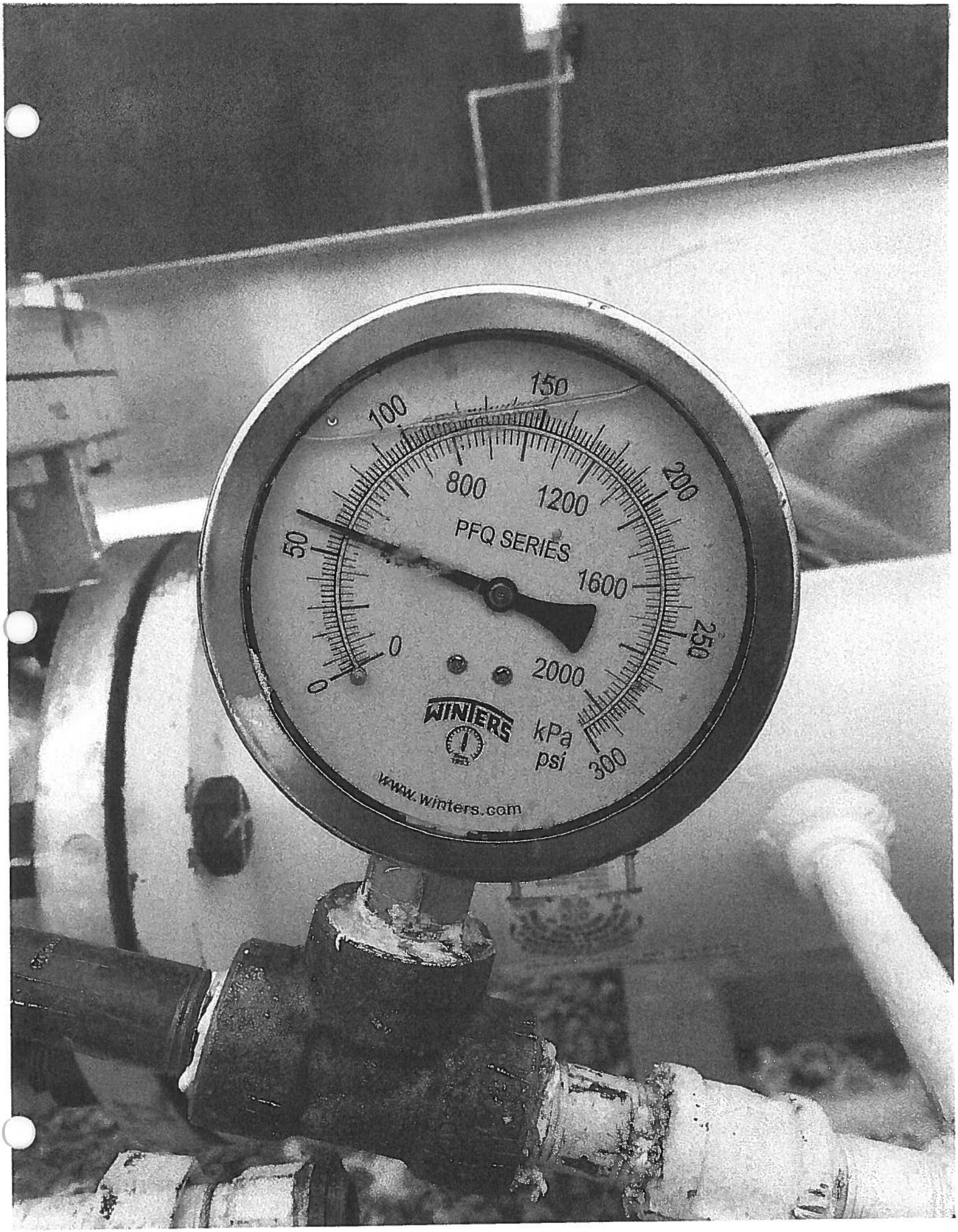
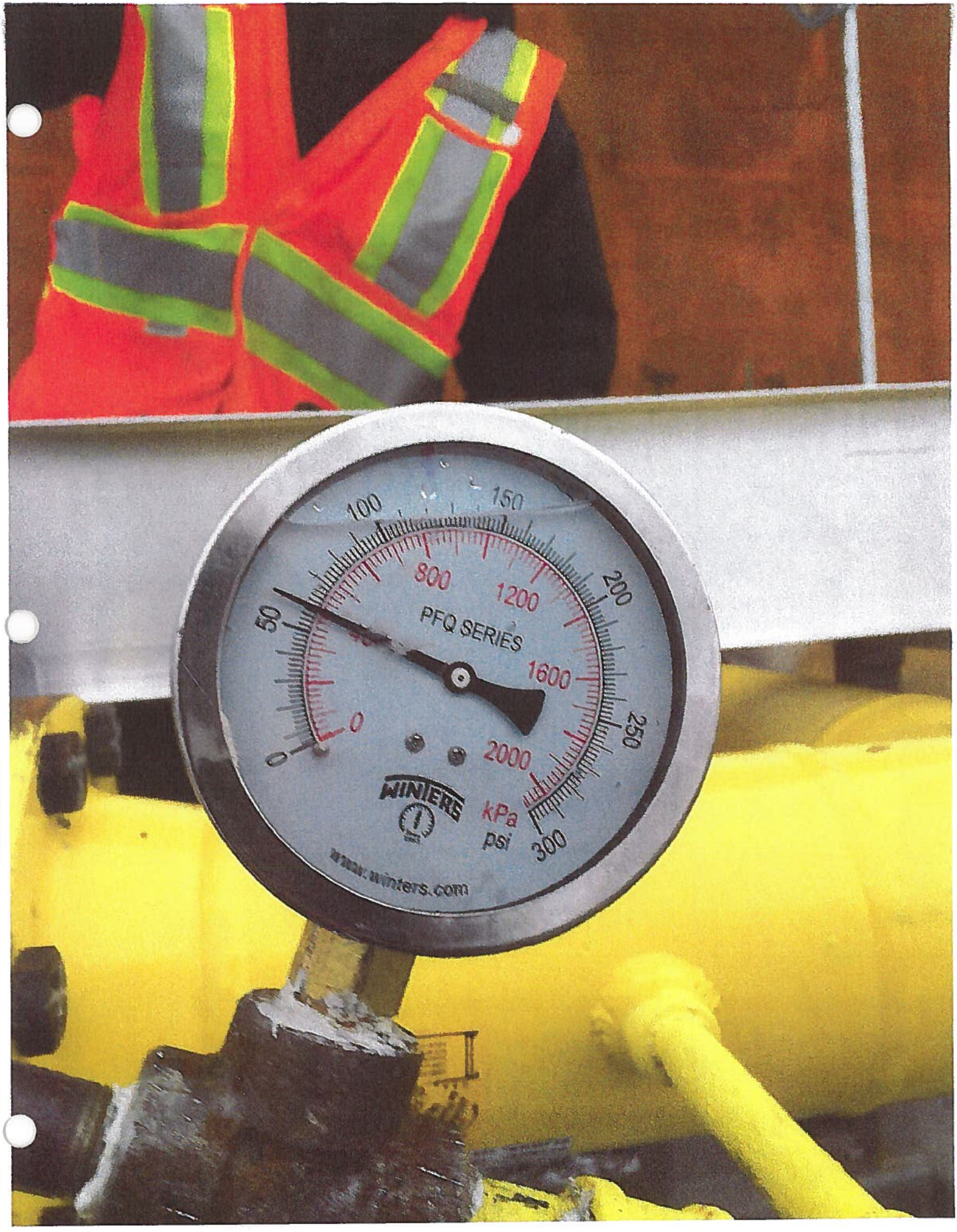

PFQ SERIES
WINTERS
kPa
psi
www.winters.com


100
150
200
50
800
1200
PFQ SERIES
1600
0
0
250
2000
WINTERS
kPa
psi
300
www.winters.com

NUQSANA PROMEC MINING

Agnico-Eagle Mines Ltd.
Pressure Test Report

ITR Number : AEM-PI-ITR-001
Contract no. : C22466T

AGNICO EAGLE

Design Code	Design Test Pressure	Test Medium	Medium Temp.	Test Duration
	60 PSI	Pneumatic		60 min

