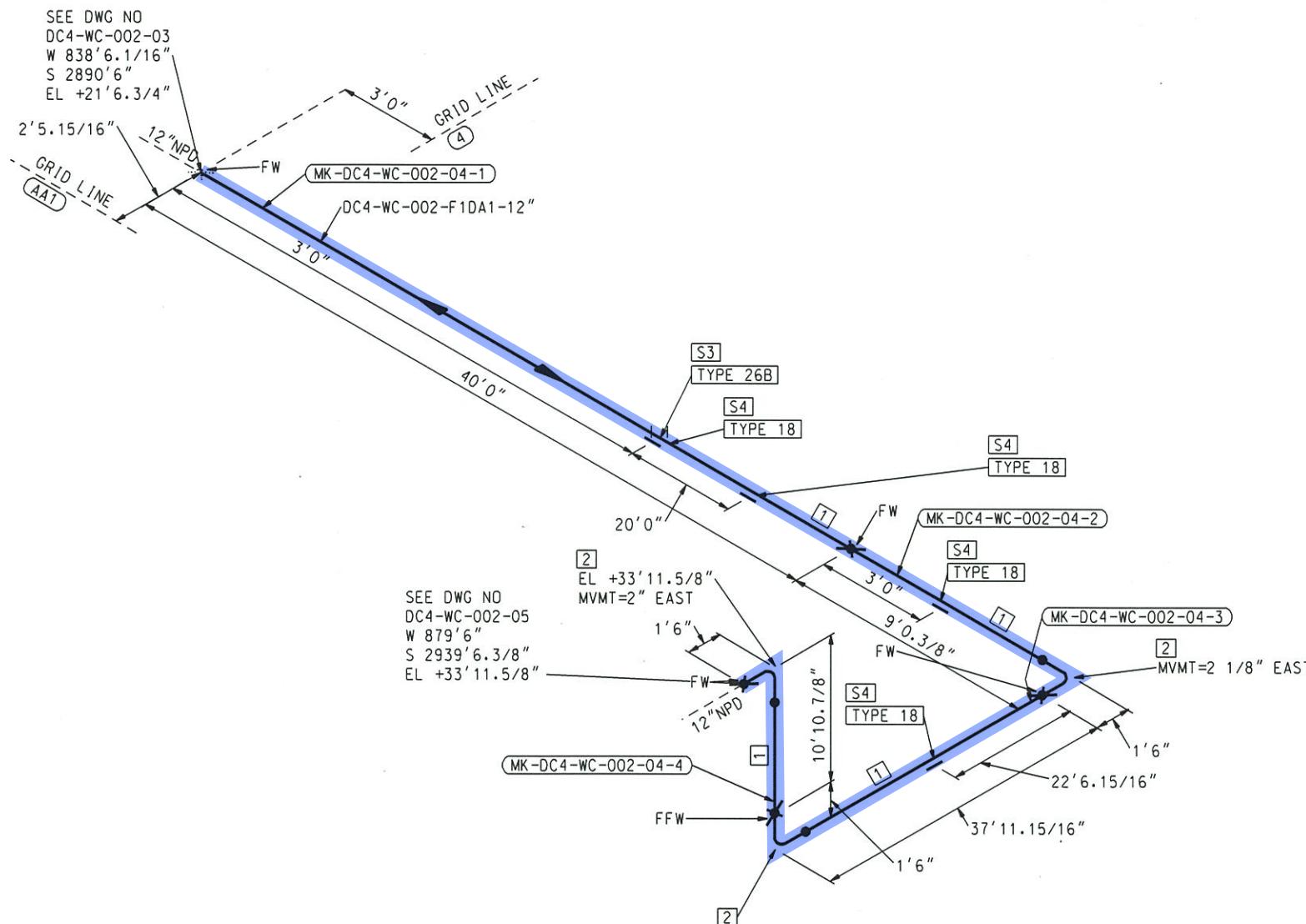
TP-09-01

EXTRACTION NO. : 1

EXTRACTION DATE. : 30-AUG-2017

ISOPEN DEFAULTS FILE : VARFILE:\F:\070J80\ISOREF\MONSANTO.DEF

ENG-1042 CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	94.0'	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	3	WAAAABBAAA

PIPE SUPPORTS

3	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B
4	T18-12#20-0.38-0-0-0-CS	12	4	TYPE 18

