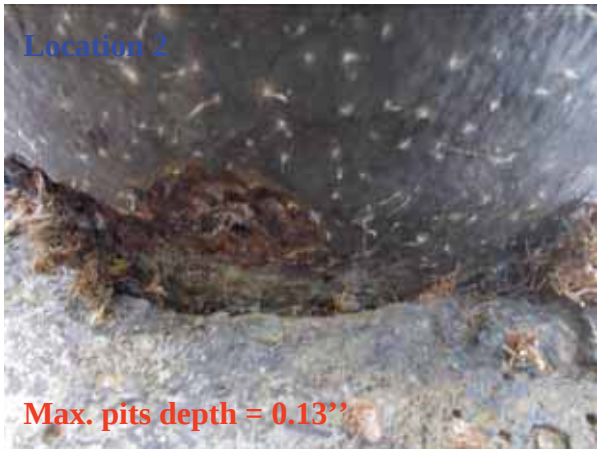
LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 20
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion under wrapping was noted at soil to air interface area due to wrap failure and gives a path to water ingress inside, marked as location 1 in ISO drawing. No sign of corrosion propagate deeper after the wrapping end. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	Consideration to perform permanent repair at this area with remove the corrosion, restore with weld metal deposited/insert weld patch, apply coal tar enamel and re-wrap with proper procedure and suitable wrapping for buried piping up to 6'' from soil to air interface.

Prepared By : *MOHD. KHAIRI*

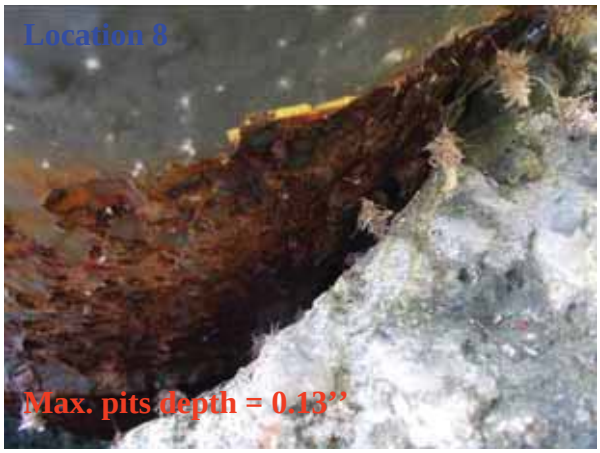


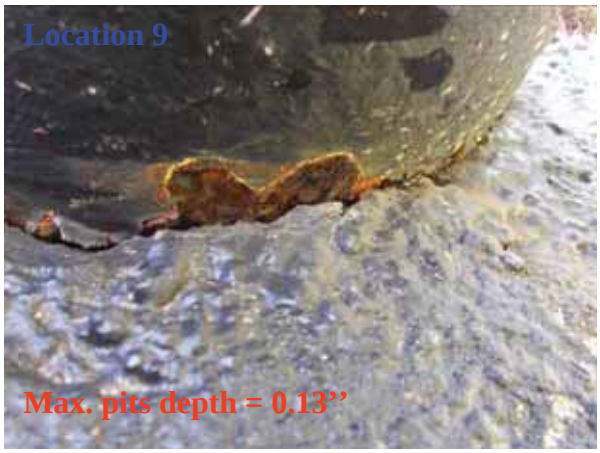
LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 20
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion was noted at contact area between piping and support, marked as locations 2 to 5 in ISO drawing. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	To lift the piping and consideration to perform permanent repair at this area with remove the corrosion, restore with weld metal deposited/insert weld patch, follow by NDE and re-painting as per client's specification. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 20
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Temporary repair was noted at bottom section of piping. According to API 570 paragraph 8.1.4.1, *the design of temporary enclosures and repair shall be approved by piping engineer and temporary repairs should be removed and replaced with a suitable permanent repair at the next available maintenance opportunity*.	Consideration to perform permanent repair in accordance to API 570, restore with weld metal deposited/insert weld patch follows by NDE and painting as per client's specification.

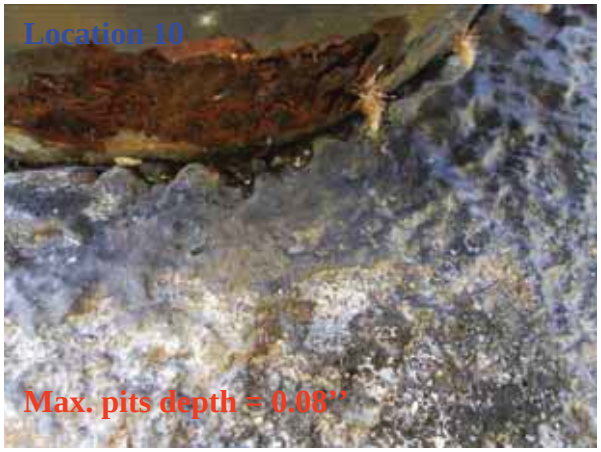
Prepared By : *MOHD. KHAIRI*

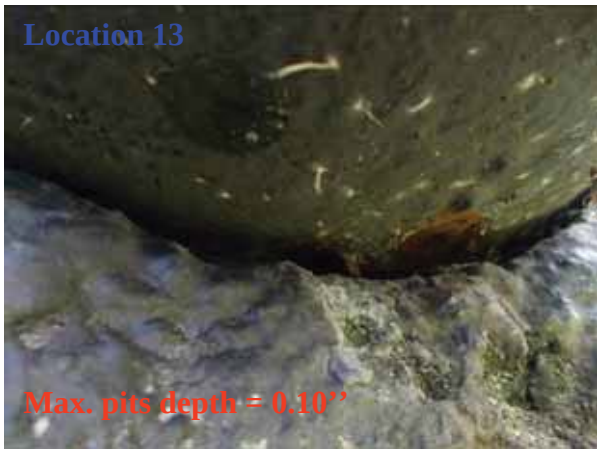




LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 21
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion was noted at contact area between piping and support, marked as locations 6 to 9 in ISO drawing. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	To lift the piping and consideration to perform permanent repair at location 8 and 9 with remove the corrosion, restore with weld metal deposited/insert weld patch, follow by NDE and re-painting as per client's specification. To perform surface preparation and follows with maintenance painting for location 6 and 7. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

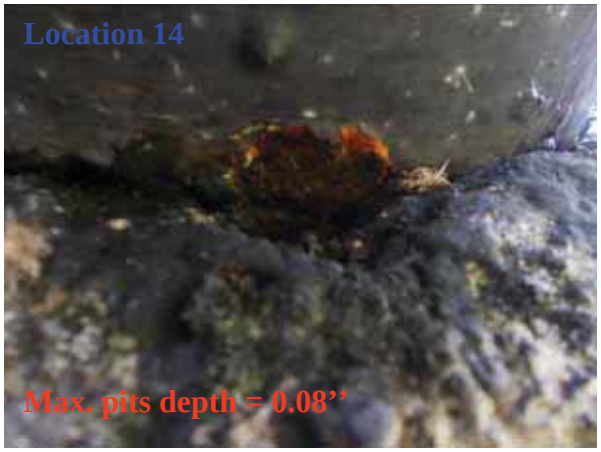
Prepared By : *MOHD. KHAIRI*

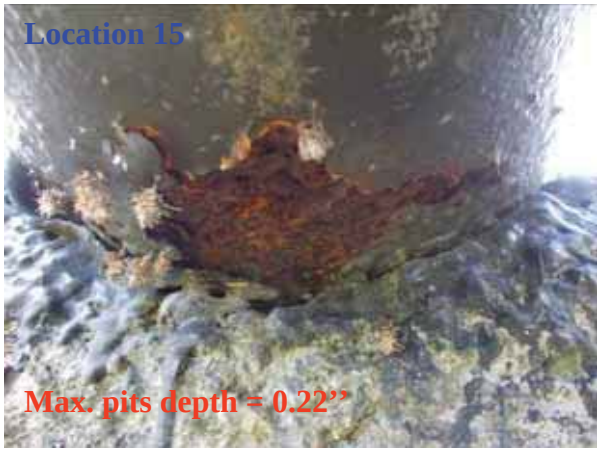




LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 21
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion was noted at contact area between piping and support, marked as locations 10 to 13 in ISO drawing. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	To lift the piping and perform surface preparation and follows by maintenance painting as per client's specification. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

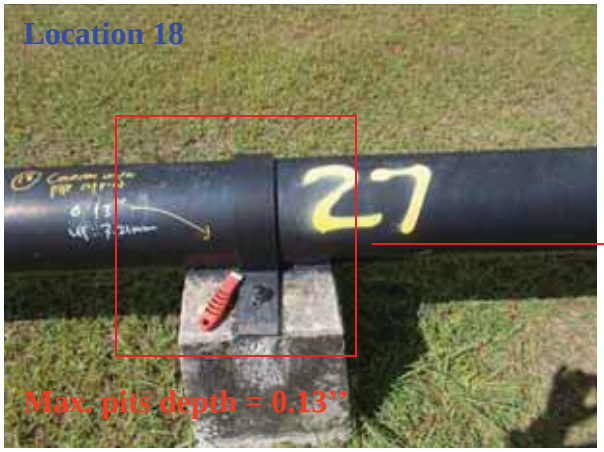
Prepared By : *MOHD. KHAIRI*





LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 22
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion was noted at contact area between piping and support, marked as locations 14 to 17 in ISO drawing. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	To lift the piping and perform surface preparation and follows by maintenance painting as per client's specification for location 14 and consideration to perform permanent repair at location 15 to 17 with remove the corrosion, restore with weld metal deposited/insert weld patch, follow by NDE and re-painting as per client's specification. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

Prepared By : *MOHD. KHAIRI*



LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 22
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Corrosion was noted at contact area between piping and support, marked as location 18 in ISO drawing. 2. Temporary repair was noted at bottom section of piping. According to API 570 paragraph 8.1.4.1, *the design of temporary enclosures and repair shall be approved by piping engineer and temporary repairs should be removed and replaced with a suitable permanent repair at the next available maintenance opportunity*. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	1. To lift the piping and consideration to perform permanent repair at this area with remove the corrosion, restore with weld metal deposited/insert weld patch, follow by NDE and re-painting as per client's specification. 2. Consideration to perform permanent repair in accordance to API 570, restore with weld metal deposited/insert weld patch follows by NDE and painting as per client's specification. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 11

LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 22
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Temporary repair was noted at bottom section of piping. According to API 570 paragraph 8.1.4.1, *the design of temporary enclosures and repair shall be approved by piping engineer and temporary repairs should be removed and replaced with a suitable permanent repair at the next available maintenance opportunity*.	Consideration to perform permanent repair in accordance to API 570, restore with weld metal deposited/insert weld patch follows by NDE and painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 23
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion was noted at contact area between piping and support, marked as locations 19 and 20 in ISO drawing. **Please refer Appendix 2 for ½ remaining life calculation at pits area.*	To lift the piping and perform surface preparation and follows by maintenance painting as per client's specification for location 20 and consideration to perform permanent repair at location 19 with remove the corrosion, restore with weld metal deposited/insert weld patch, follow by NDE and re-painting as per client's specification. Note:-Pits depth measurement at contact area between piping and support based on estimation due to inaccessible area.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
14'' Residual Fuel Oil No. 6	ISO drawing no. 23
DESCRIPTION	**LOCATION**
Circuit 4 - Tango line	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Temporary repair was noted at bottom section of piping. According to API 570 paragraph 8.1.4.1, *the design of temporary enclosures and repair shall be approved by piping engineer and temporary repairs should be removed and replaced with a suitable permanent repair at the next available maintenance opportunity*. 2. Wrapping tape was observed intact, no sign of corrosion was noted at soil to air interface area. 3. Permanent repair (insert weld patch) was noted on top section of piping. Remaining thickness from ultrasonic thickness measurement is 9.39mm.	1. Consideration to perform permanent repair in accordance to API 570, restore with weld metal deposited/insert weld patch follows by NDE and painting as per client's specification. 2. Nil. 3. Nil.

Prepared By : *MOHD. KHAIRI*

INSIDE TERMINAL
Circuit 5
- Cabras line -

VISUAL INSPECTION FINDINGS AND RECOMMENDATIONS
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VITAL ENERGY, GUAM, U.S.A

PHOTO NO. : 1

LINE SERVICE	DRAWING REFERENCE
Residual Fuel Oil No. 6	ISO drawing no. 24 to 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras pump no. 1,2,3 & 4 discharge	Inside Terminal – Pump & outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. General view of 6'' Cabras line outlet from C -1, C - 2 and C- 3 and C – 4 pumps. 2. Excessive in contact between piping and pedestal support at outside pump area.	1. Nil. 2. Consideration to modify existing support and to install rounded/angle bar or others material to give single contact point between piping and support. Single contact point is to prevent moisture or water sitting against the piping surface and promote to corrosion.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
4', 5'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Product stain sign of leak was noted on 4'' and 5'' valve (by pass line). 2. Stud bolts and nuts of the 5'' valve was noted corroded.	1. Consideration to dismantle the valves to check for corrosion at raise face and replace with new gasket. 2. To replace the corroded stud bolts and nuts at the same material and specification.

Prepared By : *MOHD. KHAIRI*

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PHOTO NO. : 3

LINE SERVICE	DRAWING REFERENCE
5'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Product stain sign of leak was noted at 5'' valve. 2. Stud bolts of 6'' valve was noted not extend out from their nuts and corroded at 5'' valve.	1. Consideration to dismantle the valves to check for corrosion at raise face and replace with new gasket. 2. To replace not fully engaged//corroded stud bolts with the same material and specification.

Prepared By : *MOHD. KHAIRI*

VISUAL INSPECTION FINDINGS AND RECOMMENDATIONS
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VITAL ENERGY, GUAM, U.S.A

PHOTO NO. : 4

LINE SERVICE	DRAWING REFERENCE
4' & 5"' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Stud bolts of flanges joint to Pump Cabras 3 was noted not extend out from their nuts. 2. Product stain sign of leak was noted at 4" valve by pass line. Corroded was noted at stud bolts of the valve.	1. To replace with longer stud bolts with the same material specification. 2. Consideration to dismantle the valves to check for corrosion at raise face and replace with new gasket and to replace the corroded stud bolts.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
4'', 6'',10'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Wrapping tape at 6'' piping was observed deteriorated and minor corrosion under wrapping was noted at the area. 2. Pipe support modification was noted at support 3, 5 and surface rust was noted at the area. 3. Stud bolts of flange was noted to be missing at 4'' valve. 4. Stud bolts at upper housing of 4'' valve was noted corroded.	1. To perform surface preparation and follows by maintenance painting as per client's specification. 2. To perform surface preparation and follows by maintenance painting as per client's specification and to monitor periodically. 3. To replace the missing/corroded stud bolts.