P&ID (Highlight Boundaries)	Rev	Line	Drawing/ISO	Rev	Spool
65-116-205-200	2	116-150-PD1-CC10-0001	103-150-PD1-CC10 001	0	Pg 1-9
"	2	116-150-PD1-CC10-002	103-150-PD1 CC10002	0	Pg 1-3

Pressure Test Specifications

	Contractor	Date (dd-mm-yy)	Client	Date (dd-mm-yy)
Pre-Hydro Inspection				
NDE/PWHT Clearance				
Release for Test				

Test Instruments

	Make/Model	Serial Number	Test Range (psi)	Calibration Date
Upper	Winters PFQ Series	617-0675	0-300 PSI	May 15 2017
Lower				

Test Data

	Time	Test Pressure	Ambient Temp. (C)	Pipe Temp. (C)	Comments
Start	4h46 PM	60 PSI	-2	-2	
Finish	5h46 PM	60 PSI	-2	-2	

Comments/Referenced Documents (e.g. applicable field reports):

PRESSURE TEST COMPLETE

Contractor Representative			Client Representative		
Robert Lamothe	[signature]	7 oct 2017	Stephane Gienet	[signature]	07 oct, 2017
Name (Print)	Signature	Date	Name (Print)	Signature	Date

LINE RESTORATION COMPLETE

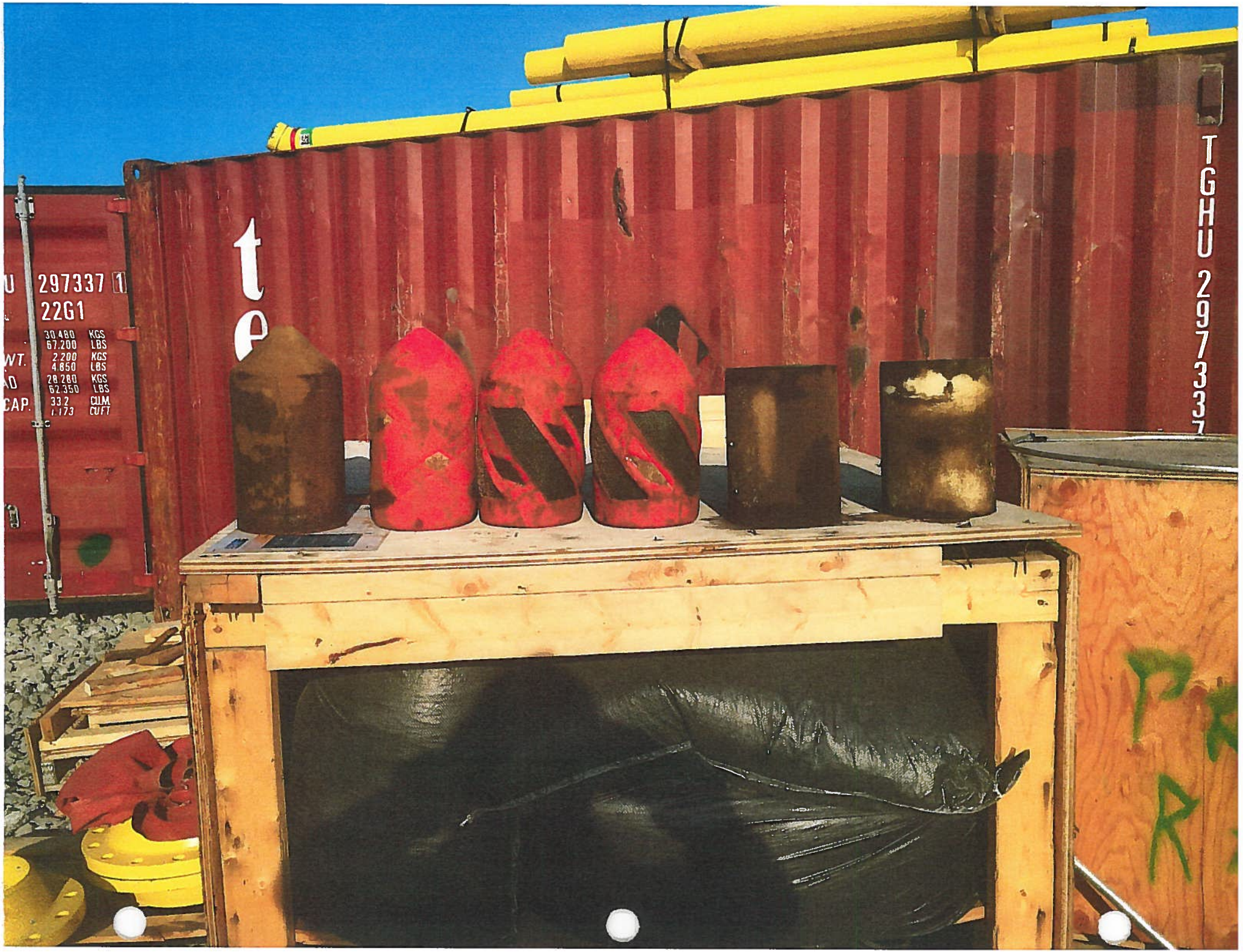
Contractor Representative			Client Representative		
Robert Lamoth	[signature]	8 oct 2017	Stephane Gienet	[signature]	08 oct, 2017
Name (Print)	Signature	Date	Name (Print)	Signature	Date