PIECE MARKS

MK-DC4-WC-002-04-1 MK-DC4-WC-002-04-2 MK-DC4-WC-002-04-3 MK-DC4-WC-002-04-4

RECEIVED
TURNER-INDUSTRIES

5-22-2018

S. STILLWELL

PIPING PLAN REFERENCE:
PDS MODEL FILE : PP803461

CONSTRUCTION STATUS

300900078

STRESS RELIEVE

TRACING

FINISH COLOR

INSULATION

COATING SYSTEM

K13104

OPERATING CONDITIONS

TEMP °F

70

PSIG

110

DESIGN CONDITIONS

TEMP °F

150

PSIG

150

TEST PRESS TEST MEDIA NOE

SVC

SVC

V100

NOTES:
3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP.
FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH
AND/OR VERTICAL C'S UNLESS NOTED.
2. ± DENOTES AN APPROXIMATE DIMENSION,
FIELD CHECK BEFORE FABRICATION.

0

30-AUG-2017

ISSUED FOR CONSTRUCTION

CMP

OBJ

NT [Signature]

JACOBS**MONSANTO**

PROJECT NO. 07QJ81XX

COMMODITY

WC

LINE NO.

DC4-WC-002-F1DA1-12"

CLASS

F1DAI

CONTRACT NO.

DRAWING NO.

FAB/CONST.

DC4-WC-002-04

MODEL AREA

DRAWING NO.