Prepared By : *MOHD. KHAIRI*

VISUAL INSPECTION FINDINGS AND RECOMMENDATIONS
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PHOTO NO. : 6

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 25
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Wrapping tape at 6'' piping was observed deteriorated and minor corrosion under wrapping was noted at the area. Weld decay approximate 1mm from actual welding cap.	To un-install the wrapping, perform surface preparation and follows by maintenance painting as per client's specification.

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PHOTO NO. : 7

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 25
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Wrapping tape was observed deteriorated at some location and surface rust was noted at the area.	To un-install the wrapping, perform surface preparation, painting as per client's specification, to monitor periodically especially at bottom section since the piping layout close to ground level.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 8

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. No sign of corrosion at soil to air interface area. 2. Corrosion under wrapping with maximum pit depth below than 1mm was noted due to wrap failure and gives a path to water ingress inside.	1. Nil. 2. To perform surface preparation and follow by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 9

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Localized corrosion/pits with maximum pit depth below than 1mm was noted at bottom section of piping. 2. Corrosion under wrapping with maximum pit depth below than 1mm was noted due to wrap failure and gives a path to water ingress inside.	To perform surface preparation and follow by maintenance painting as per client's specification.

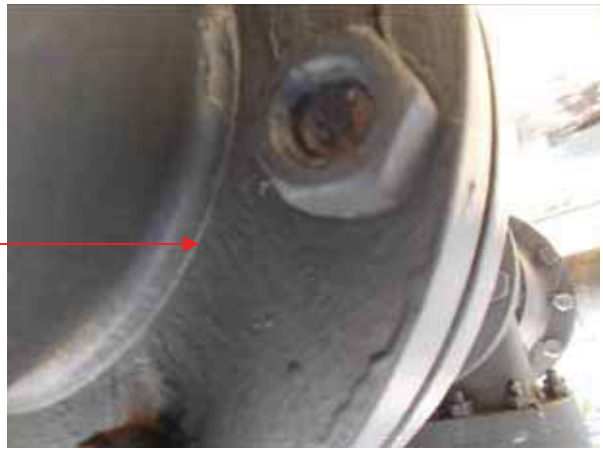
Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 10

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 2	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Paint failure with surface rust was noted all along of piping.	To perform surface preparation and follow by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 11



LINE SERVICE	DRAWING REFERENCE
5'' & 4'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Stud bolt of flange was noted not extend out from the nut. 2. Blistering was noted at bottom section of piping.	1. To replace with longer stud bolts with the same material specification. 2. To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

LINE SERVICE	DRAWING REFERENCE
4'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Piping was noted in contact with flange. 2. Paint failure with surface rust was noted at bottom section of piping.	1. To use protective material to prevent abrasion at the contacting area or to re-align the pipeline. 2. To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 13

LINE SERVICE	DRAWING REFERENCE
10'' Residual Fuel Oil No. 6	ISO drawing no. 24
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Small bore piping (gauge line) was noted without gusset plates. 2. Pipe support modification was noted at support 5 and 6 and surface rust was noted at the area.	1. To replace with longer stud bolts with the same material specification. 2. To install 2 gusset plates on the piping to strengthen the pressure line.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 14

LINE SERVICE	DRAWING REFERENCE
4'' & 6'' Residual Fuel Oil No. 6	ISO drawing no. 25
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. Wrapping tape was noted deteriorated at some locations and paint failure with surface rust was noted at the area. 2. Paint failure with surface was noted at soil to air interface Area.	1. To un-install the wrapping tape and perform surface preparation follows by maintenance painting as per client's specification. 2. To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 15

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
1. No sign of corrosion at soil to air interface area. 2. General corrosion with maximum pit depth below than 1mm was noted all along of piping.	1. Nil. 2. To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 16

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
General corrosion with maximum pit depth below than 1mm was noted all along of piping.	To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

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PHOTO NO. : 17




LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
Corrosion under wrapping with maximum pit depth below than 1mm due to wrap failure and gives a path to water ingress inside.	To un-install the wrapping tape and perform surface preparation follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

PHOTO NO. : 18

LINE SERVICE	DRAWING REFERENCE
6'' Residual Fuel Oil No. 6	ISO drawing no. 26
DESCRIPTION	**LOCATION**
Circuit 5 – Cabras Manifold 1	Inside Terminal – Outside pump area **Please refer Appendix 3 for detail location*
FINDING	**RECOMMENDATIONS**
General corrosion with maximum pit depth below than 1mm was noted all along of piping.	To perform surface preparation and follows by maintenance painting as per client's specification.

Prepared By : *MOHD. KHAIRI*

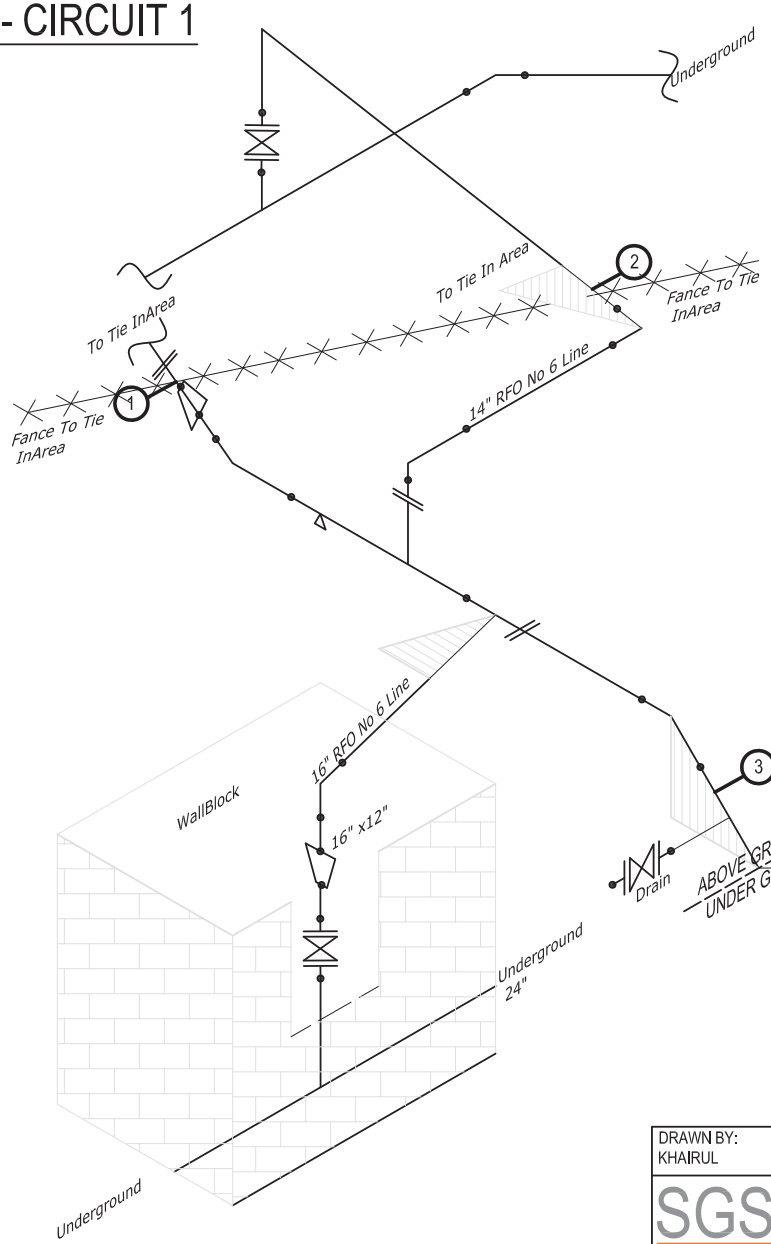
APPENDIX 3

- PIPELINE ISOMETRIC DRAWING -

(Support numbering for visual report reference location & corrosion location)

OUTSIDE TERMINAL - CIRCUIT 1

Tie In Area



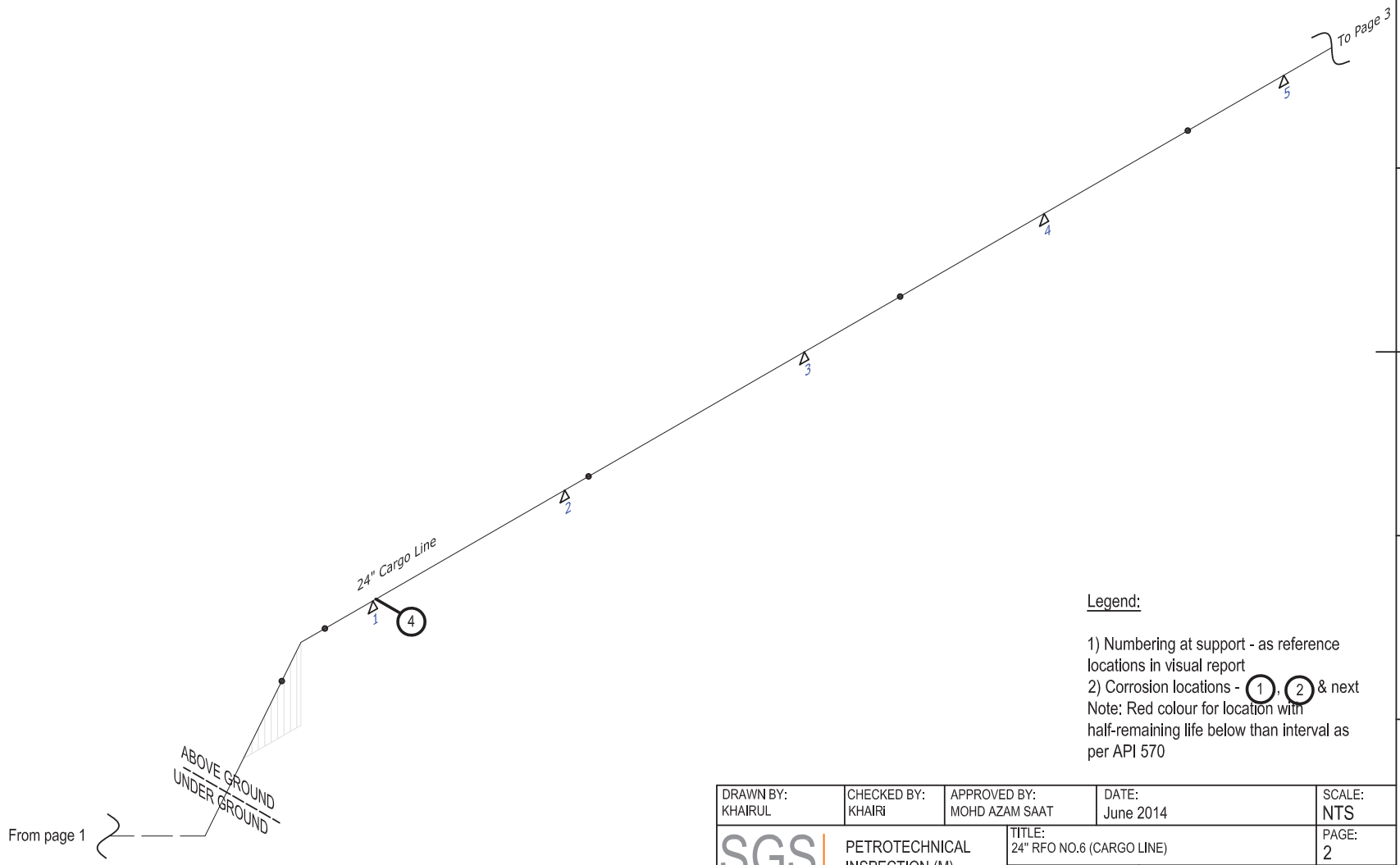
Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY: KHAIRUL	CHECKED BY: KHAIRi	APPROVED BY: MOHD AZAM SAAT	DATE: June 2014	SCALE: NTS
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.	TITLE: 14" & 24" RFO NO.6 (CARGO LINE)			PAGE: 1
	JOB NUMBER: -	PLACE: VITAL ENERGY, GUAM, USA		

OUTSIDE TERMINAL - CIRCUIT 1

Road area



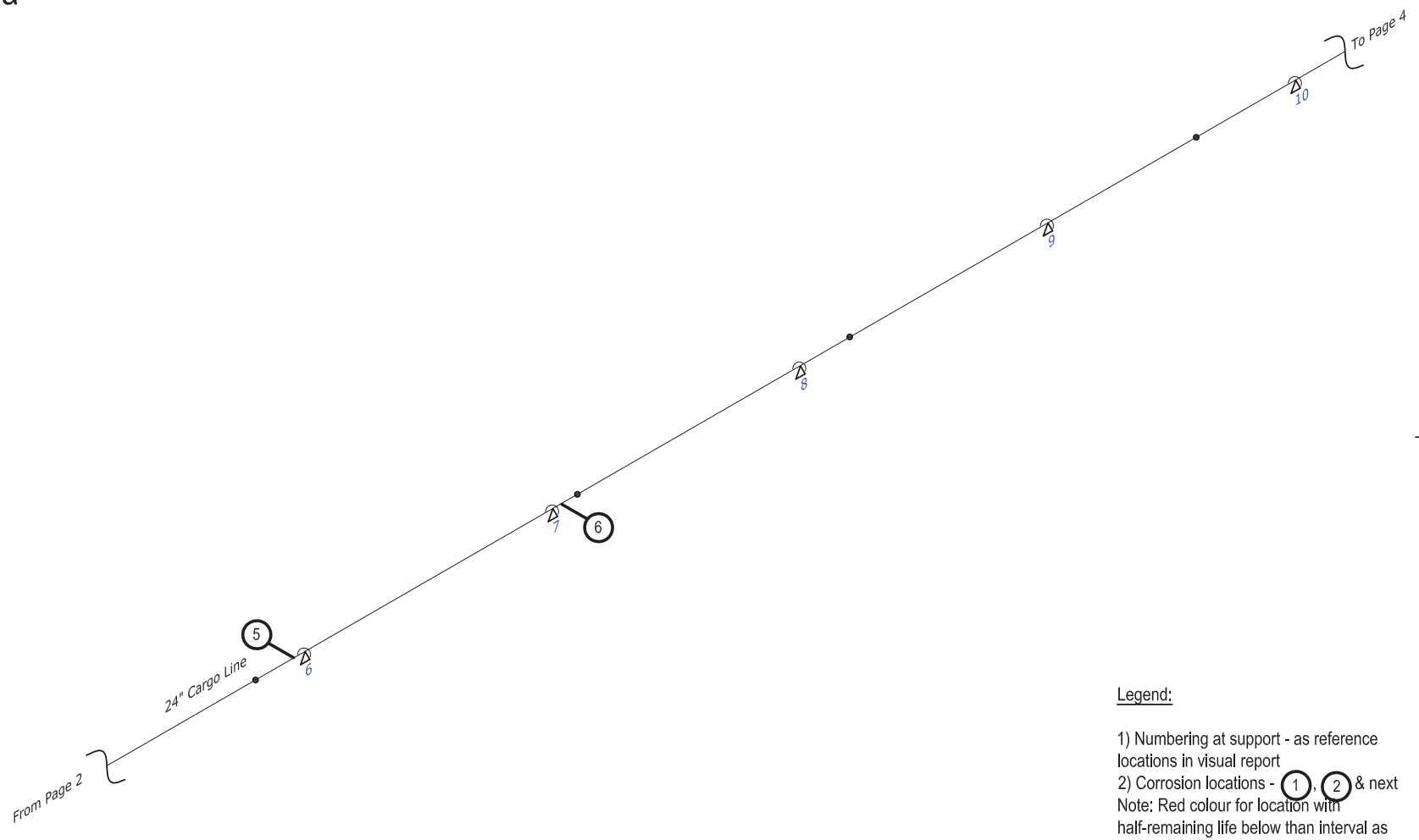
Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY: KHAIRUL	CHECKED BY: KHAIRi	APPROVED BY: MOHD AZAM SAAT	DATE: June 2014	SCALE: NTS
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.	TITLE: 24" RFO NO.6 (CARGO LINE)			PAGE: 2
	JOB NUMBER: -	PLACE: VITAL ENERGY, GUAM, USA		