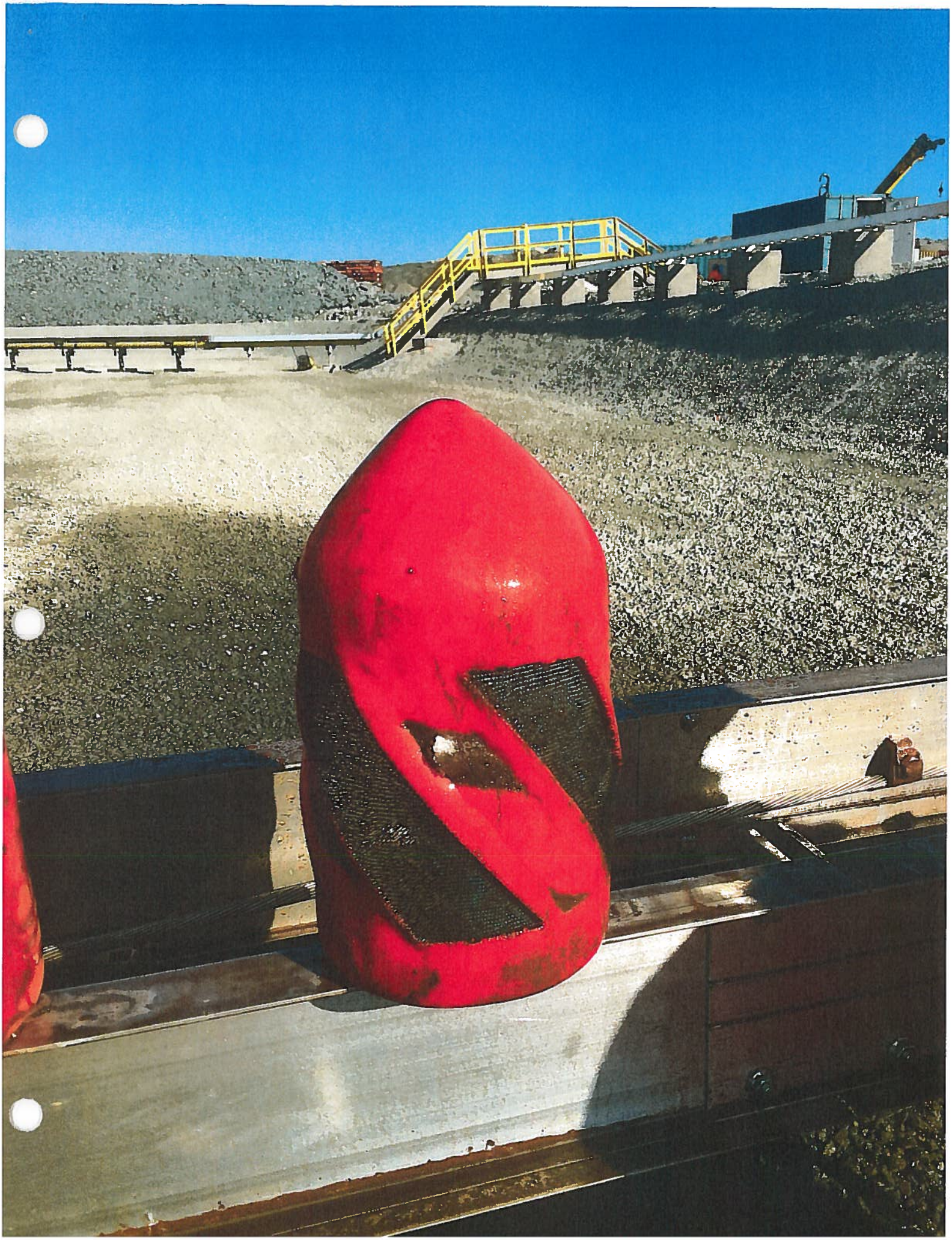

PFQ SERIES
WINTERS
kPa
psi
www.winters.com

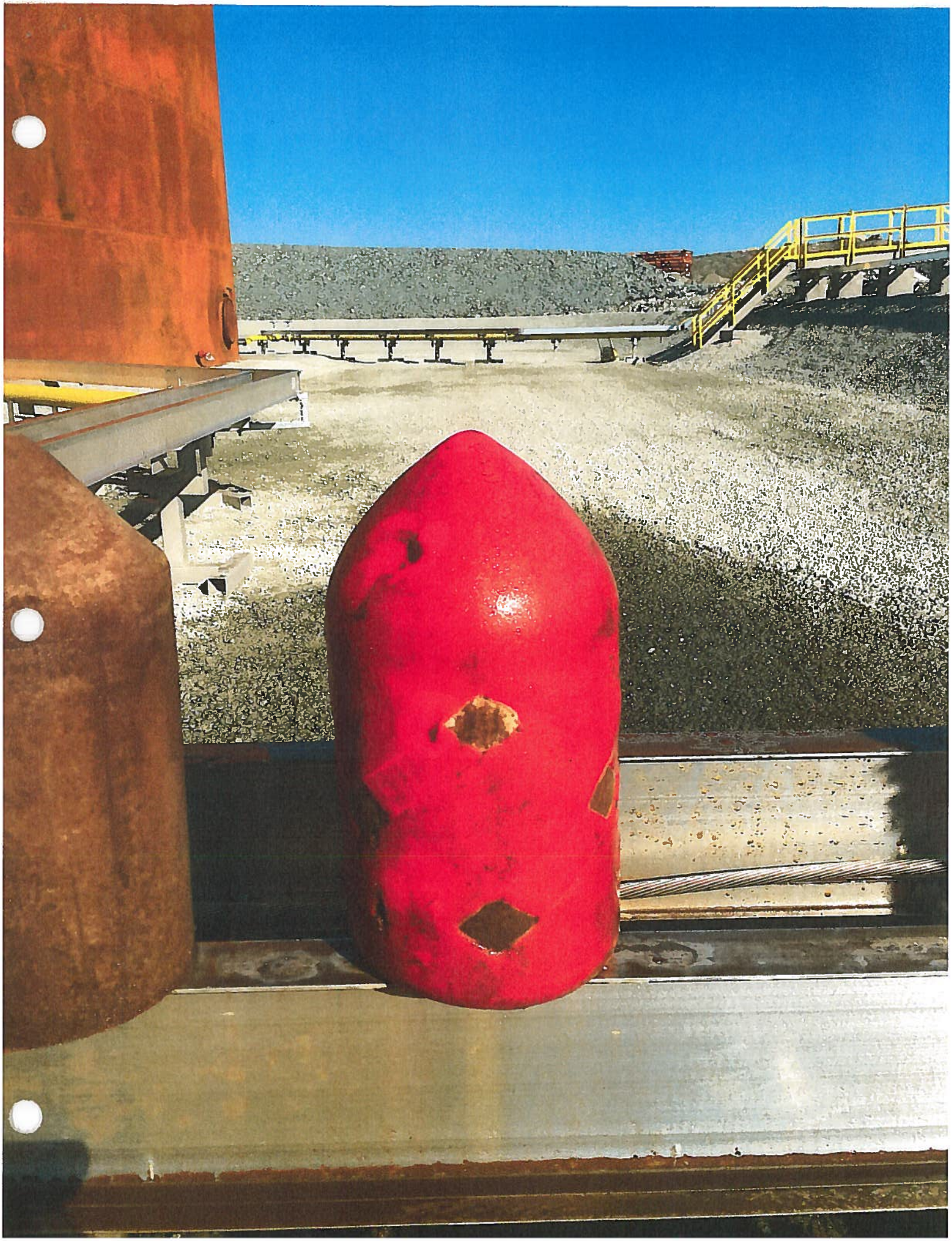

PRO SERIES
WINTERS
kPa
psi
www.winters.com

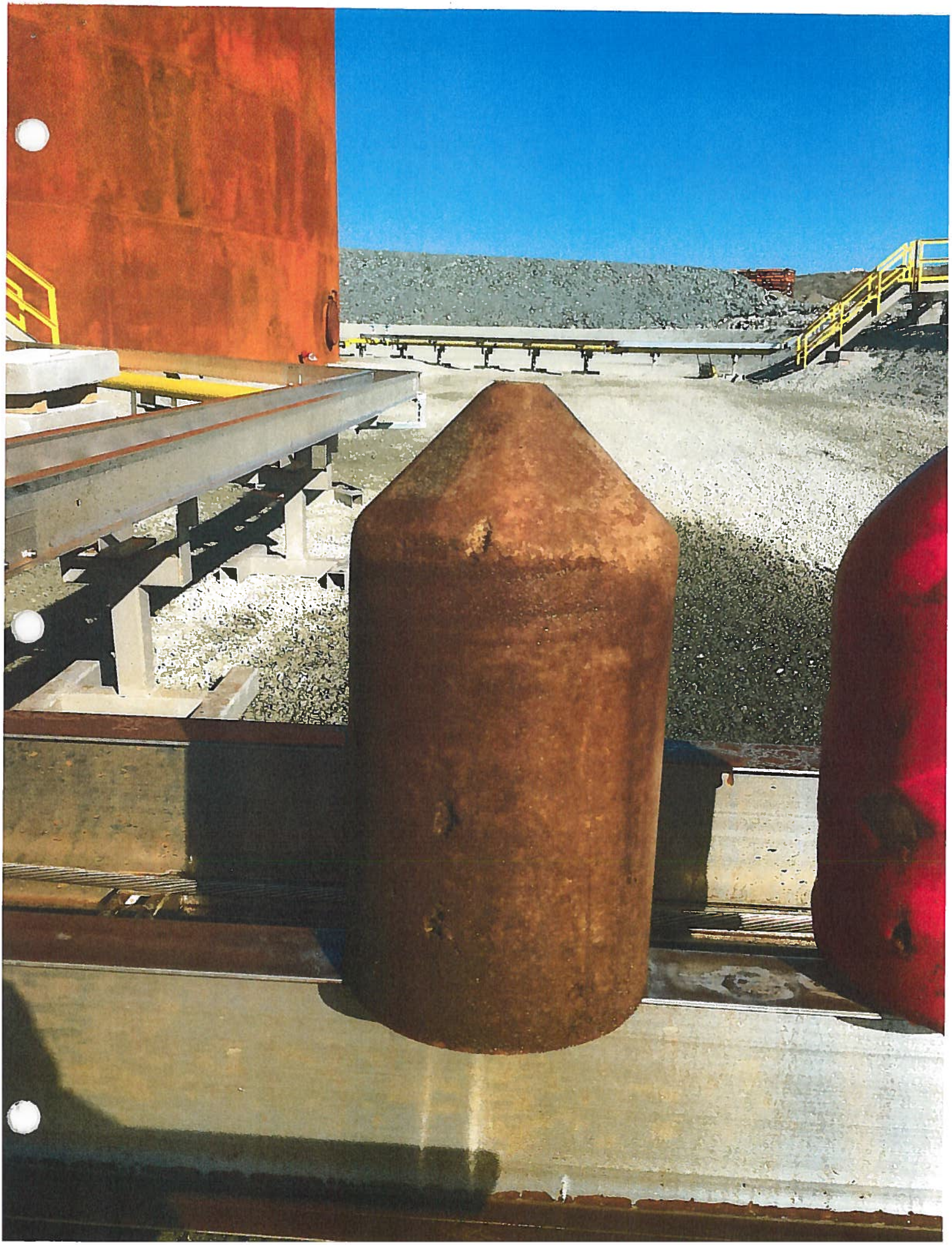
Pigging of Pipe

1 fois le RX 3
1 fois le RX4
6 fois le RX5
2 fois le G1 swabs


297337 1
22G1
30.480 KGS
67.200 LBS
2.200 KGS
4.850 LBS
28.280 KGS
62.350 LBS
33.2 CUM.
CAP.
TGHU 297337



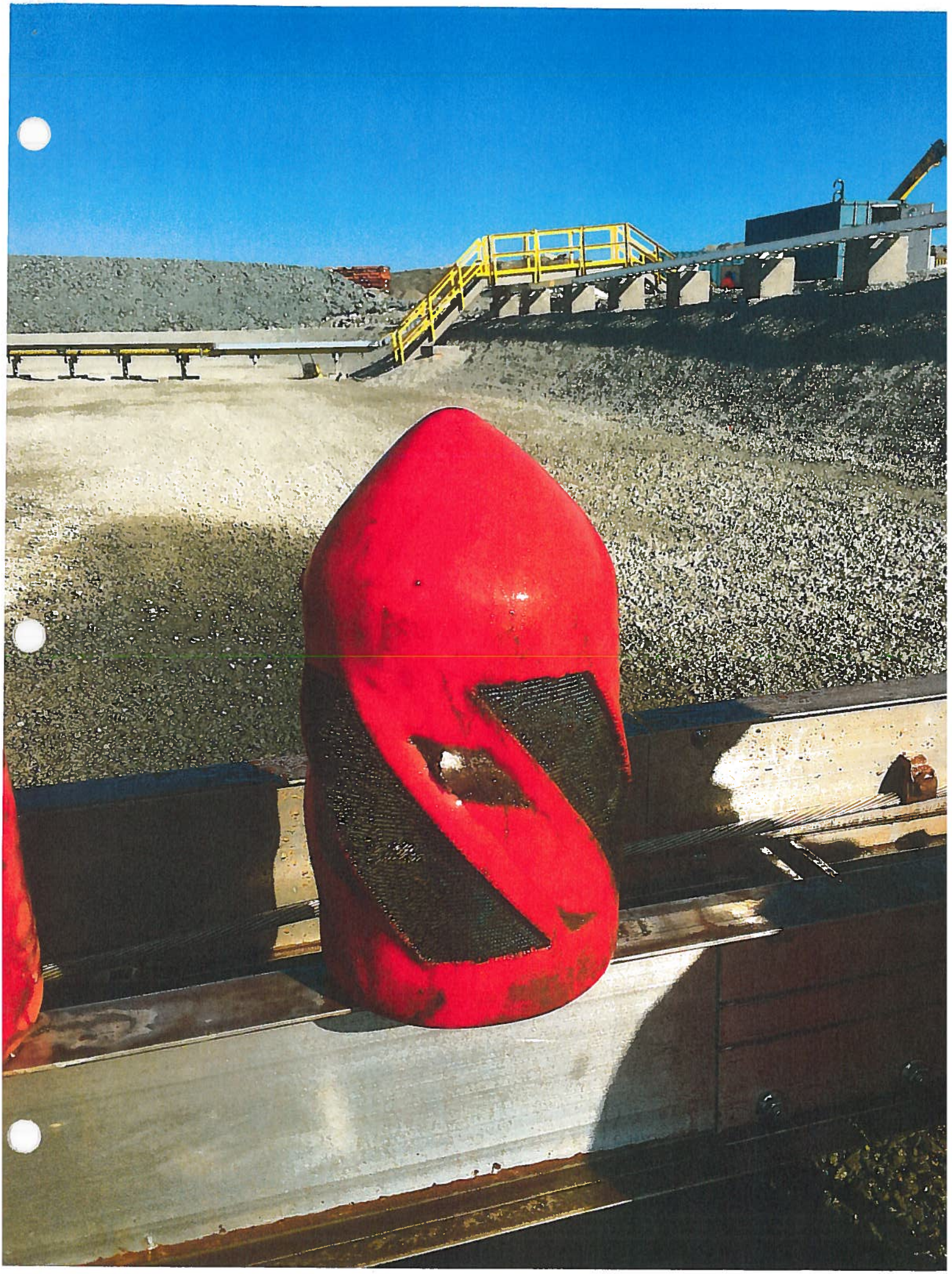


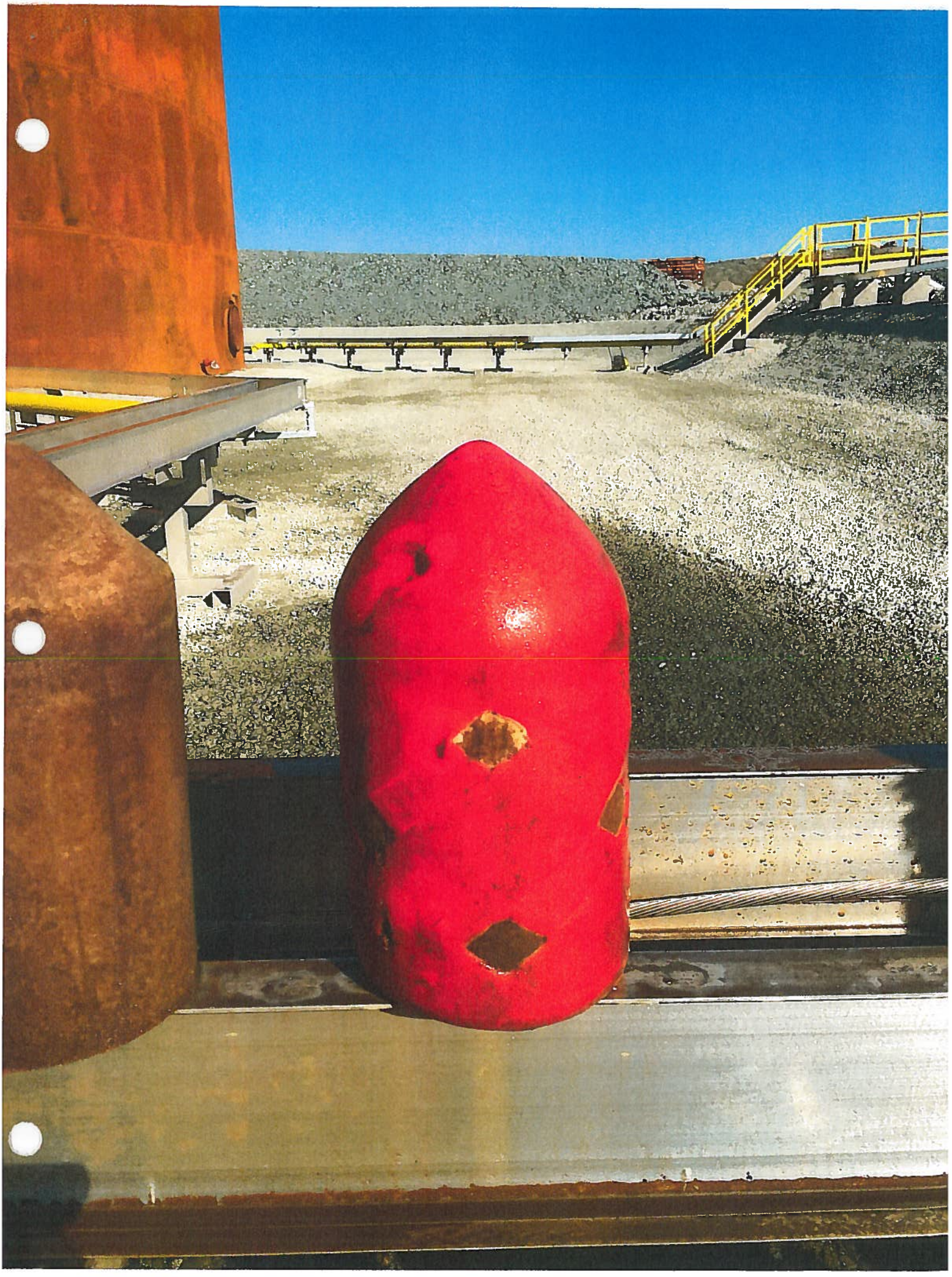


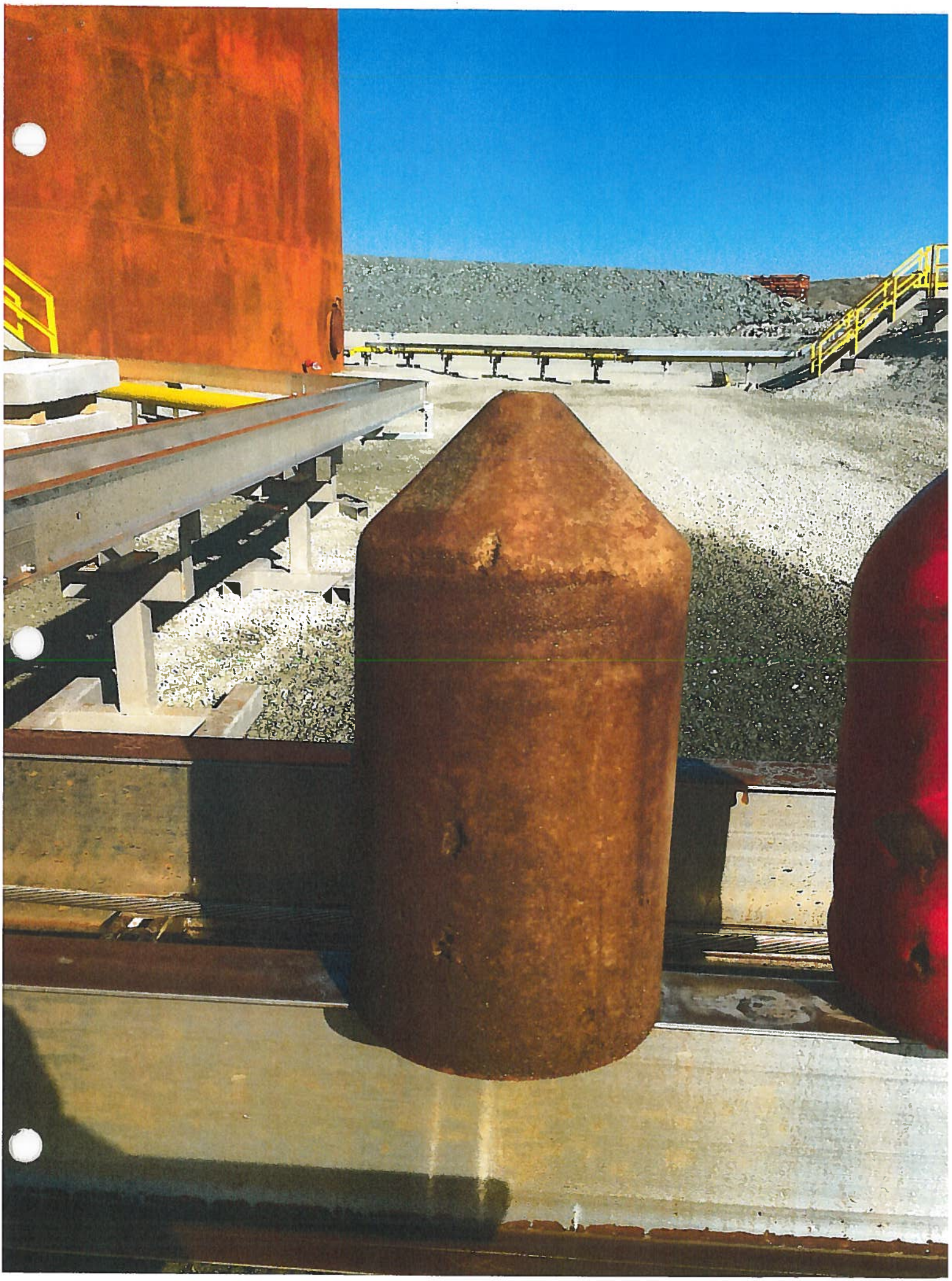
Pigging of Pipe

1 fois le RX 3
1 fois le RX4
6 fois le RX5
2 fois le G1 swabs


U 297337 1
22G1
30.480 KGS
67.200 LBS
WT. 2.200 KGS
4.850 LBS
28.280 KGS
62.350 LBS
CAP. 33.2 CUM.
1.173 CUFT
TGHU 297337







TO BE VALIDATED

AT A LATER DATE

TO BE VALIDATED

AT A LATER DATE

VIKING FIRE PROTECTION INC. 3005 | Pitfield boulevard | Saint-Laurent, Québec, Canada | H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

AUTOMATIC DRY CHEMICAL FIRE SUPRESSION SYSTEMS

TECHNICAL MANUAL

FOR

AGNICO EAGLE MELIADINE PROJECT KIVALLIQ REGION, NUNAVUT TERRITORY, CANADA

C-270-007 – FUEL MODULES

SUBMITTED BY

VIKING FIRE PROTECTION INC.
3005, PITFIELD BOUL.
ST-LAURENT, QUÉBEC,
CANADA H4S 1H4
Tel.: 514-332-5110
Fax: 514-332-6260

CONTRACT N° VMC04097

July 2017

VIKING FIRE PROTECTION INC. 3005 | Pitfield boulevard | Saint-Laurent, Québec, Canada | H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

TABLE OF CONTENT

VIKING FIRE PROTECTION INC. 3005 | Pitfield boulevard | Saint-Laurent, Québec, Canada | H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

CHAPTER 1

GENERAL INFORMATION