04

REV

0

PLOTTED ON : 07/30/2017

AlbertJS

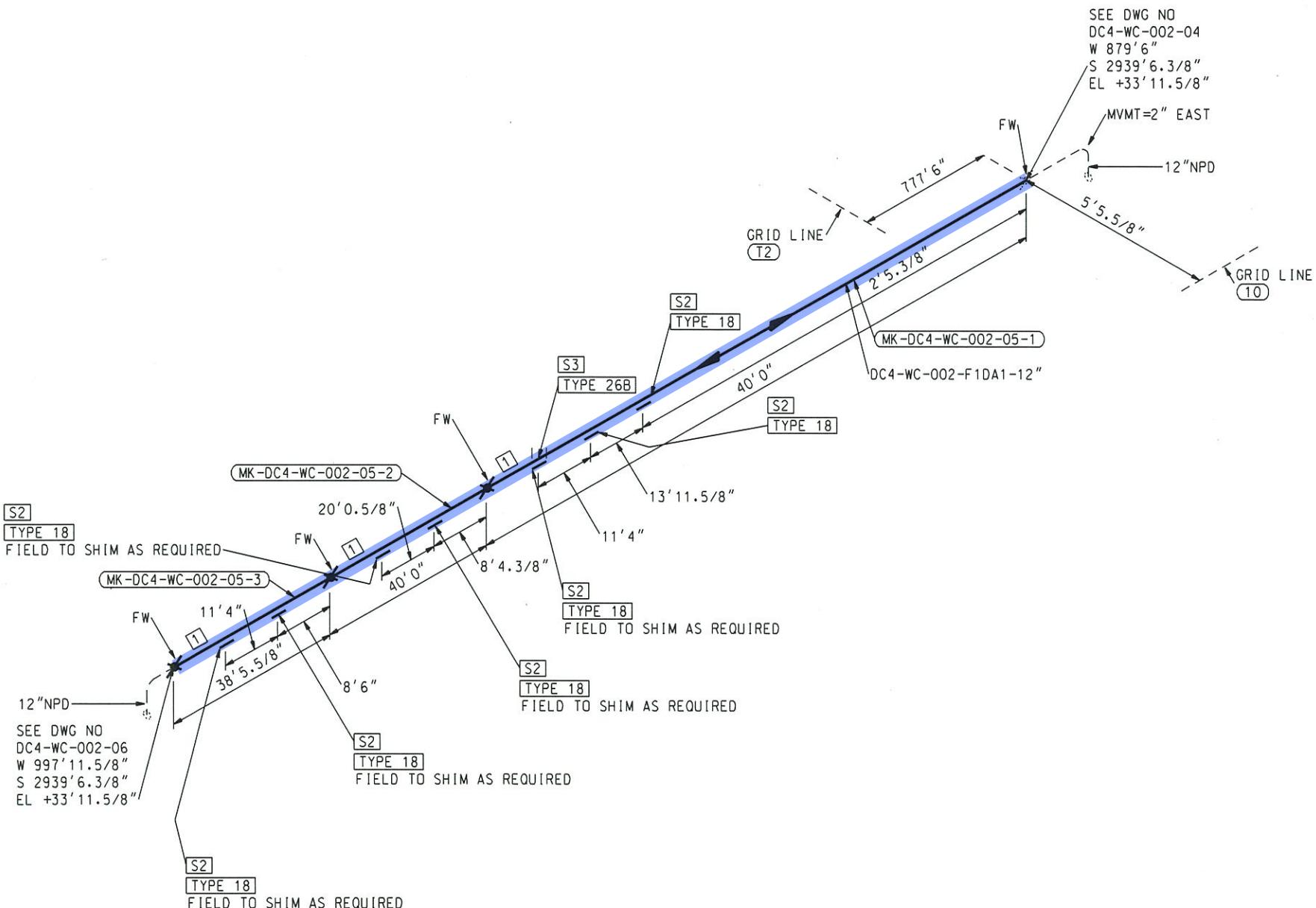
EXTRACTION NO. : 7

EXTRACTION DATE. : 01-AUG-2017

ISOCEN DEFAULTS FILE : VARFL01:;V070J80\ISOREF\MONSANTO.DFF

ENG-1042

TP-09-01



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	118.5'	PAAJABBAAM
2	PIPE SUPPORTS			

2	T18-12#20-0-38-0-0-0-CS	12	7	TYPE 18
---	-------------------------	----	---	---------

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
3	PIPE SUPPORTS			
3	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B

PIECE MARKS

MK-DC4-WC-002-05-1 MK-DC4-WC-002-05-2 MK-DC4-WC-002-05-3

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5-22-2018

S. STILLWELL

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 90

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE		TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS PSIG	DESIGN CONDITIONS PSIG	TEST PRESS	TEST MEDIA	NDE		
PIPS MODEL FILE :	PP03461	CONSTRUCTION STATUS	3009D0078	N	N/A	GREY	N/A	K13104	70	110	150	150	SVC	SVC	V100
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.														
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.														
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.		0	01-AUG-2017	ISSUED FOR CONSTRUCTION				KAP	DAP	MC	WT			
CAD DESIGN FILE :	07QJ80\ISOREF\MONSANTO.BDR		REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED			

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LIVING PLANT
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MONSANTO, MO 65049
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PROJECT NO. 07QJ81 XX

COMMODITY

WC

LINE NO.

DC4-WC-002-F1DA1-12"

CLASS

F1DA1

CONTRACT NO.