OUTSIDE TERMINAL - CIRCUIT 1

Road area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
KHAIRUL	KHAIRi	MOHD AZAM SAAT	June 2014	NTS

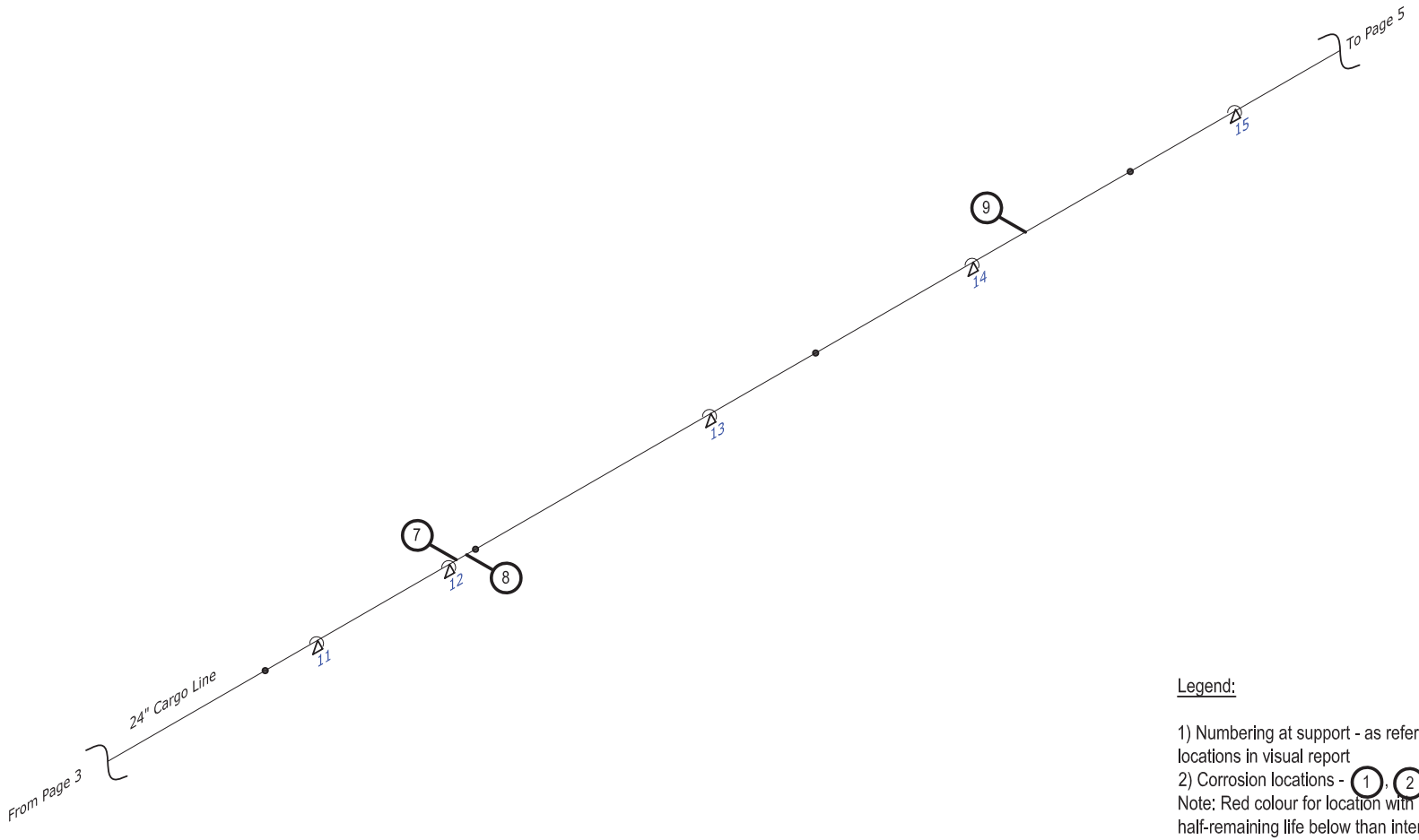
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	3

JOB NUMBER:	PLACE:
-	VITAL ENERGY, GUAM, USA

OUTSIDE TERMINAL - CIRCUIT 1

Road area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
KHAIRUL	KHAIRi	MOHD AZAM SAAT	June 2014	NTS

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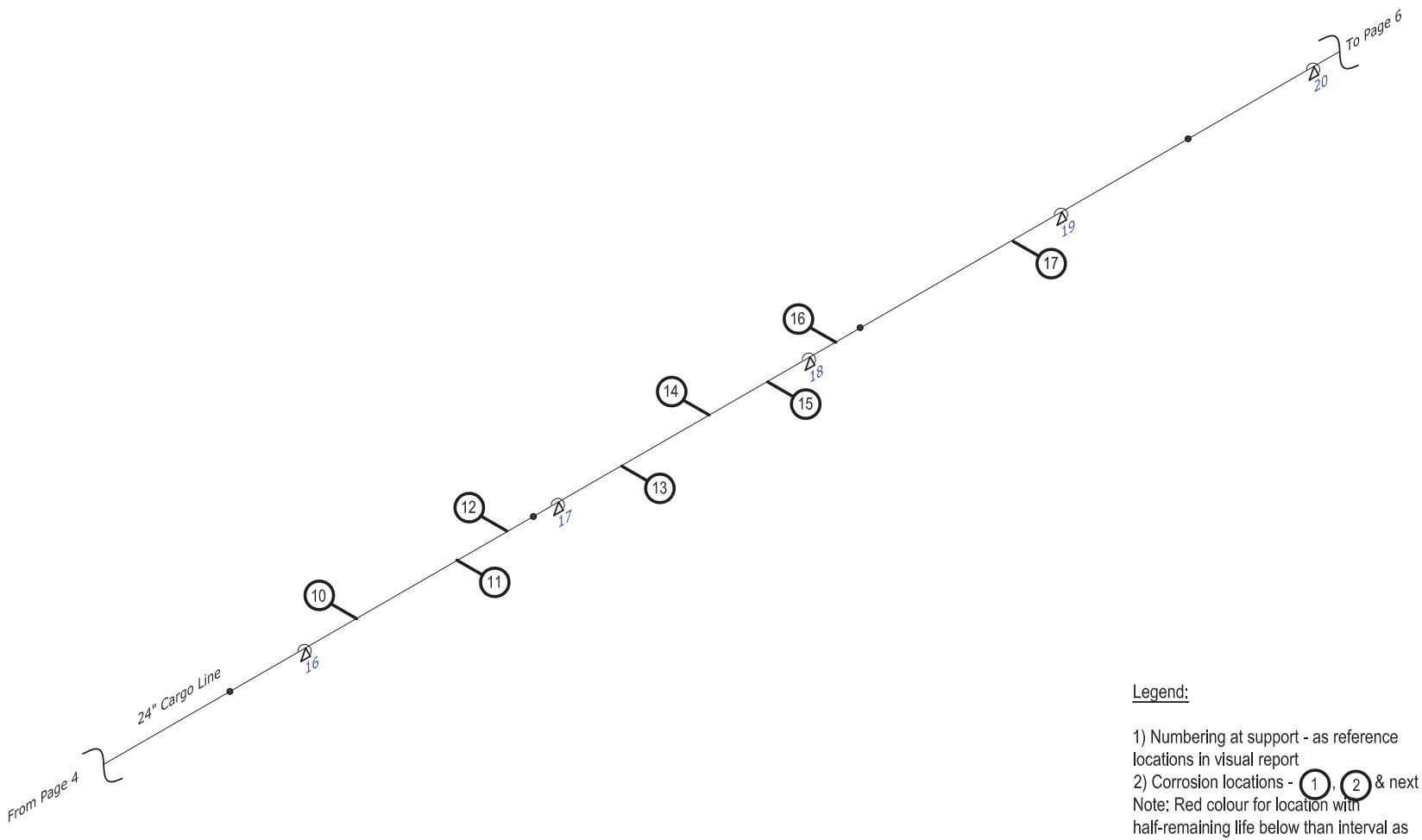
TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	4

JOB NUMBER:	PLACE:
-	VITAL ENERGY, GUAM, USA

OUTSIDE TERMINAL - CIRCUIT 1

Road area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
KHAIRUL	KHAIRi	MOHD AZAM SAAT	June 2014	NTS

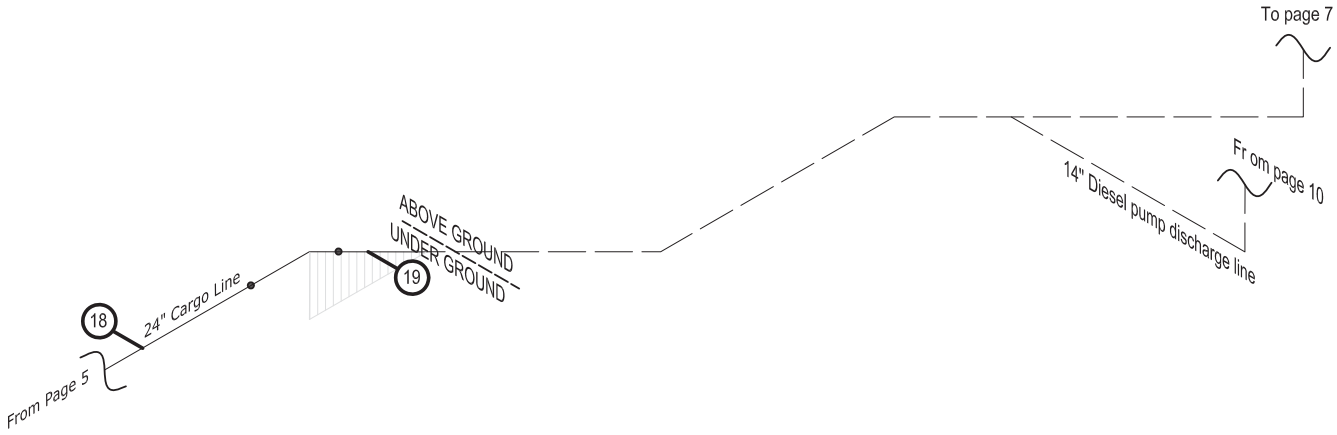
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	5

JOB NUMBER:	PLACE:
-	VITAL ENERGY, GUAM, USA

OUTSIDE TERMINAL - CIRCUIT 1

Road area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
KHAIRUL	KHAIRi	MOHD AZAM SAAT	June 2014	NTS

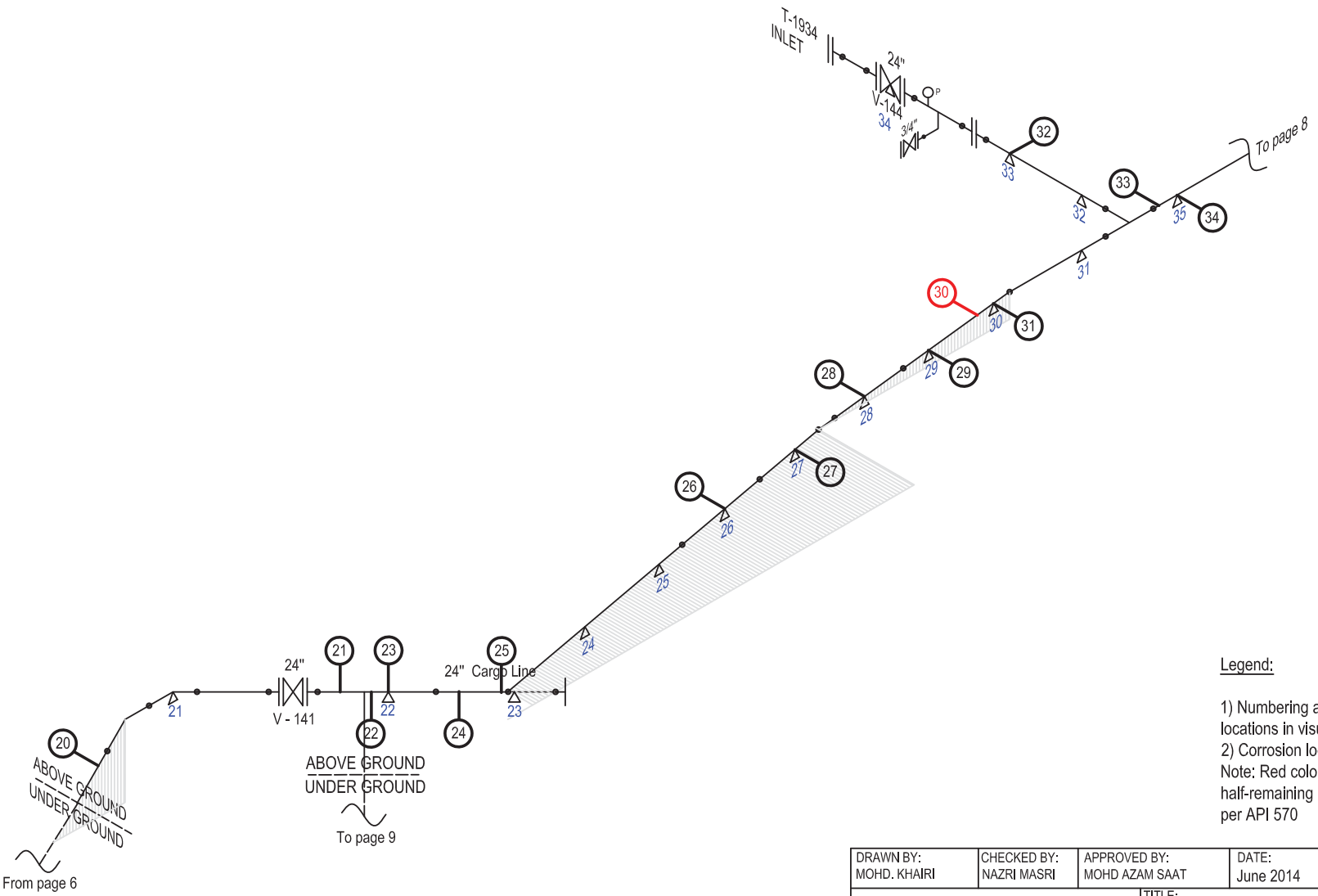
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	6