CHAPTER I
General Information

INTRODUCTION

PYRO-CHEM automatic dry chemical fire suppression systems are of the pre-engineered type as defined by the NFPA Standard for Dry Chemical Extinguishing Systems, NFPA-17. The extinguishing units described in this manual are intended to be installed, inspected, and maintained in accordance with NFPA-17. Limitations detailed in this manual have been established through extensive testing by Underwriters Laboratories, Inc. Installation and maintenance of the system must conform to the limitations detailed in this manual and be performed by an Authorized PYRO-CHEM dealer.

The PYRO-CHEM Industrial Fire Suppression System utilizes a either a sodium bicarbonate based dry chemical agent (specifically designed to suppress liquid, gas or electrical fires) or a monoammonium phosphate based dry chemical agent (specifically designed to suppress carbonaceous solid, liquid, gas or electrical fires). The system provides mechanical or electrical automatic actuation and can be manually actuated through a remote mechanical pull station. Upon actuation, the system discharges a pre-determined amount of agent to the hazard area.

The shutdown of fuel and power to the hazard area is required upon system actuation. Exhaust fan(s) in the ventilation system must be shut off during system discharge to allow the proper concentration of agent to build up in the hazard area.

TEMPERATURE LIMITATIONS

The operating temperature ranges of the PYRO-CHEM System are:

Monoammonium Phosphate (ABC) Total Flooding Systems: –20 °F (–28 °C) minimum to 120 °F (49 °C) maximum.