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

DC4-WC-002-05

SHEET

05

REV

0

PLOTTED ON : 8/2/2017

Arbitris

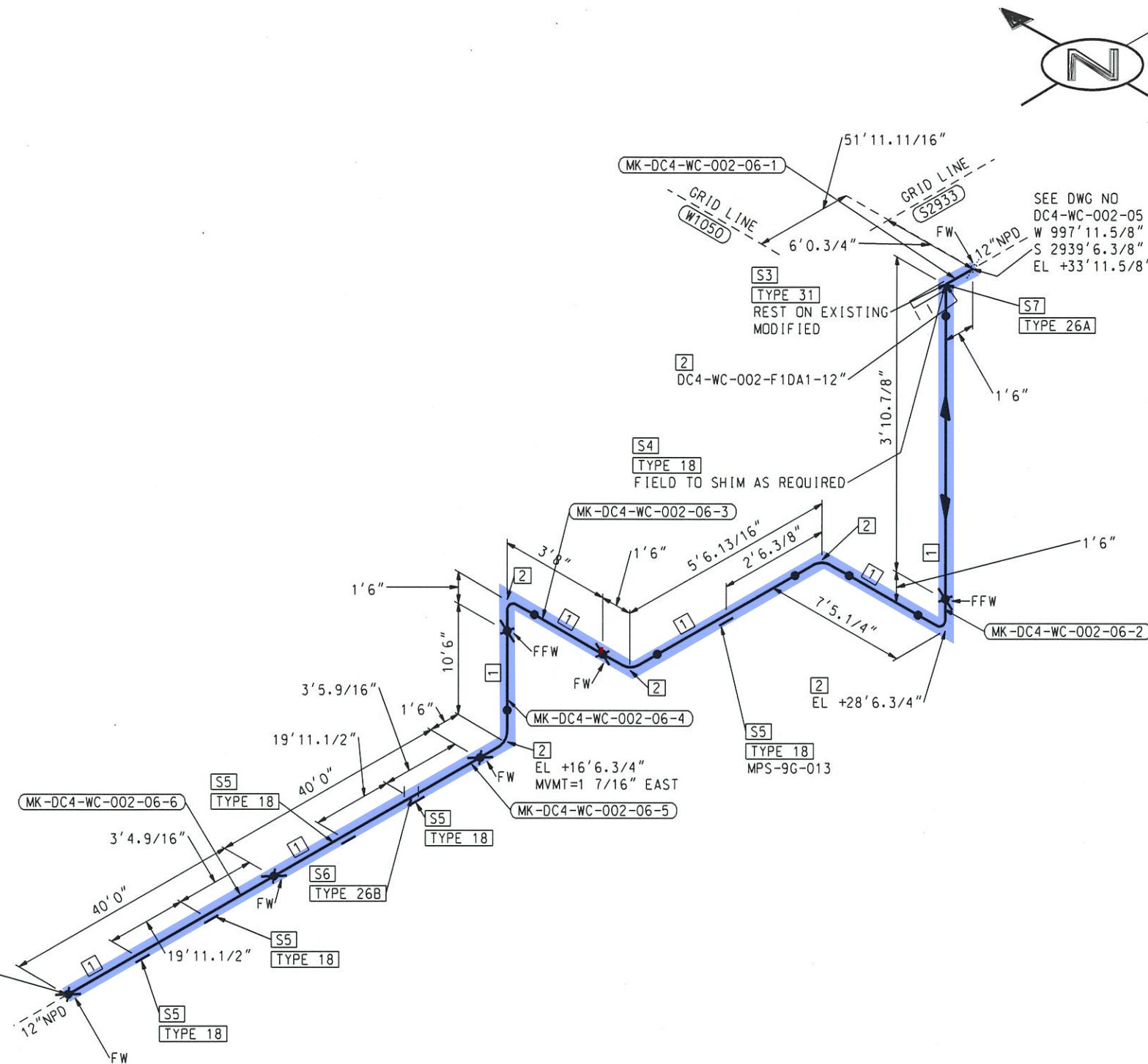
EXTRACTION NO. : 1

EXTRACTION DATE. : 30-AUG-2017

ISogen DEFAULTS FILE : VARFILE1:\070J80\ISOREF\MONSANTO.DEF

ENG-1042 CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR

TP-09-01



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GTR THAN = 0.85	12	101.6'	PAAJABBAAM
2	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	6	WAAAABBAAA
	PIPE SUPPORTS			
3	T31-12#42.38-0-12-0-8-CS-M	12	1	TYPE 31
4	T18-8#20-0.38-0-0-0	12	1	TYPE 18
5	T18-12#20-0.38-0-0-0-CS	12	5	TYPE 18
6	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
7	PIPE SUPPORTS	12	1	TYPE 26A

PIECE MARKS

MK-DC4-WC-002-06-1 MK-DC4-WC-002-06-2 MK-DC4-WC-002-06-3 MK-DC4-WC-002-06-4 MK-DC4-WC-002-06-5
MK-DC4-WC-002-06-6

NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

RECEIVED
TURNER-INDUSTRIES

5-22-2018

S. STILLWELL

PIPING PLAN REFERENCE:	P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803461	CONSTRUCTION STATUS	300900078	N	N/A	GREY	N/A	K13104	70 110 150 150	SVC SVC	V100	
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.										
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	0	30-AUG-2017	ISSUED FOR CONSTRUCTION				CMP	OBJ NT			
CAO DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE	REVISION DESCRIPTION	BY	CHECKED BY	STRESS	APPROVED				