JOB NUMBER:	PLACE:
-	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 1

Tank 1934 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
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MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	June 2014	NTS

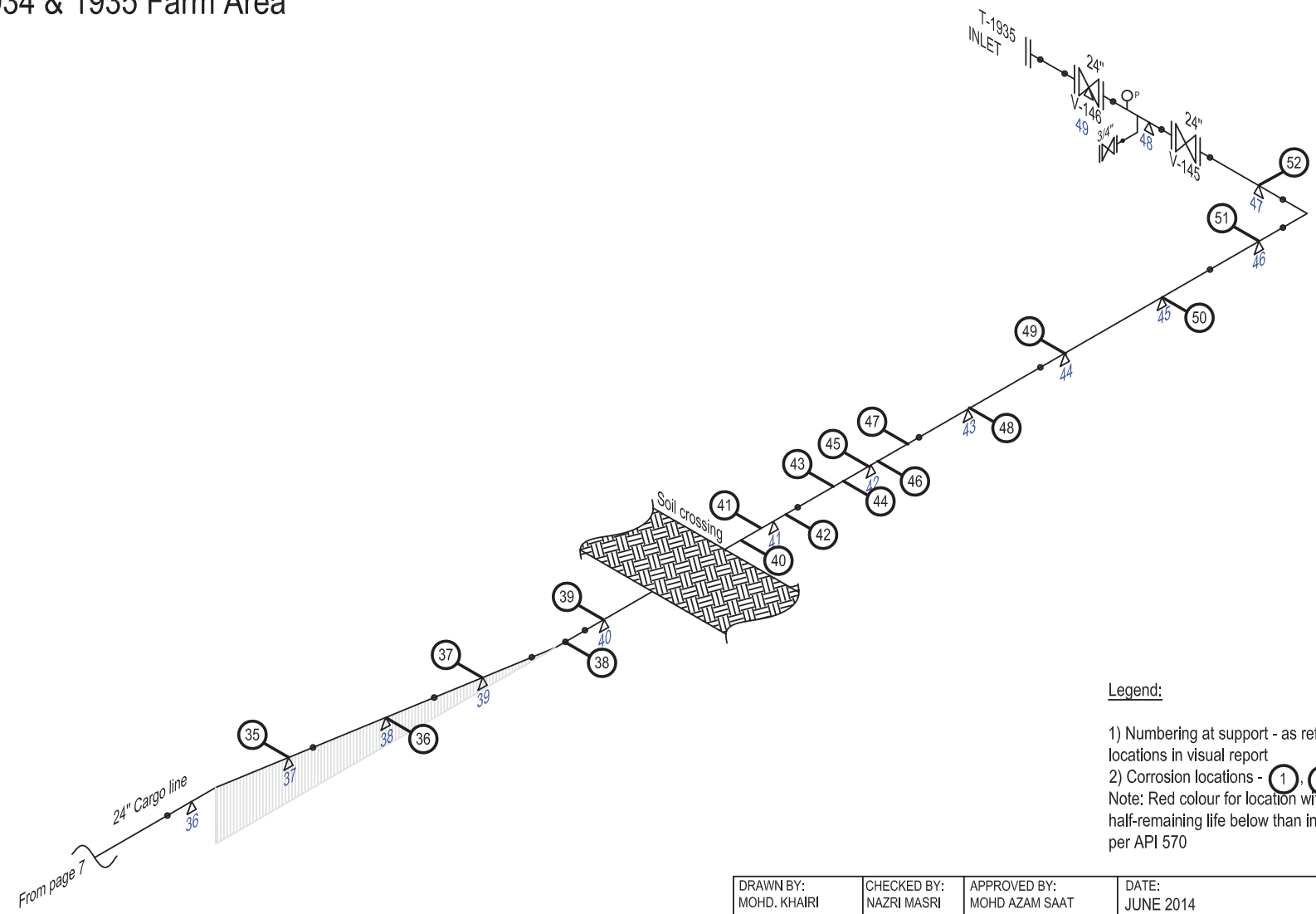
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	7

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 1

Tank 1934 & 1935 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
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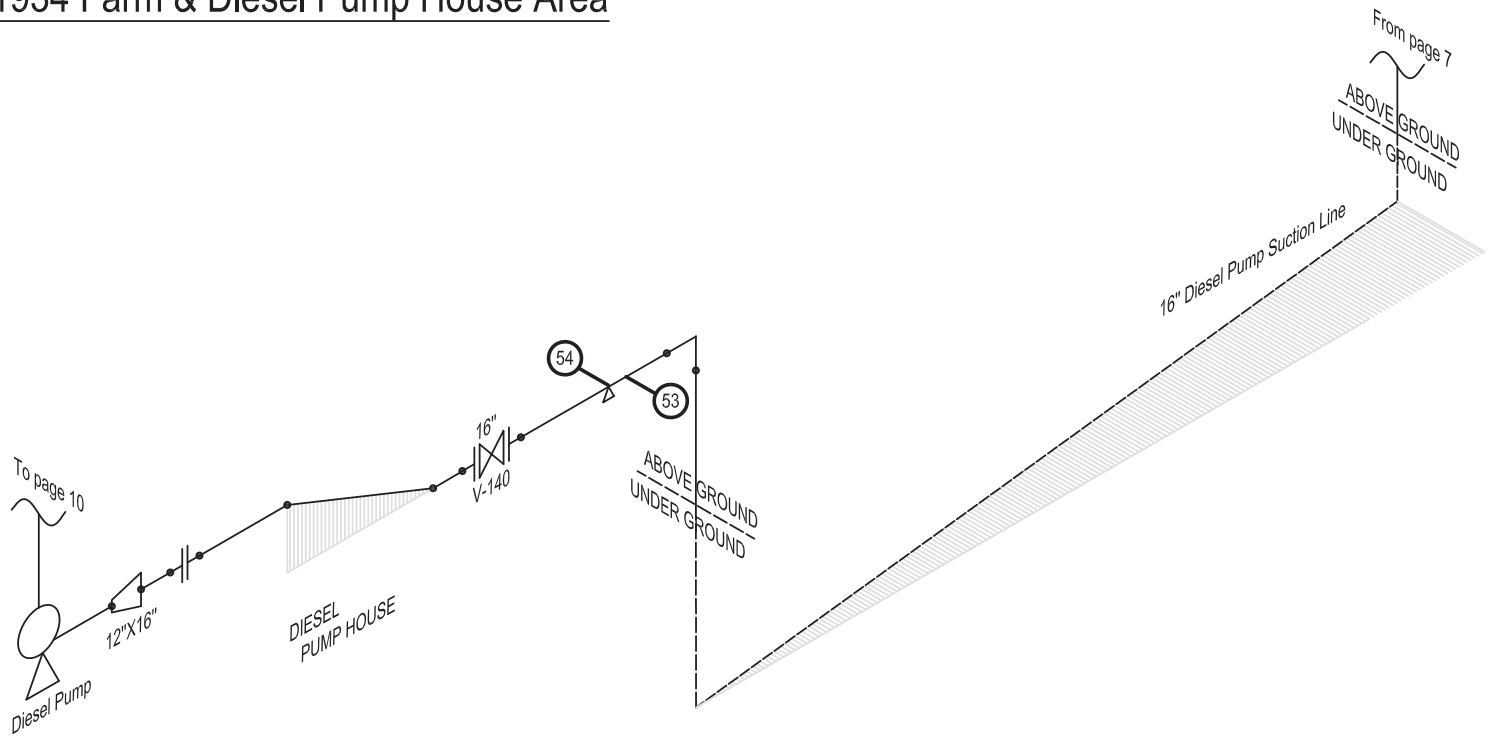
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
24" RFO NO.6 (CARGO LINE)	8

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 1
Tank 1934 Farm & Diesel Pump House Area



N

Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

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MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE: 16" RFO NO.6 (DIESEL PUMP SUCTION LINE)

PAGE: 9

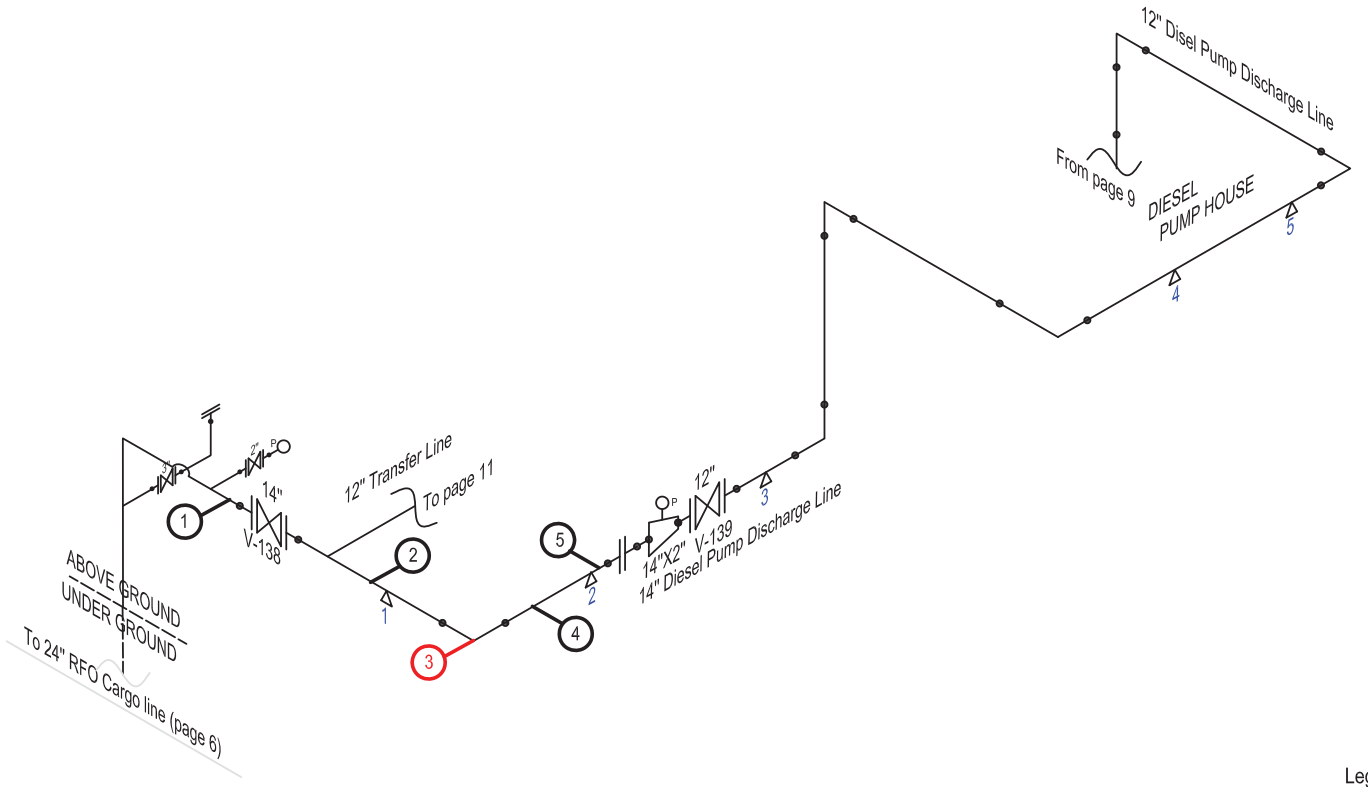
JOB NUMBER: 10100627

PLACE: VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 2

Diesel Pump House Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

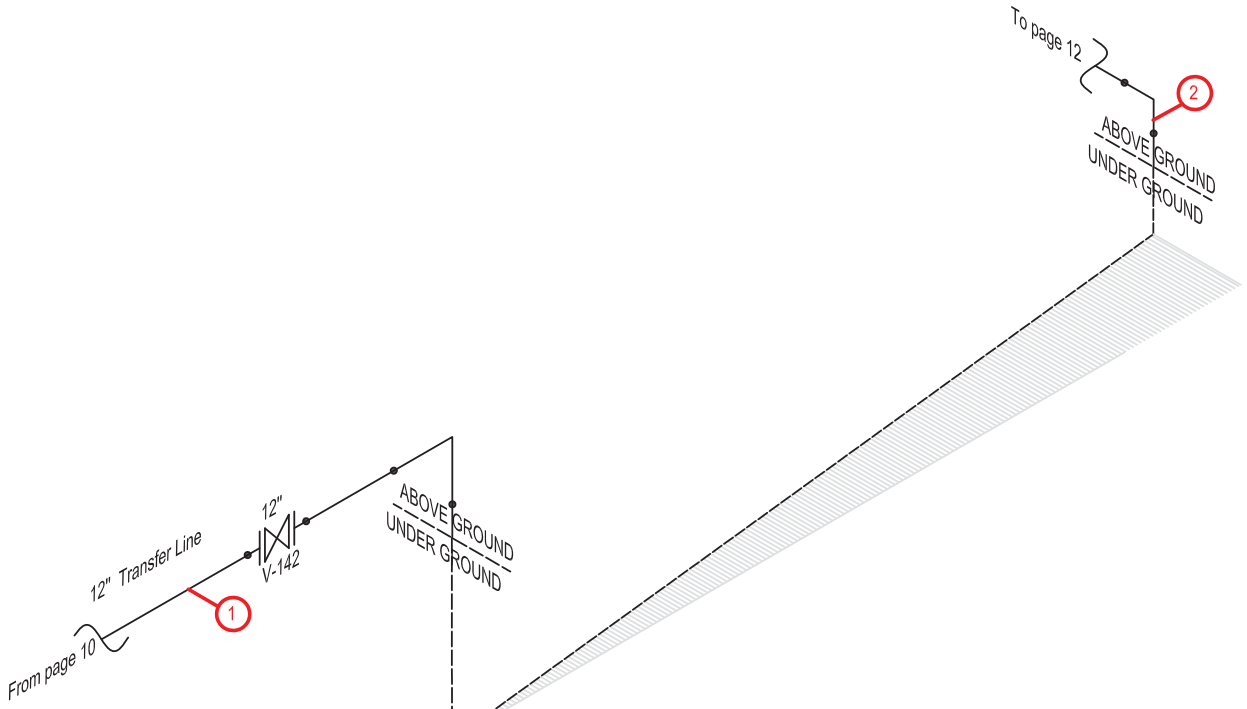
TITLE:	PAGE:
12" & 14" RFO NO.6 (DIESEL PUMP DISCHARGE LINE)	10

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 3

Diesel Pump House & Tank 1934 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