Local Application – Overhead Systems: 32 °F (0 °C) minimum to 120 °F (49 °C) maximum.

Local Application – Tankside Systems: –20 °F (–28 °C) minimum to 120 °F (49 °C) maximum.

UL LISTING

The PYRO-CHEM Industrial Fire Suppression System has been tested to the UL Standard for Pre-Engineered Dry Chemical Extinguishing System Units, UL1254 (Revised Sept. 29, 1998), and Listed by Underwriters Laboratories, Inc.

VIKING FIRE PROTECTION INC. 3005 Pitfield boulevard Saint-Laurent, Québec, Canada H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

CHAPTER 2

COMPONENTS

CHAPTER II
COMPONENTS

CYLINDERS & VALVE

PYRO-CHEM automatic dry chemical systems are supplied in 17 pound, 25 pound, 35 pound, 50 pound, and 70 pound capacity cylinders. They are the Models PCI-15ABC, PCI-17ABC, PCI-25sBC, PCI-25sABC, PCI-35ABC, PCI-50sBC, PCI-50sABC, and PCI-70ABC. Each cylinder must be separately piped to its own nozzles. All models are charged with dry nitrogen to 350 psi @ 70° F. These systems are for **indoor hazard protection only.** The particular models are as follows:

PCI-15ABC. This system is charged with 12.5 pounds of monoammonium phosphate-based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

PCI-17ABC. This system is charged with 17 pounds of monoammonium phosphate based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

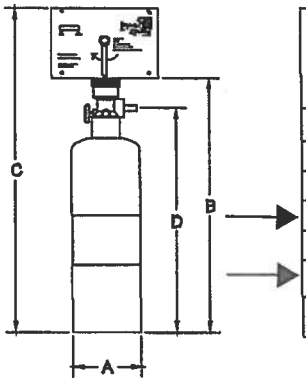
PCI-25sBC. This system is charged with 25 pounds of regular sodium bicarbonate based dry chemical, PYRO-CHEM Part No. 550162. It is Listed for use in local overhead and local tankside applications. It is rated to protect only Class "B" and "C" hazards.