JACOBS

MONSANTO COMPANY
LULING PLANT
HIGHWAY 90
LULING, LOUISIANA 70070

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PROJECT NO. 07QJ81XX

COMMODITY
WC

LINE NO.
DC4-WC-002-F1DA1-12*

CLASS
F1DA1

CONTRACT NO.
MON11900

FAB/CONST.
MODEL AREA

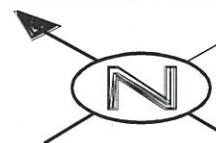
DRAWING NO.
DC4-WC-002-06

SHEET
06 REV
0

PLOTTED ON : 30/07/2017

Alt+rtJS

TP-09-01



* SHOP MATERIALS *

NO. DESCRIPTION

SIZE QTY. COMMODITY

1 PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85 12 120.0' PAAJABBAAM

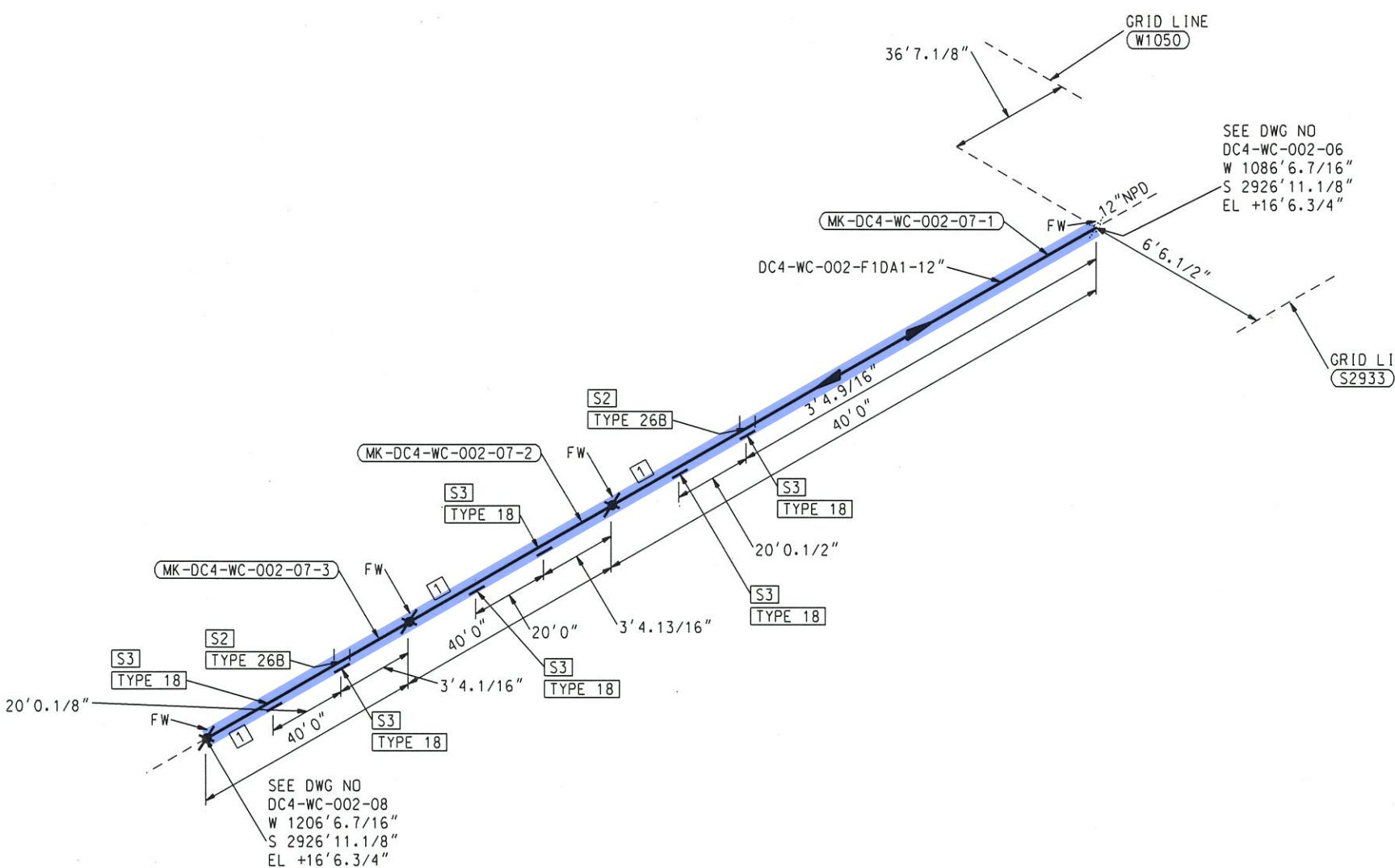
PIPE SUPPORTS

12 2 TYPE 26B

2 T26B-12#0-3-16-0.13-0-CS 12 6 TYPE 18

PIECE MARKS

MK-DC4-WC-002-07-1 MK-DC4-WC-002-07-2 MK-DC4-WC-002-07-3



CWA # 9G

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5-22-2018

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NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
, PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PIPE LINE	ITEM						TEMP °F	PSIG	TEMP °F	PSIG		
PDS MODEL FILE : PP803461	CONSTRUCTION STATUS	300900078	N	N/A	GREY	N/A	K13104	70	110	150	SVC	SVC
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.												
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR	REV	DATE	ISSUED FOR CONSTRUCTION				CMP	OBJ NT				
			REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED		

JACOBS

MONSANTO

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LUDINGTON PLANT
HIGHWAY 90
LUDINGTON, MICHIGAN 49430
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PROJECT NO. 070J81 XX

COMMODITY

WC

LINE NO.