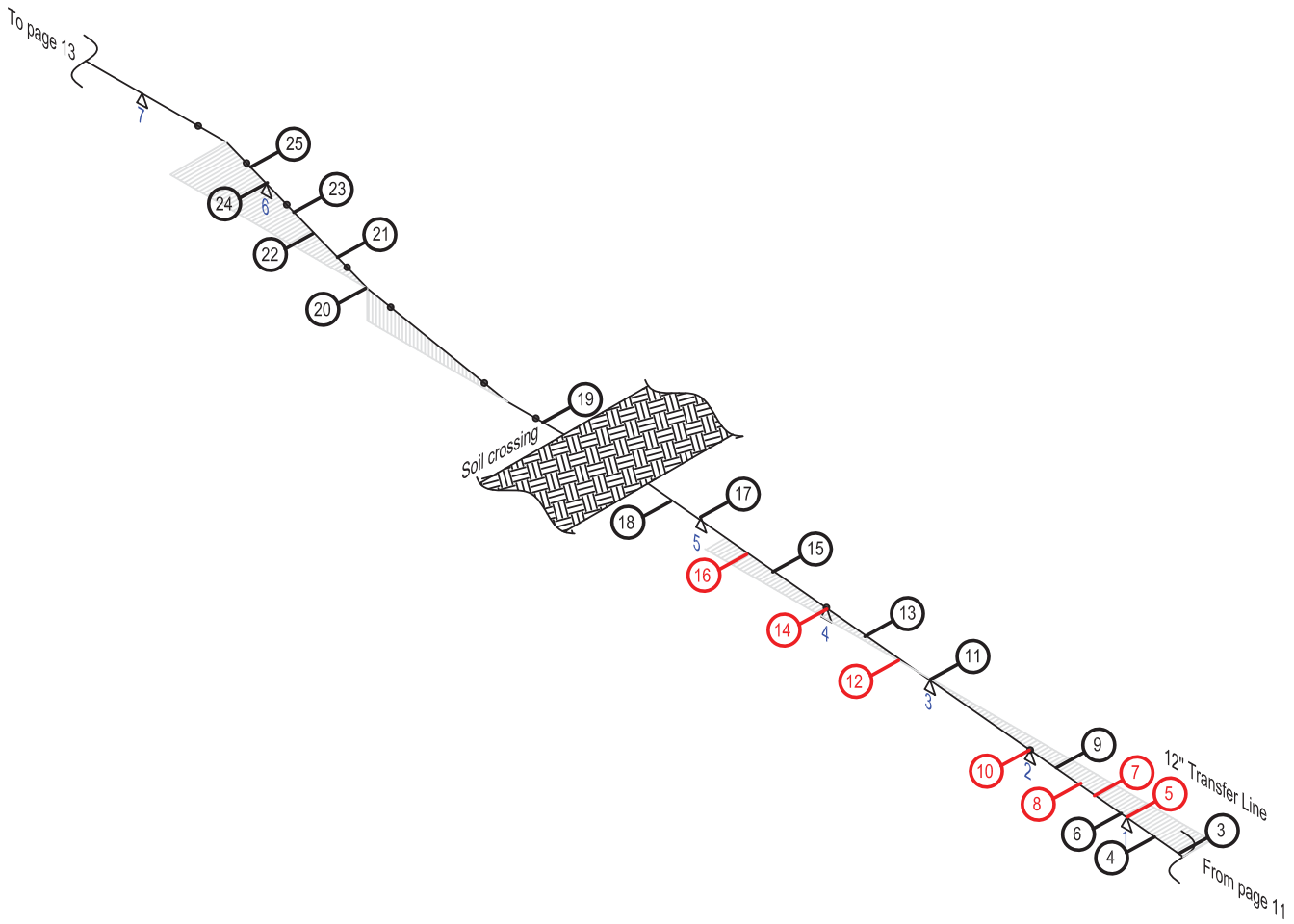
TITLE:	PAGE:
12" RFO NO.6 (TRANSFER LINE)	11

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 3

Tank 1934 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

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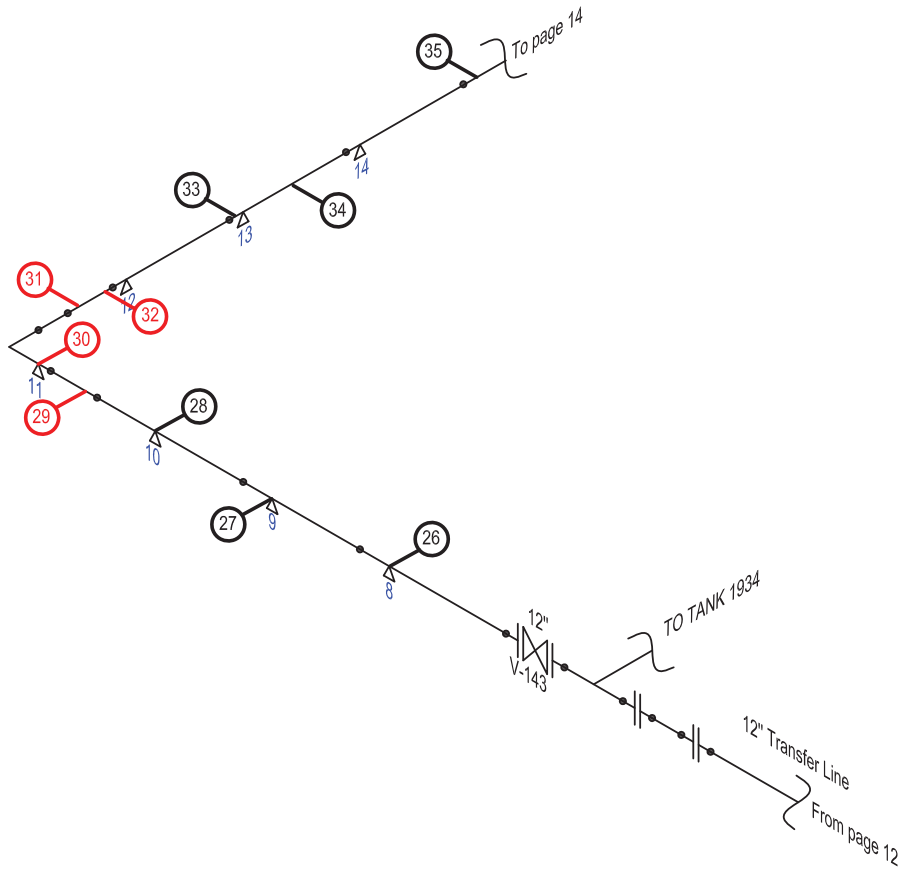
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
16" RFO NO.6 (TRANSFER LINE)	12
JOB NUMBER: 10100627	PLACE: VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 3

Tank 1934 Farm Area



N

Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
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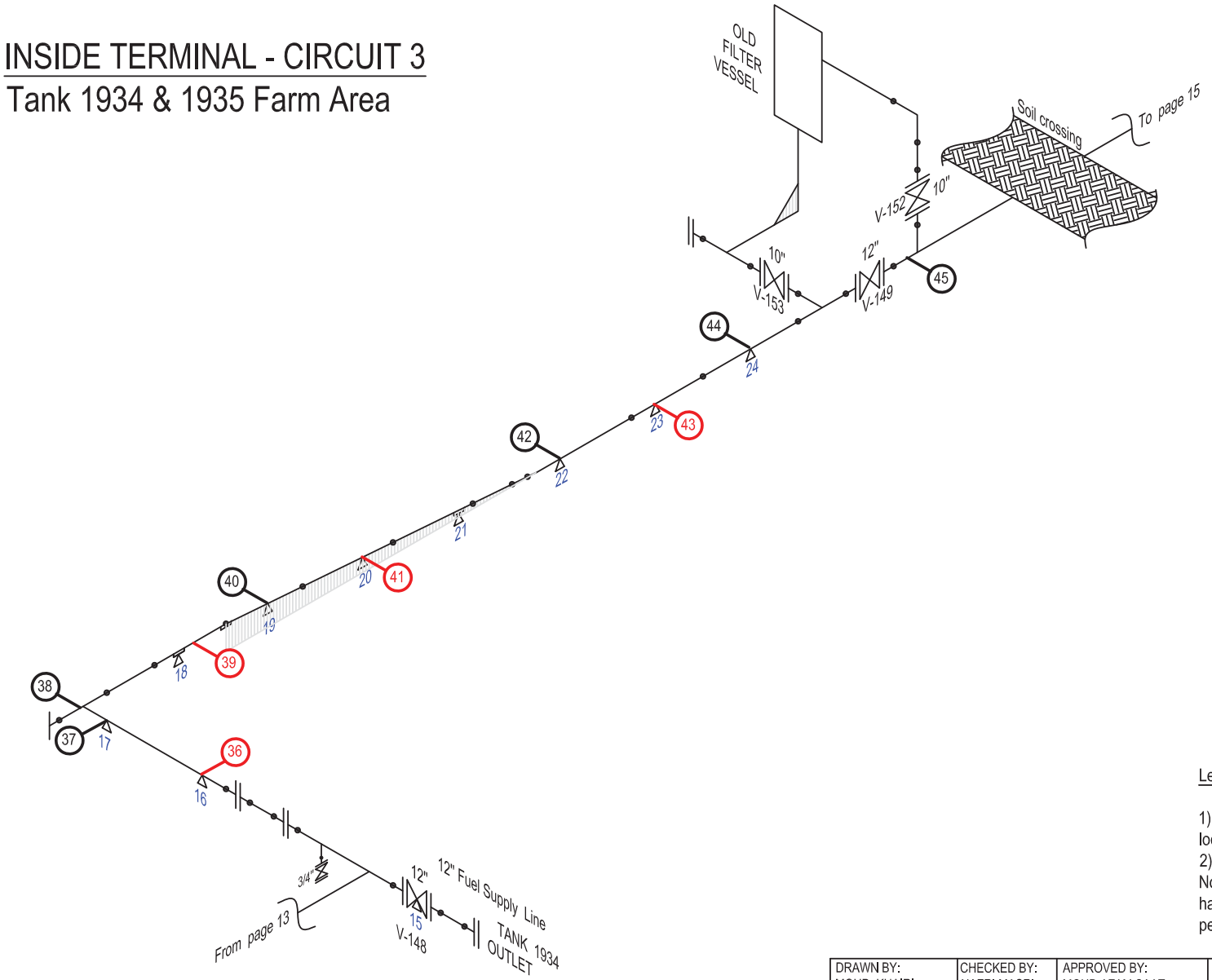
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
12" RFO NO.6 (TRANSFER LINE)	13
JOB NUMBER: 10100627	PLACE: VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 3

Tank 1934 & 1935 Farm Area



N

Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

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MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

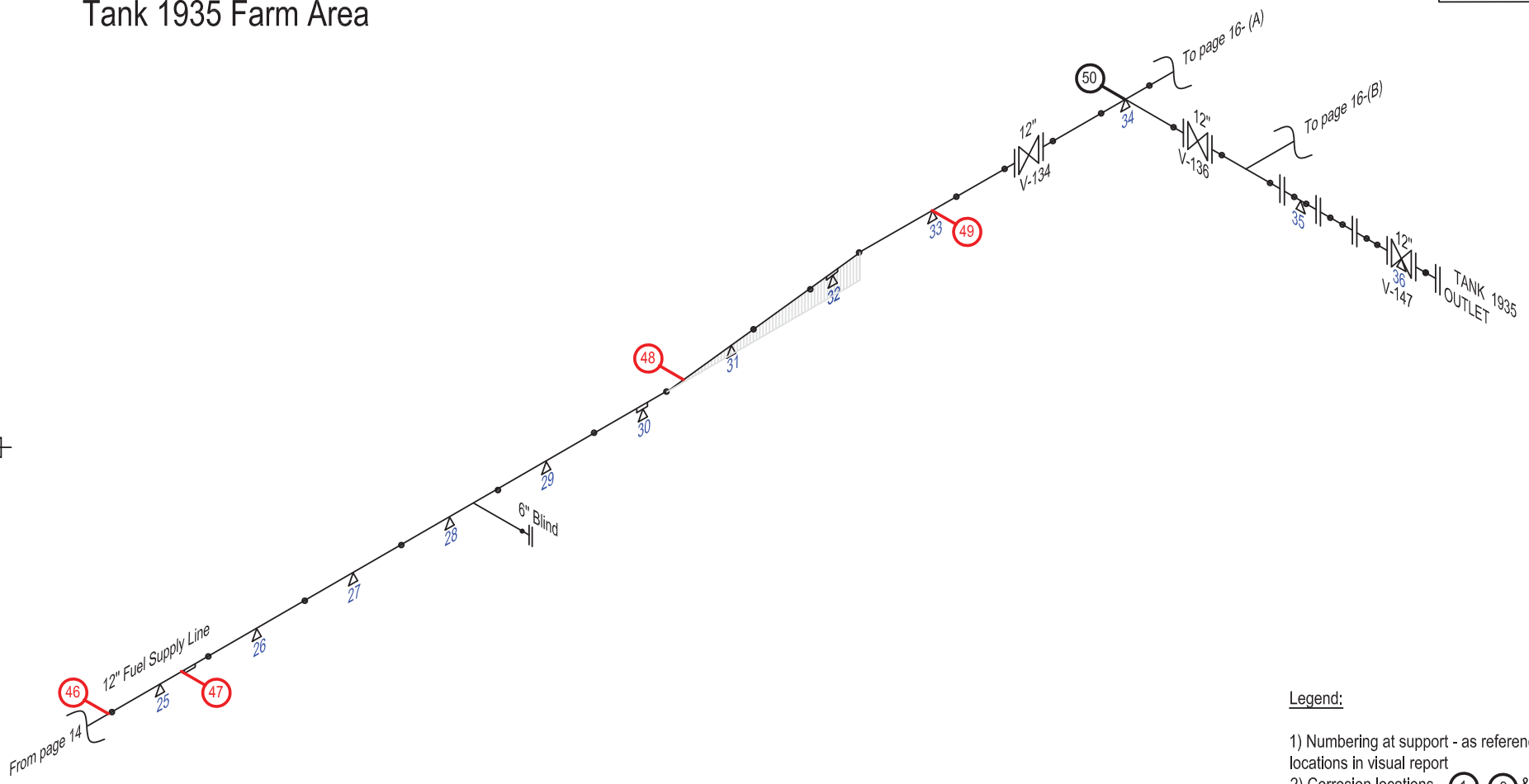
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
12" RFO NO.6 (FUEL SUPPLY LINE)	14