PCI-25sABC. This system is charged with 25 pounds of monoammonium phosphate based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in local overhead and local tankside applications. It is rated to protect Class "A," "B," and "C" hazards.

PCI-35ABC. This system is charged with 35 pounds of monoammonium phosphate based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

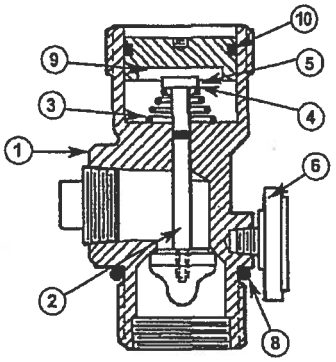
PCI-50sBC. This system is charged with 50 pounds of regular sodium bicarbonate based dry chemical, PYRO-CHEM Part No. 550162. It is Listed for use in local overhead and local tankside applications. It is rated to protect only Class "B" and "C" hazards.

PCI-50sABC. This system is charged with 50 pounds of monoammonium phosphate based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in local overhead and local tankside applications. It is rated to protect Class "A," "B," and "C" hazards.



MODEL NO.	A	B	C	D	WEIGHT	MOUNTING BRACKET USED
PCI-15ABC	6.00	21.44	27.19	18.69	30 lbs.	MB-15
PCI-17ABC	8.00	24.81	30.56	22.06	50 lbs.	MB-15
PCI-25sABC/BC	8.00	24.81	30.56	22.06	58 lbs.	MB-15
PCI-35ABC	10.00	29.94	35.69	27.18	71 lbs.	MB-1
PCI-50sABC/BC	10.00	29.94	35.69	27.18	86 lbs.	MB-1
PCI-70ABC	12.00	35.31	41.06	32.56	130 lbs.	MB-1
ALL DIMENSIONS IN INCHES						

Figure 2-1 Cylinder and Valve Assemblies
002841PC



ITEM	PART NO.	DESCRIPTION
1	– – –	VALVE BODY
2	– – –	VALVE STEM & CAP ASSEMBLY
3	550022	CONICAL SPRING
4	550261	RETAINING WASHER
5	550024	E-RING
6	550025	PRESSURE GAUGE
7	550026	HIGH TEMPERATURE RELIEF PLUG
8	550029	VALVE BODY O-RING
9	550805	PISTON
10	550636	PISTON O-RING

Figure 2-2 Valve Cross Section
002842PC

PCI-70ABC. This system is charged with 70 pounds of monoammonium phosphate based dry chemical, PYRO-CHEM Part No. 550170. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

The dimensions of the PCI-15/17/25s/35/50s/70 cylinder and valve assemblies are shown in **Figure 2-1.** The cylinder is manufactured, tested, and marked in accordance with DOT specification 4BW350.

The valve shown in **Figure 2-2** is a pressure sealed, poppet type valve. It is used on the PCI-15/17/25s/35/50s/70, PAC-10, and PAC-200 cylinders. The valve discharge port is 3/4 in. NPT.

NOZZLES

Nozzles have been developed for total flooding, local application overhead, and local application tankside. The Model NF-ABC nozzle is used for total flooding protection. The Model N-SCR nozzle is used for screening the opening. The Model N-OTF nozzle is used for overhead total flooding application in the work area. The Model N-PLU nozzle is used for overhead application in the plenum area. The Model N-DCT nozzle is used for exhaust duct protection. The Models N-LA-ABC and N-LA-BC nozzles are used for local overhead application. The Model N-TS nozzle is used for local tankside application. **See Figure 2-3.**

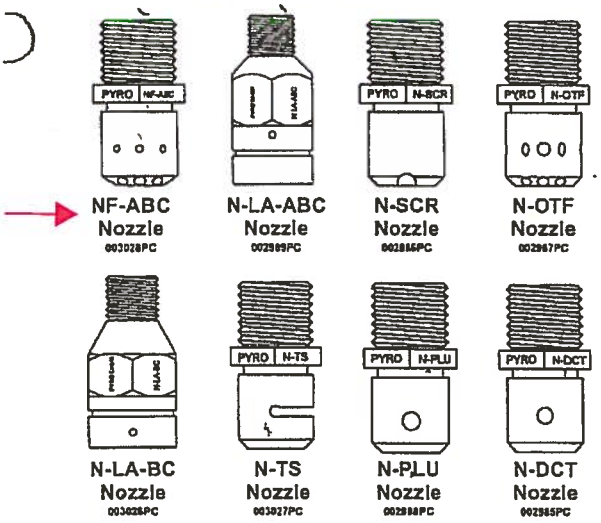


Figure 2-3. Nozzles.

CYLINDER BRACKETING

Vertical wall mounting for the **PCI-15ABC, PCI-17ABC,** and **PCI-25sBC/ABC,** is provided by the Model **MB-15** mounting bracket kit. Vertical wall mounting for the **PCI-35ABC, PCI-50sBC/ABC** and **PCI-70ABC** is provided by the Model **MB-1** mounting bracket kit. **See Figure 2-4.**

For vertical floor mounting of the **PCI-15ABC, PCI-17ABC, PCI-25sBC** and **PCI-25sABC,** an 8 in. unistrut type mounting bracket is available, the Model **MB-U8.**

For vertical floor mounting of the **PCI-35ABC, PCI-50sBC,** and **PCI-50sABC,** a 10 in. unistrut type mounting bracket is available, the Model **MB-U10.**

For vertical floor mounting of the **PCI-70ABC,** a 12 in. unistrut type mounting bracket is available, the Model **MB-U12.**

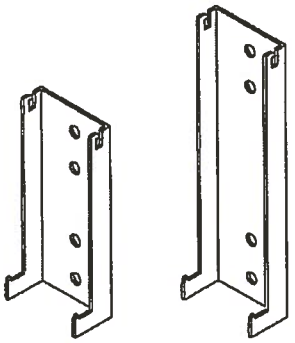


Figure 2-4 Mounting Brackets MB-15 and MB-1.
002843PC

MODEL MCH3 – MECHANICAL CONTROL HEAD

The Model MCH3 mechanical control head is a fully mechanical control head which can be connected to the PCI-15/17/25s/35/50s/70 cylinder valve. This control head will support a fusible link detection system, a remote mechanical pull station (Model RPS-M), and a mechanical or electric gas shut-off valve. A micro switch (Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT) can be ordered separately and field installed. It is equipped with a local manual control handle that allows for mechanical system actuation. Operation of the local manual control requires removing the pull pin and rotating the handle clockwise. The Model MCH3 control head can actuate a maximum of five (5) cylinders. **See Figure 2-5.**

MODEL MCH3 CONTROL HEAD

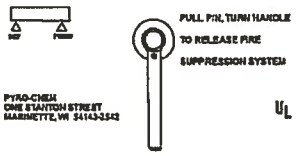


Figure 2-5. Mechanical Control Head.
004790PC

MODEL ECH3 – ELECTRIC CONTROL HEAD

The Model ECH3 electric control head is an electrically operated control head which can be connected to the PCI-15/17/25s/35/50s/70 cylinder valve. This control head will support an electric thermal detection system, a remote mechanical pull station (Model RPS-M), and an electric gas shut-off valve. It will not support a fusible link detection system. A micro switch (Model MS-DPDT) is included. The Model ECH3 control head is available in both 120 VAC (Model ECH3-120) and 24 VDC (Model ECH3-24). It is equipped with a local manual control handle that allows for mechanical system actuation. Operation of the local manual control requires removing the pull pin and rotating the handle clockwise. The Model ECH3 control head can actuate a maximum of five (5) cylinders. See Figure 2-6.