DC4-WC-002-F1DA1-12'

CLASS

F1DA1

CONTRACT NO.

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

DC4-WC-002-07

SHEET

07

REV

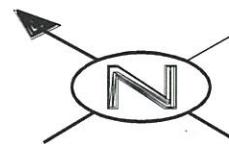
EXTRACTION NO. : 1

EXTRACTION DATE. : 30-AUG-2017

ISOCEN DEFAULTS FILE : VARFILE\01\f:\070J80\ISOREF\MONSANTO.DEF

ENG-1002

TP-09-01



* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	120.0'	PAAJABBAAM

PIPE SUPPORTS

2	T18-12#20-0-38-0-0-CS	12	6	TYPE 18
3	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B

* FIELD MATERIALS *

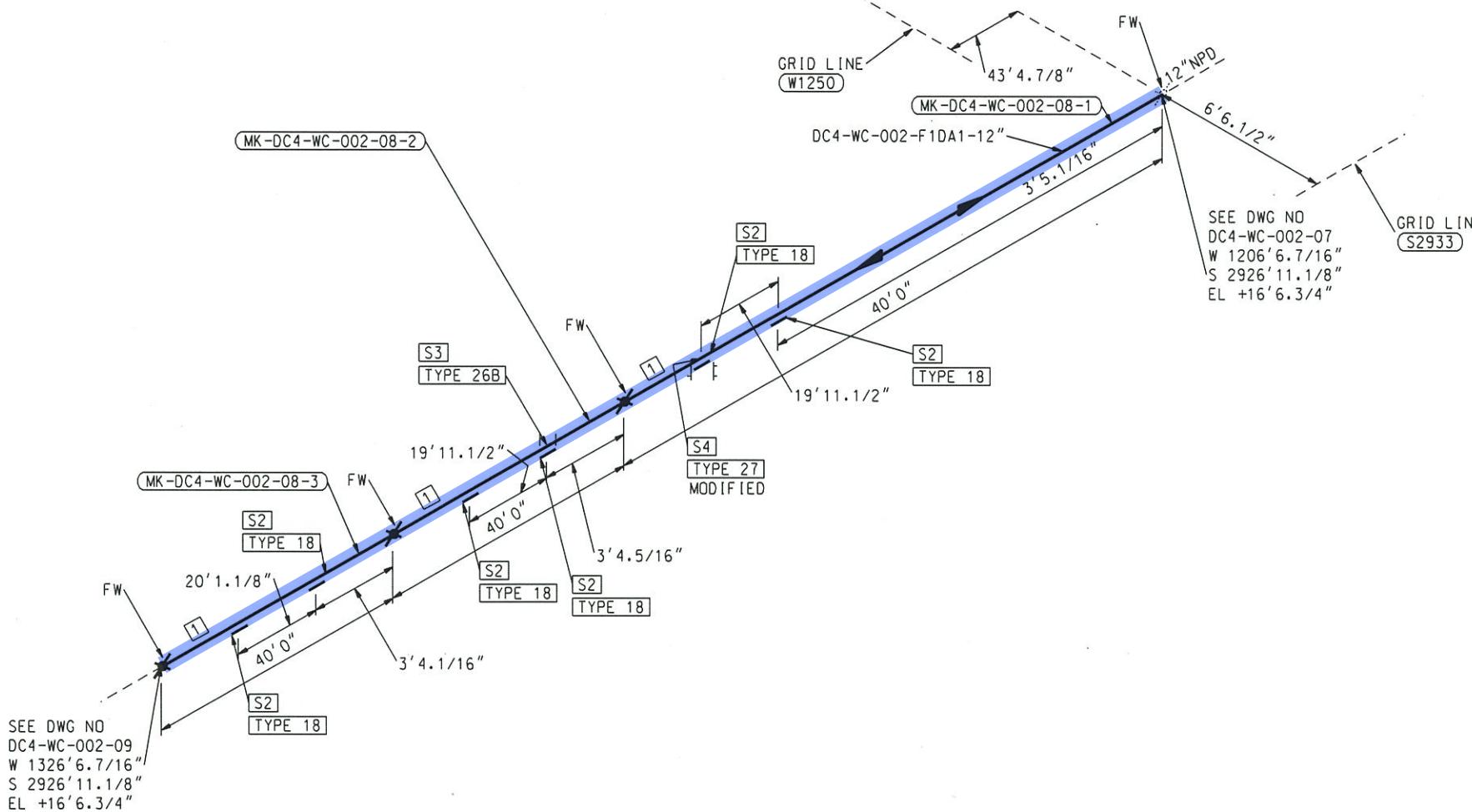
NO.	DESCRIPTION	SIZE	QTY.	COMMODITY
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PIPE SUPPORTS