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 3

Tank 1935 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

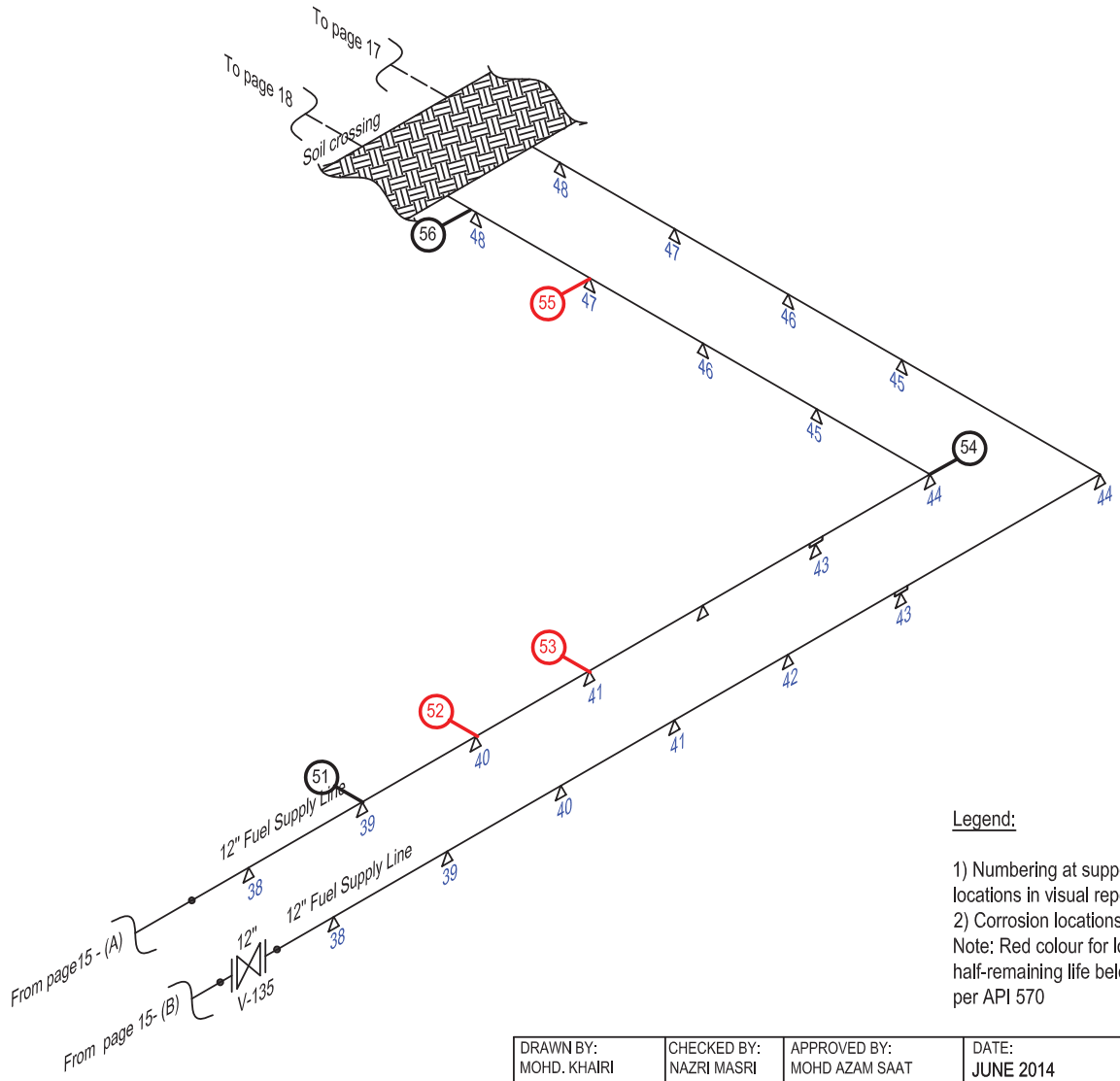
TITLE:	PAGE:
12" RFO NO.6 (FUEL SUPPLY LINE)	15

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 3

Tank 1935 Farm Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

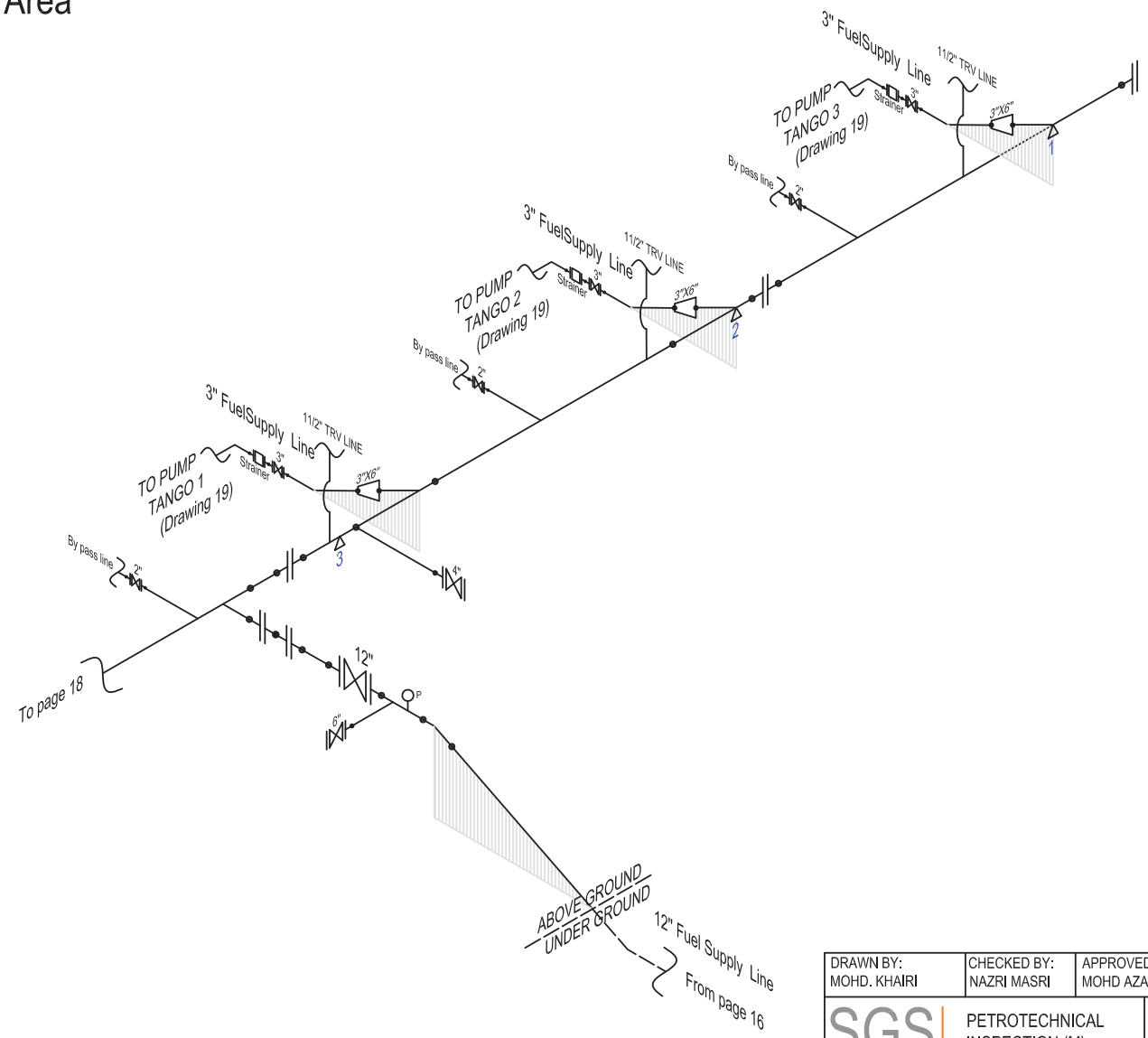
TITLE:	PAGE:
12" RFO NO.6 (FUEL SUPPLY)	16

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 3

Pump Area



Legend:

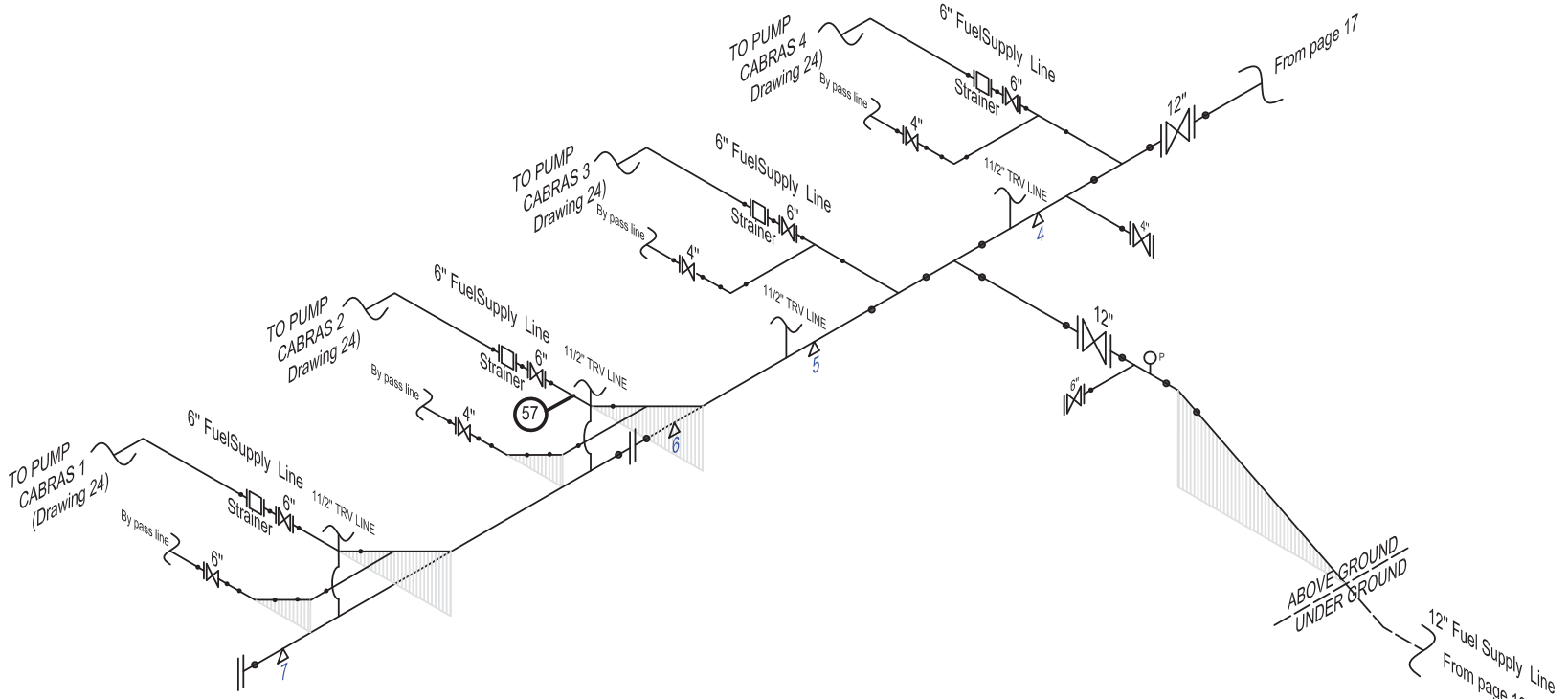
1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

DRAWN BY: MOHD. KHAIRI	CHECKED BY: NAZRI MASRI	APPROVED BY: MOHD AZAM SAAT	DATE: JUNE 2014	SCALE: NTS
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.		TITLE: 3", 12" RFO NO.6 (FUEL SUPPLY)		PAGE: 17
		JOB NUMBER: 10100627	PLACE: VITAL ENERGY, GUAM, USA	