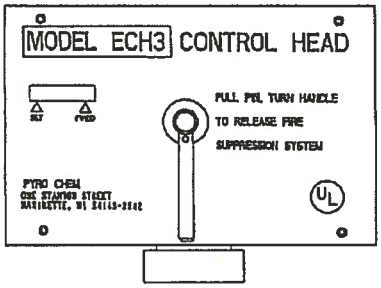


Figure 2-6. Electric Control Head.
004789PC

MODEL NMCH3 – MECHANICAL CONTROL HEAD

The Model NMCH3 Mechanical Control Head is a fully mechanical control head which can be connected to the PCI-15/17/25s/35/50s/70 cylinder valve. This control head will support a fusible link detection system, a remote mechanical pull station (Model RPS-M), and a mechanical or electric shut-off valve. A micro switch (Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT) can be ordered separately and field installed. There is no local manual actuation for the Model NMCH3. The Model NMCH3 control head can actuate a maximum of five (5) cylinders. See Figure 2-6a.

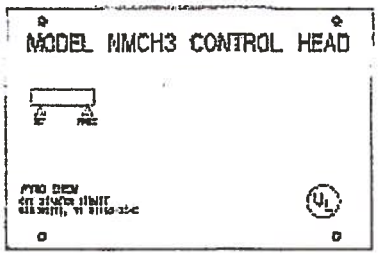


Figure 2-6a. Mechanical Control Head.
006843PC

MODEL MB-P2 - CONTROL HEAD MOUNTING BRACKET

The Model MB-P2 mounting bracket must be used to mount the Model MCH3, NMCH3 or ECH3 control head if the control head is not mounted directly on a cylinder valve. See Figure 2-7.

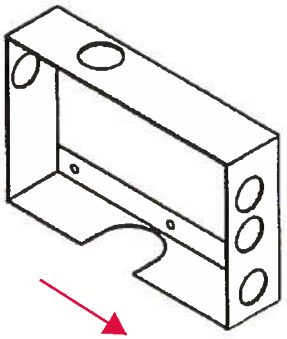


Figure 2-7. Model MB-P2 – Control Head Mounting Bracket.
002845PC

CAUTION

Do not screw the control head directly to a wall as this will warp the control head, not allowing the mechanism to actuate.

MODEL PDA-D2 PNEUMATIC ACTUATING ADAPTOR

The Model PDA-D2 Pneumatic Actuating Adaptor is used to open the cylinder valve when the system is actuated. It must be installed on the valve of each cylinder unless a control head has been mounted on the cylinder valve. See Figure 2-7a.

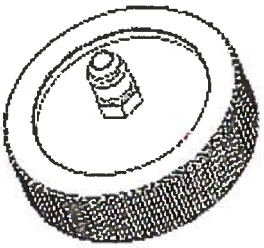


Figure 2-7a. Model PDA-D2 Pneumatic Actuating Adaptor.
006886PC

DETECTION EQUIPMENT

1. Model FLK-1.

The Model FLK-1 fusible link kit includes a 10 in. steel bracket, two (2) 1/2 in. EMT connectors, two (2) cable crimps, and two (2) "S" hooks. Fusible links must be ordered separately. See Figure 2-10.

2. Model FLK-1A.

The Model FLK-1A fusible link kit includes an 8 in. steel bracket, two (2) 1/2 in. EMT connectors, two (2) cable crimps, and two (2) "S" hooks. Fusible links must be ordered separately.

3. Model FLH-1.

The Model FLH-1 fusible link hanger is an accessory designed to simplify the installation of fusible links in the fusible link line. It can be used with the Model FLK-1/1A fusible link kits (kits must be ordered separately). The Fusible Link Hanger makes it possible to install fusible links without cutting and crimping loops in the fusible link line for each link. They are available in packages of 25 (FLH-25) only. See Figure 2-11.

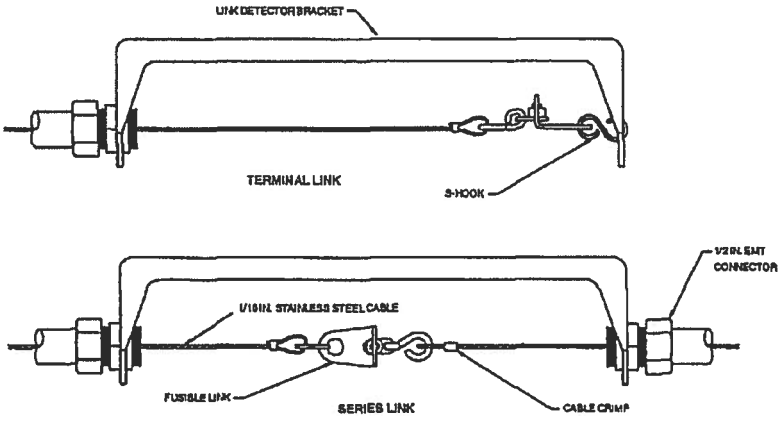


Figure 2-10. Model FLK-1 Fusible Link
002849PC

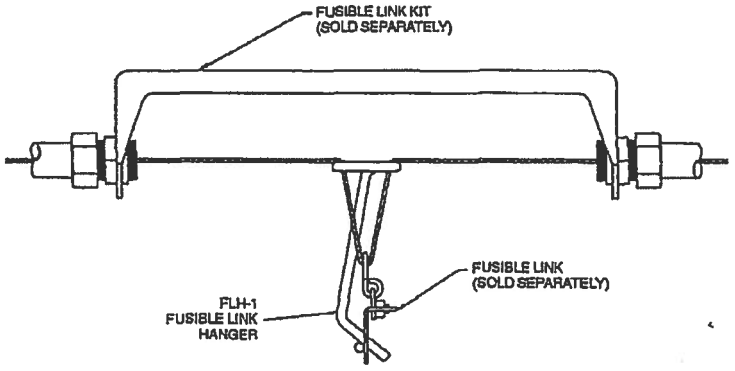


Figure 2-11. Model FLH-1 Fusible Link Hanger
002850PC

4. Fusible Links.

The fusible link is designed to separate at a specific temperature, releasing tension from the fusible link line, causing system actuation. See Figure 2-12.

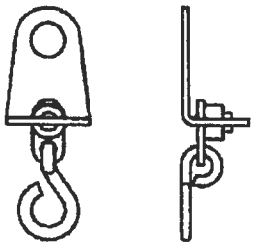


Figure 2-12. ML Style Fusible Link.
002851PC

After determining the maximum ambient temperature at the fusible link location, select the correct fusible link according to the temperature condition chart below:

Fusible Link Model No.	Maximum Ambient Temperature
FL-165	100° F. (38° C.)
FL-212	150° F. (66° C.)
FL-280	225° F. (107° C.)
FL-360	290° F. (143° C.)
FL-450	360° F. (182° C.)
FL-500	400° F. (204° C.)

5. Thermal Detectors.

Rate compensated temperature thermal detectors are normally open, mechanical contact closure switches designed to operate at a factory preset temperature. They are available in six preset temperatures which meet NFPA standards and are UL Listed and FM Approved.

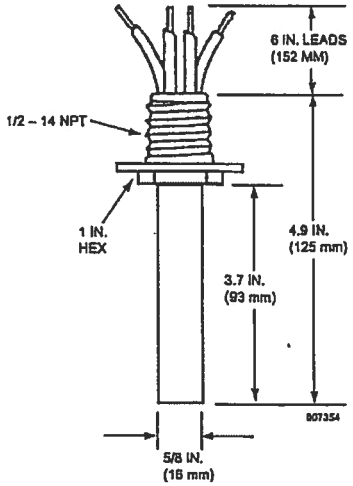


Figure 2-12a. Thermal Detector.

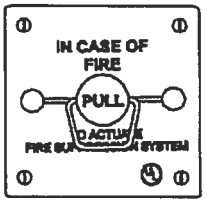
After determining the maximum ambient temperature at the thermal detector location, select the correct thermal detector according to the temperature condition chart below:

Thermal Detector Model No.	Maximum Ambient Temperature
TD-140	100° F. (38° C.)
TD-190	150° F. (66° C.)
TD-225	185° F. (85° C.)
TD-325	285° F. (141° C.)
TD-450	410° F. (210° C.)
TD-600	560° F. (293° C.)

REMOTE MECHANICAL PULL STATION

Model RPS-M

Remote manual control for system releasing devices is provided by the Model RPS-M remote mechanical pull station. It is connected to the system releasing device by stainless steel cable. This cable is enclosed in 1/2 in. EMT with corner pulleys at each change in direction. The remote mechanical pull station shall be located at the point of egress from the hazard area. See Figure 2-13.