4	T27-12#0-0-10-0.13-0-CS-M	12	1	TYPE 27
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PIECE MARKS

MK-DC4-WC-002-08-1 MK-DC4-WC-002-08-2 MK-DC4-WC-002-08-3



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

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5-22-2018

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PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NDE
PDS MODEL FILE : PP803461		300900078	N	N/A	GREY	N/A	K13104	70	110	150	SVC	SVC
NOTES:		3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.										
1. ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED. 2. ± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.												
ENG-1002 CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR		0	30-AUG-2017	ISSUED FOR CONSTRUCTION				CMP	OBJ	NT (Signature)		
ISOCEN DEFAULTS FILE : VARFILE\01\f:\070J80\ISOREF\MONSANTO.DEF		REV	DATE	REVISION DESCRIPTION				BY	CHECKED BY	STRESS	APPROVED	

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PROJECT NO. 070J81 XX

COMMODITY

WC

LINE NO.

DC4-WC-002-F1DA1-12"

CLASS

F1DA1

CONTRACT NO.

MON11900

FAB/CONST.

MODEL AREA

DRAWING NO.

DC4-WC-002-08

SHEET

08

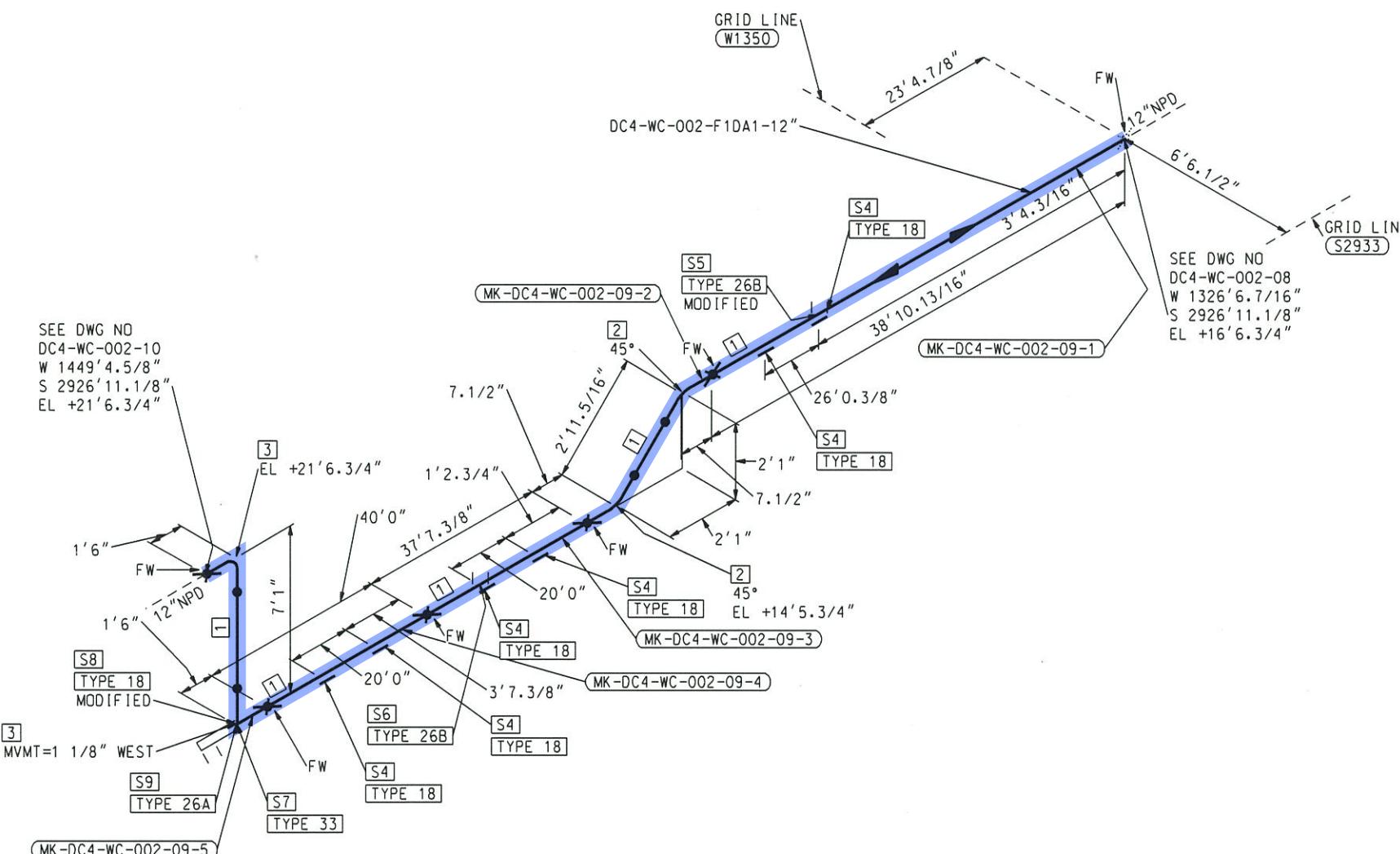
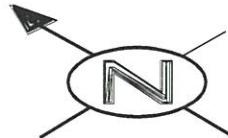
REV