INSIDE TERMINAL - CIRCUIT 3

Pump Area



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

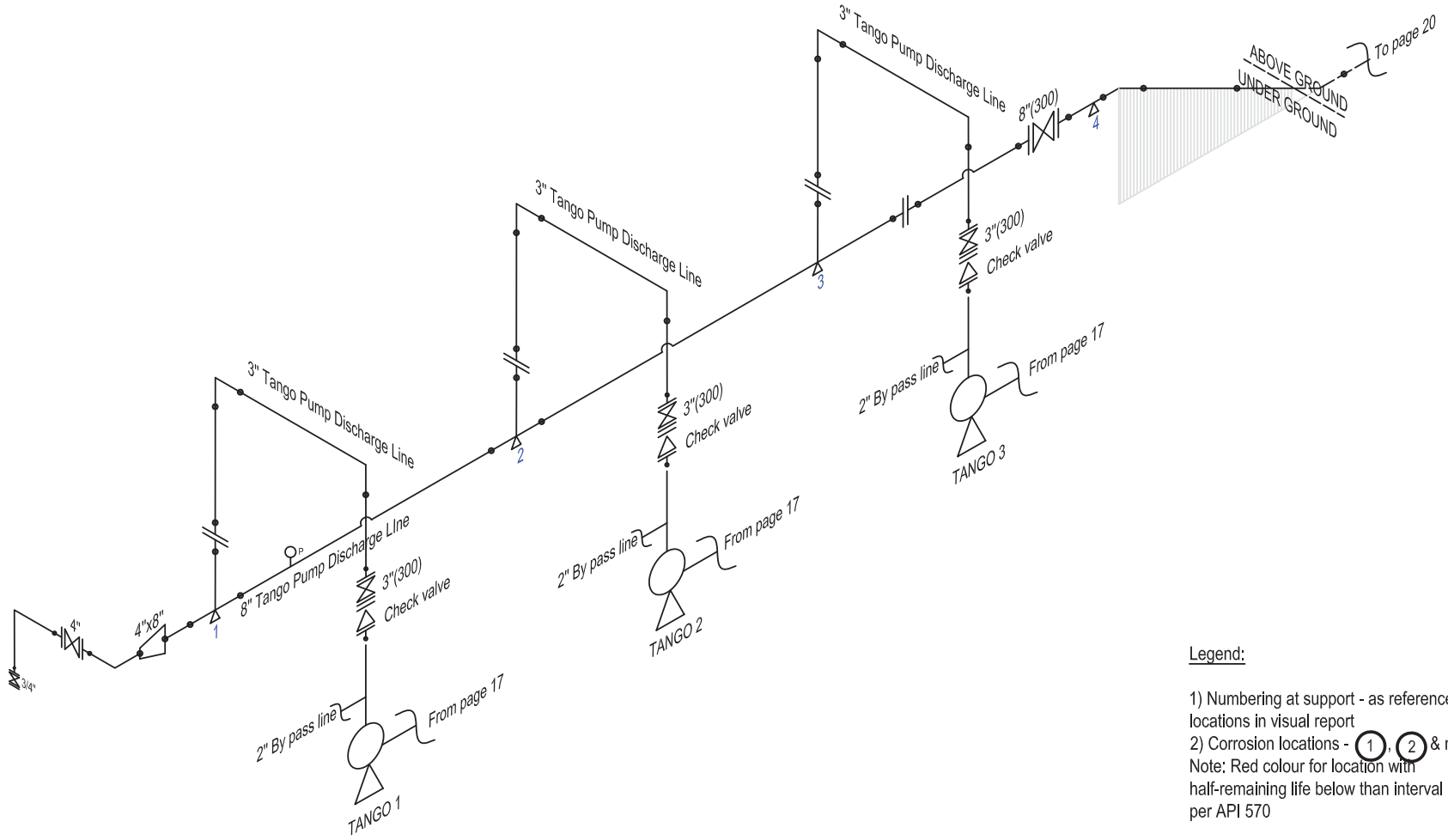
TITLE:	PAGE:
6", 12" RFO NO.6 (FUEL SUPPLY)	18

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 4

Pump Area - Tango pump discharge line



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

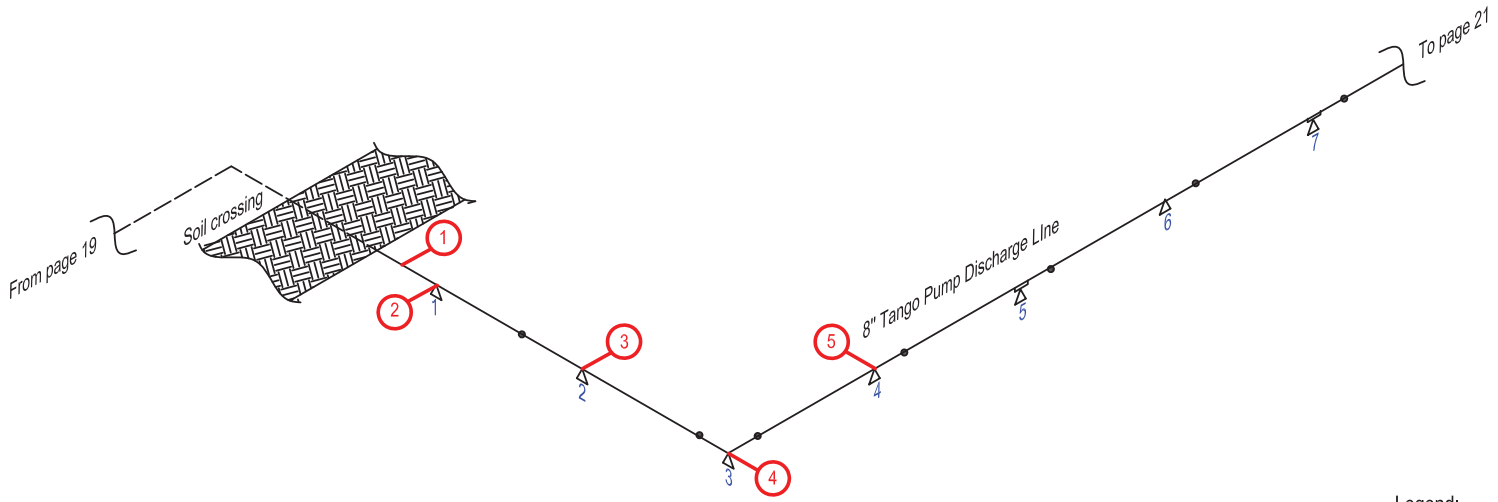
TITLE:	PAGE:
3", 8" RFO NO.6 (TANGO LINE)	19

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 4

Field Area - Tango pump discharge line



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

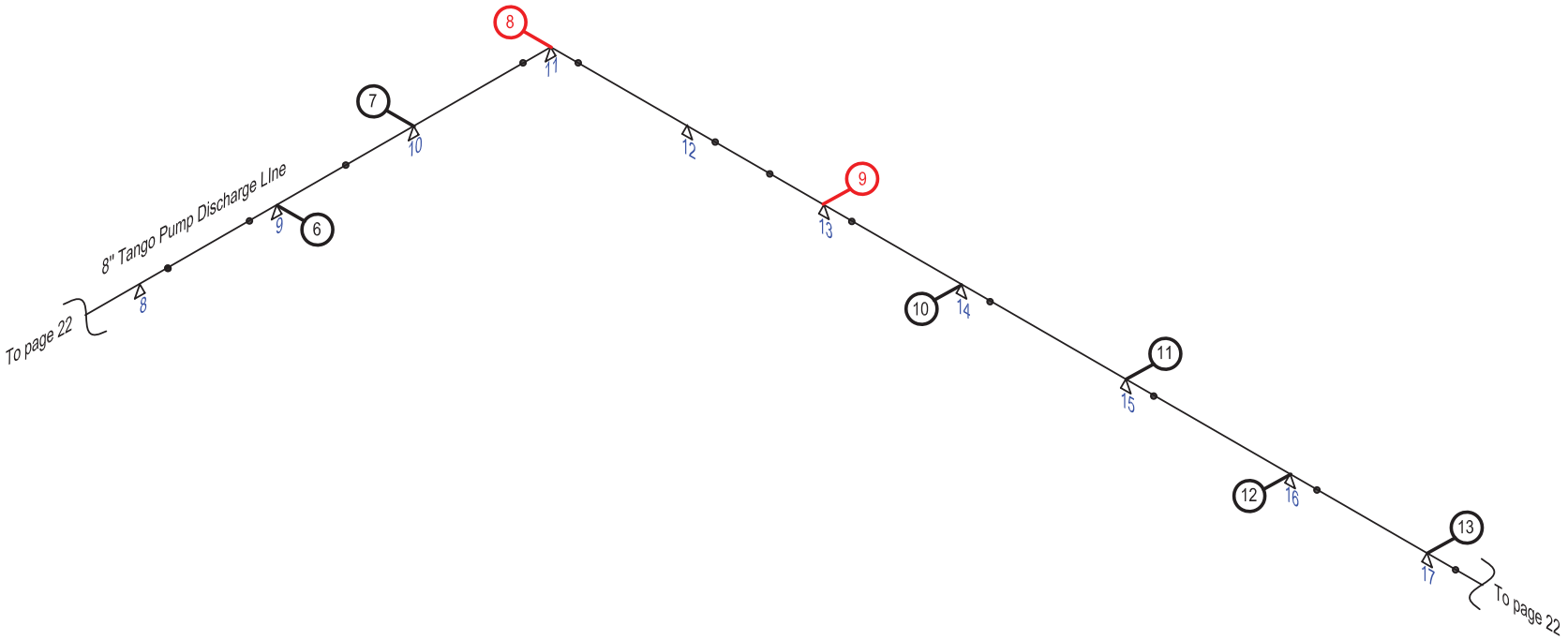
TITLE:	PAGE:
8" RFO NO.6 (TANGO LINE)	20

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 4

Field Area - Tango pump discharge line



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

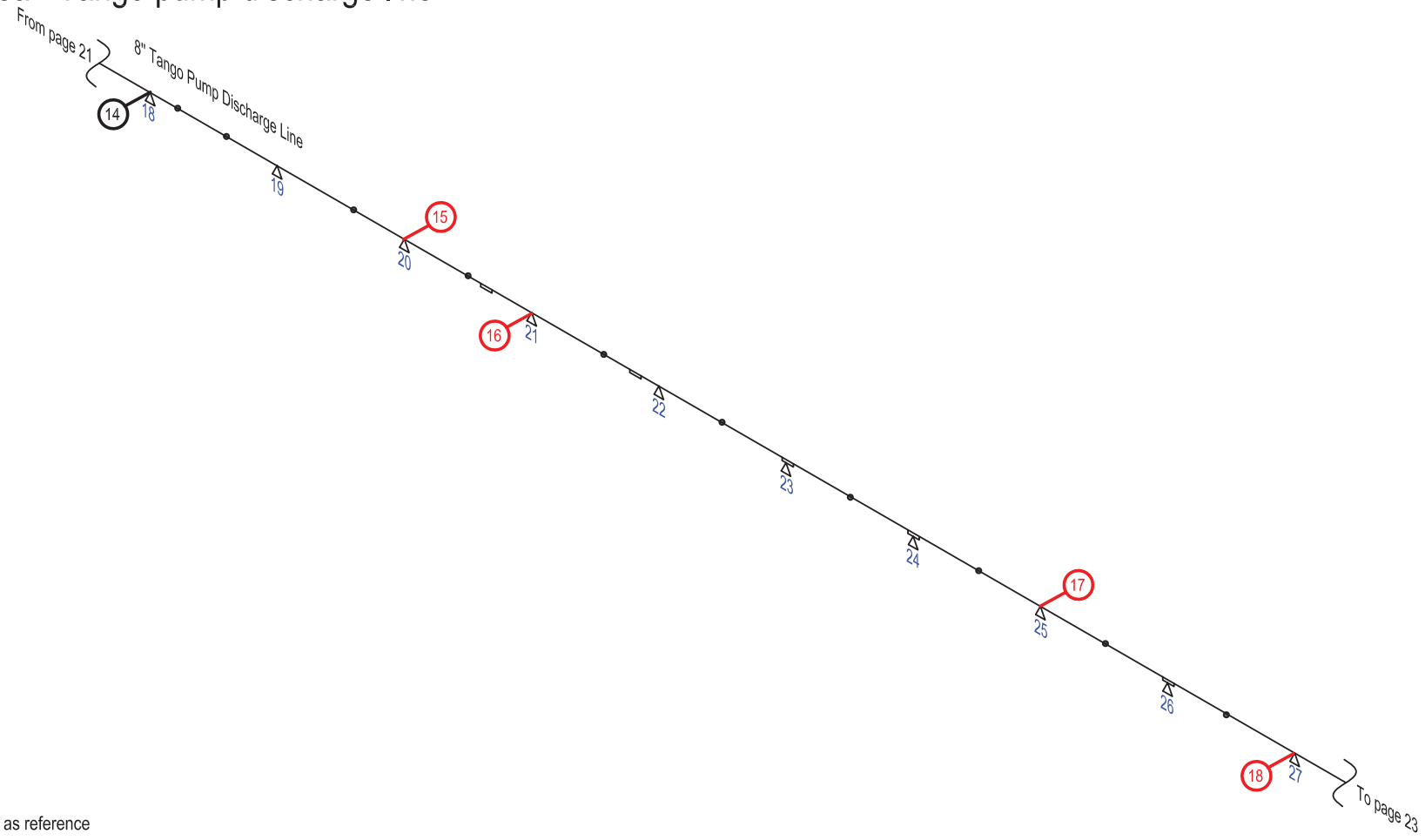
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
8" RFO NO.6 (TANGO LINE)	21
JOB NUMBER: 10100627	PLACE: VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 4

Field Area - Tango pump discharge line



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

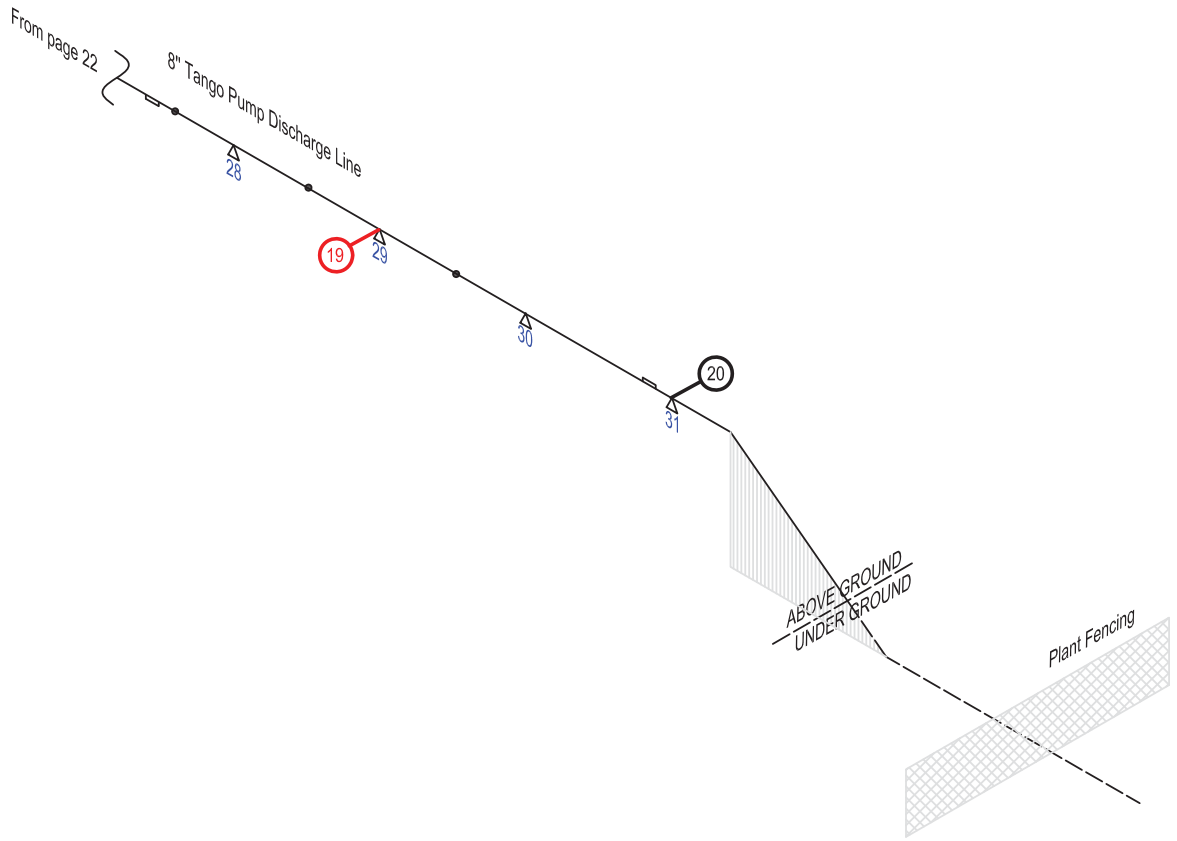
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
8" RFO NO.6 (TANGO LINE)	22

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 4

Field Area - Tango pump discharge line



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

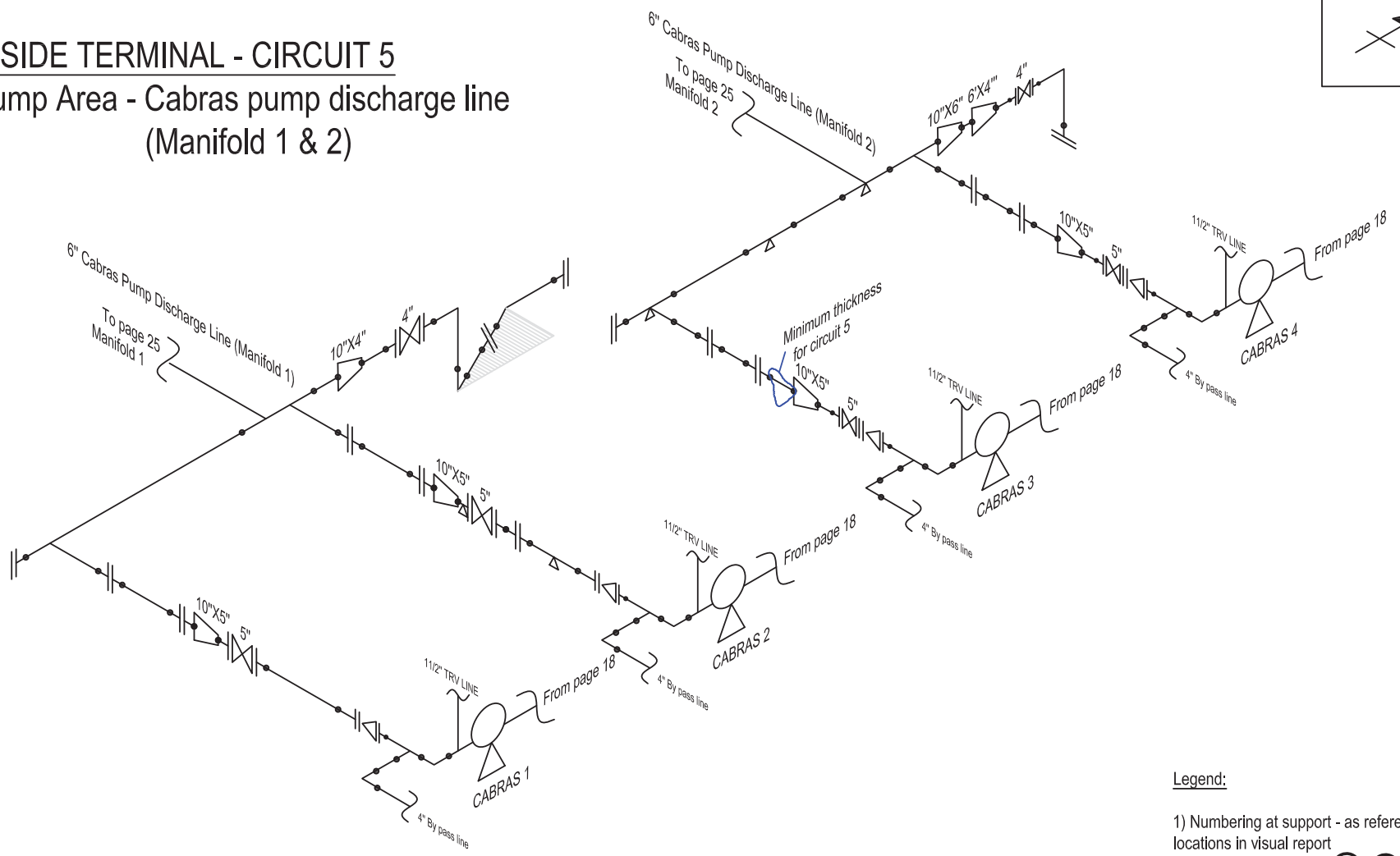
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
8" RFO NO.6 (TANGO LINE)	23
JOB NUMBER: 10100627	PLACE: VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 5

Pump Area - Cabras pump discharge line (Manifold 1 & 2)



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

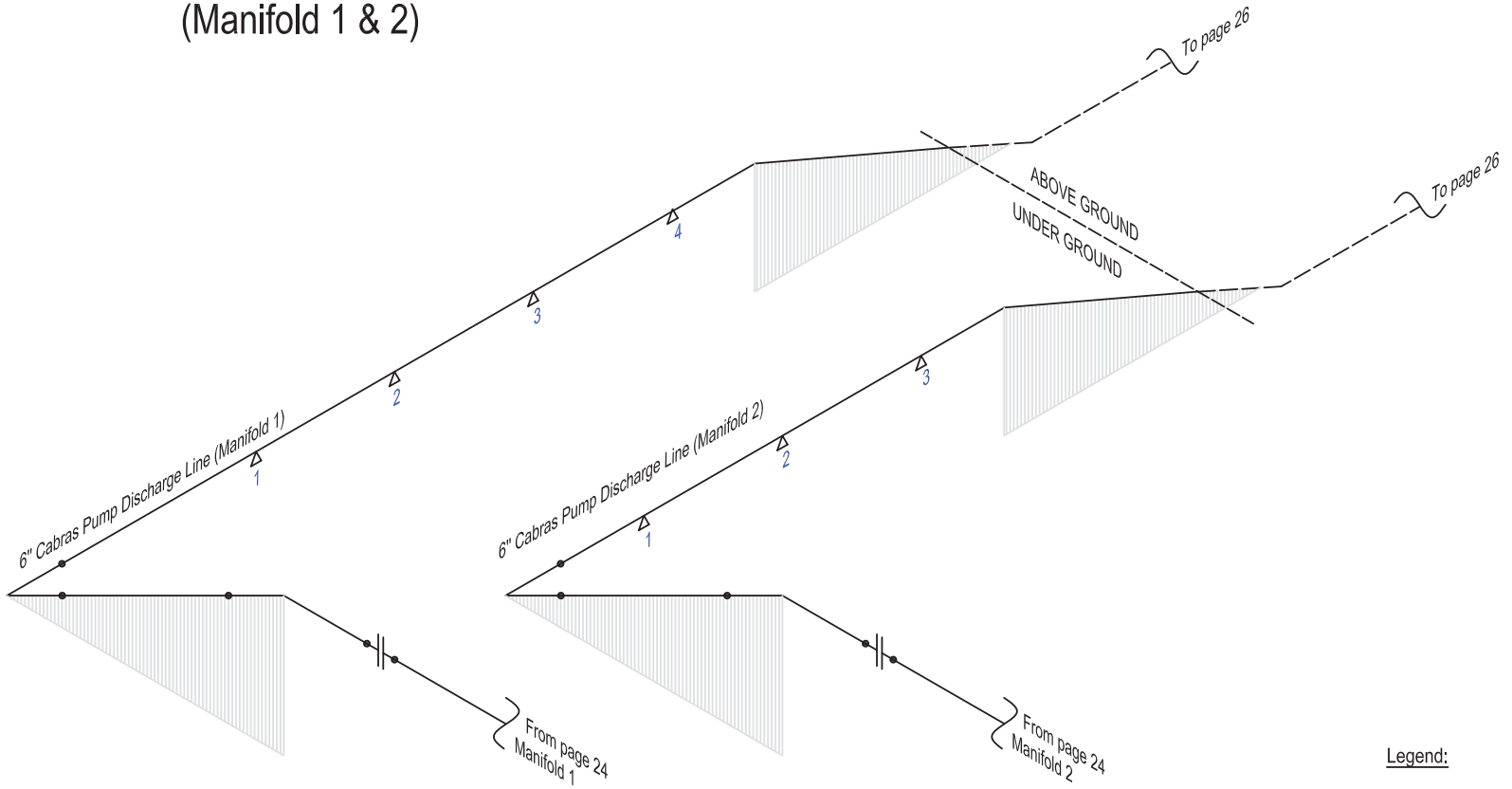
TITLE:	PAGE:
5",6",10" RFO NO.6 (CABRAS LINE)	24

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

Note:-
Drawing for inspection used only

INSIDE TERMINAL - CIRCUIT 5

Field Area - Cabras pump discharge line (Manifold 1 & 2)



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

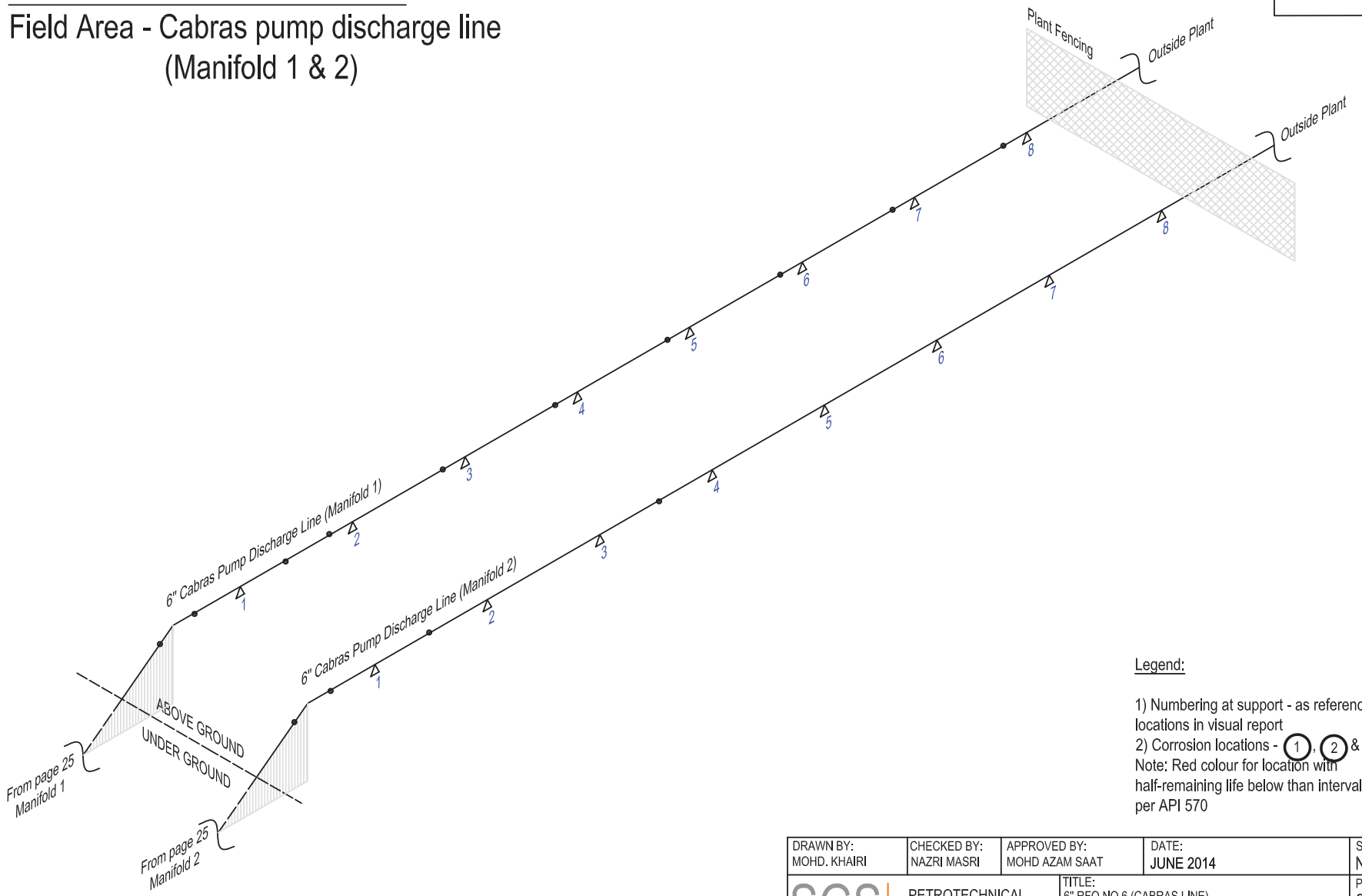
SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
6" RFO NO.6 (CABRAS LINE)	25

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA

INSIDE TERMINAL - CIRCUIT 5

Field Area - Cabras pump discharge line (Manifold 1 & 2)



Legend:

1) Numbering at support - as reference locations in visual report
2) Corrosion locations - (1), (2) & next
Note: Red colour for location with half-remaining life below than interval as per API 570

Note:-
Drawing for inspection used only

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	SCALE:
MOHD. KHAIRI	NAZRI MASRI	MOHD AZAM SAAT	JUNE 2014	NTS

SGS PETROTECHNICAL INSPECTION (M) SDN BHD.

TITLE:	PAGE:
6" RFO NO.6 (CABRAS LINE)	26

JOB NUMBER:	PLACE:
10100627	VITAL ENERGY, GUAM, USA