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PLOTTED ON : 8/30/2017

AlbrectJS

TP-09-01



NOTE: REFER TO THE PIPING MATERIALS NARRATIVE
(JACOBS STANDARD 07QJ81XX-E02-D030-00002)
PARA 4.1 AND 5.1 FOR ADDITIONAL MATERIAL REQUIREMENTS
FOR ASTM A53, A105, A106 AND A234 CARBON STEEL MATERIALS
DUE TO LOW TOUGHNESS PROBLEMS WITNESSED IN INDUSTRY.

CWA# 9G

* SHOP MATERIALS *

NO.	DESCRIPTION	SIZE	OTY.	COMMODITY
1	PIPE, S-STD, BE, ASTM-A53, TYPE E, GR.B; ASTM-A53, TYPE S, GR. B OR A106 GR. B, ERW OR SMLS, JE GRTR THAN = 0.85	12	122.3'	PAAJABBAAM
2	45 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	2	WADAABBAAA
3	90 DEG LR ELBOW, S-STD, BE, ASTM-A234-WPB, WROUGHT, ASME-B16.9	12	2	WAAAABBAAA

PIPE SUPPORTS

4	T18-12#20-0.38-0-0-0-CS	12	6	TYPE 18
5	T26B-12#0-3-16-0-0-CS-M	12	1	TYPE 26B
6	T26B-12#0-3-16-0.13-0-CS	12	1	TYPE 26B
7	T33-12#34-0-10-0-8-CS	12	1	TYPE 33
8	T18-8#12-0.32-0-0-0-CS-M	12	1	TYPE 18

* FIELD MATERIALS *

NO.	DESCRIPTION	SIZE	OTY.	COMMODITY
9	PIPE SUPPORTS	12	1	TYPE 26A

PIECE MARKS

MK-DC4-WC-002-09-1 MK-DC4-WC-002-09-2 MK-DC4-WC-002-09-3 MK-DC4-WC-002-09-4 MK-DC4-WC-002-09-5

RECEIVED
TURNER-INDUSTRIES

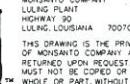
5-22-2018

S. STILLWELL

PIPING PLAN REFERENCE:		P&ID NO.	STRESS RELIEVE	TRACING	FINISH COLOR	INSULATION	COATING SYSTEM	OPERATING CONDITIONS	DESIGN CONDITIONS	TEST PRESS	TEST MEDIA	NOE
PDS MODEL FILE : PP003461		CONSTRUCTION STATUS	300900078	N	N/A	GREY	N/A	K13104	70 110 150 150	SVC SVC	V100	
NOTES:	3. FFW = SHOP TO ADD 6" TO DIMENSION FOR FIELD FIT UP. FIELD TO VERIFY DIMENSION BEFORE INSTALLATION.											
1.	ALL BOLT HOLES TO STRADDLE NORTH-SOUTH AND/OR VERTICAL C'S UNLESS NOTED.											
2.	± DENOTES AN APPROXIMATE DIMENSION, FIELD CHECK BEFORE FABRICATION.	0	30-AUG-2017	ISSUED FOR CONSTRUCTION				CMP	OBJ NT			
3.				REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED		
CAD DESIGN FILE : 070J80\ISOREF\MONSANTO.BDR		REV	DATE	REVISION DESCRIPTION			BY	CHECKED BY	STRESS	APPROVED		

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PROJECT NO. 070J81 XX

COMMODITY

WC

LINE NO.

DC4-WC-002-F1DA1-12"

CLASS

F1DAI

CONTRACT NO.

MON11900

DRAWING NO.

DC4-WC-002-09

SHEET

09

REV

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