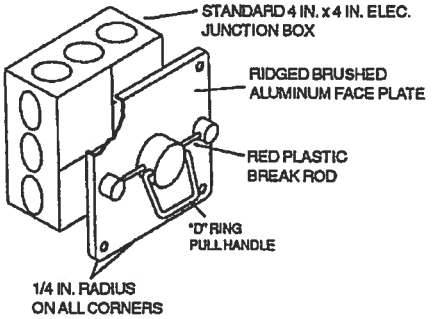


Figure 2-13. Model RPS-M Mechanical Pull Station.
002852PC

CORNER PULLEYS

1. Model SBP-1.

A corner pulley is used whenever a change in stainless steel cable direction is required. The Model SBP-1 corner pulley is equipped with a set screw fitting for connection to 1/2 in. EMT. See Figure 2-15.

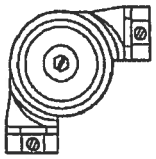


Figure 2-15. Model SBP-1 Corner Pulley.
000150

2. Model CBP-1.

A corner pulley is used whenever a change in stainless cable direction is required. The Model CBP-1 is a grease-tight corner pulley designed for areas likely to experience excessive deposit build-up. It is equipped with a compression fitting for connection to 1/2 in. EMT. See Figure 2-16.

Note: The Model CBP-1 is not a liquid tight sealing device.

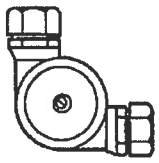


Figure 2-16. Model CBP-1 Corner Pulley.
000151

3. Model WBP-1.

A corner pulley is used whenever a change in stainless cable direction is required. The Model WBP-1 is a liquid-tight corner pulley designed for areas likely to experience excessive moisture build-up. It is equipped with a female pipe thread for connection to 1/2 in. rigid conduit. See Figure 2-17.

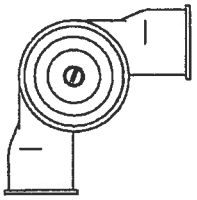


Figure 2-17. Model WBP-1 Corner Pulley.
005194PC

TEE PULLEY

The Model TP-1 tee pulley is used to connect two mechanical gas valves or two remote mechanical pull stations to a single control head. The tee pulley replaces two standard 90° corner pulleys. See Figure 2-18.

CAUTION

The Tee Pulley must never be used to connect multiple fusible link lines to a single control head.

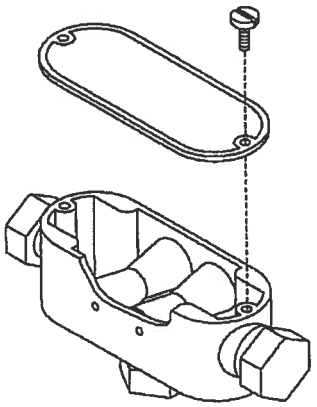


Figure 2-18. Model TP-1 Tee Pulley.
002687PC

SWING CHECK VALVE

The Swing Check Valve, Part No. 417788, is required when piping a main and reserve Monarch tank on the same distribution piping. It allows the dry chemical agent to discharge through the agent piping leading to the discharge nozzles, while preventing it from flowing into the piping from the other tank. The swing check valve body is constructed of brass with a 1 in. NPT female thread. See Figure 2-19.

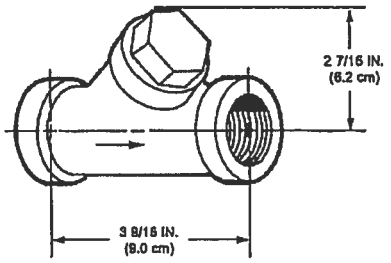


Figure 2-19. Swing Check Valve.
000430

ELECTRICAL SWITCHES

The electrical switches are intended for use with electric gas valves, alarms, contactors, lights, contractor supplied electric power shut-off devices and other electrical devices that are designed to shut off or turn on when the system is actuated.

Switches are available in kits: One Switch Kit, Part No. 551154; Two Switch Kit, Part No. 551155; Three Switch Kit, Part No. 551156, and Four Switch Kit, Part No. 551157. Mounting hardware and 12 in. wire assemblies are provided with each kit. Each switch has a set of single-pole, double-throw contacts rated:

UL/cUL/CSA Rating	ENEC Rating
250 VAC, 21A Resistive	IE4T105μ Approved
250 VAC, 2 HP	250V, 21A Resistive
125 VAC, 1 HP	8A Motor Load

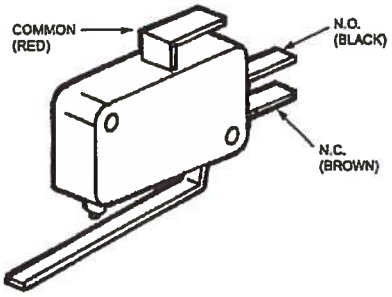


Figure 2-20a. Model MS-SPDT Micro Switch.
001612

The Alarm Initiating Switch Kit, Part No. 550077, can be field mounted within the control head. This switch must be used to close a supervised alarm circuit to the building main fire alarm panel when the control head actuates. This action will signal the fire alarm panel that there was a system actuation in the hazard area. The switch kit contains all necessary mounting components along with a mounting instruction sheet. The switch is rated 50 mA, 28 VDC.

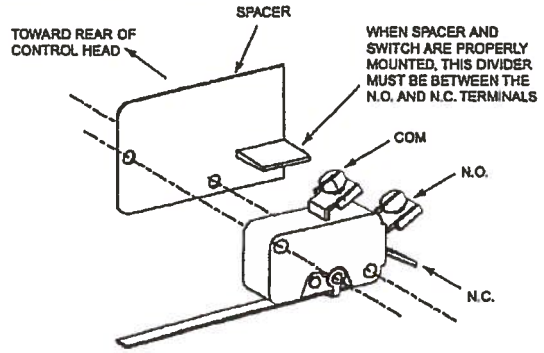


Figure 2-20b. Alarm Initiating Switch.
004890

See NFPA 72, "National Fire Alarm Code," Initiating Devices section, for the correct method of wiring connection to the fire alarm panel.

MODEL SM-120/24 SOLENOID MONITOR

The Model SM-120/24 solenoid monitor is used in conjunction with the Model ECH3 control head to supervise the actuation and detection circuits. In the event of a problem in the circuit, a light on the monitor goes out. The Model SM-120 is used with the Model ECH3-120 control head. The Model SM-24 is used with the Model ECH3-24 control head. Two sets of NO/NC dry contacts are provided. The unit mounts directly to a three gang wall outlet box. The Model SM-120 acts as a reset relay when used with an electric gas valve. Electric gas valve wiring instructions are provided in the installation section of this manual. See Figure 2-21.

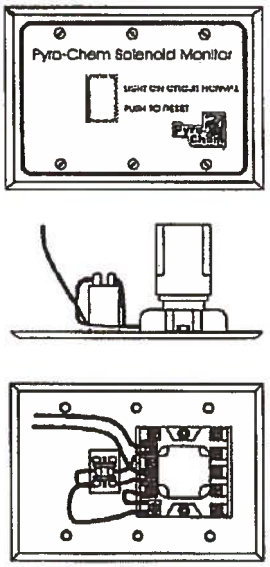


Figure 2-21. Model SM-24/120 Solenoid Monitor.
002860PC

COMPONENT LIST
GENERAL PURPOSE SYSTEM

MODEL NO.	DESCRIPTION	PART NO.
PCI-15ABC	15 lb. ABC Cylinder and Valve Assembly	550388
PCI-17ABC	17 lb. ABC Cylinder and Valve Assembly	551654
PCI-25sBC	25 lb. BC Cylinder and Valve Assembly	550391
PCI-25sABC	25 lb. ABC Cylinder and Valve Assembly	550390
PCI-35ABC	35 lb. ABC Cylinder and Valve Assembly	551097
PCI-50sBC	50 lb. BC Cylinder and Valve Assembly	550393
PCI-50sABC	50 lb. ABC Cylinder and Valve Assembly	550392
PCI-70ABC	70 lb. ABC Cylinder and Valve Assembly	551094
PAC-10	Pneumatic Actuating Cylinder	550104
PAC-200	Pneumatic Actuating Cylinder	550690
MB-P2	Control Head Mounting Bracket	550853
MB-15	Mounting Bracket (PCI-15,17,25s Cylinders)	550054
MB-1	Mounting Bracket (PCI-35,70 Cylinders)	550053
MB-U8	8 In. Unistrut Mounting Bracket	550324
MB-U10	10 in. Unistrut Mounting Bracket	550383
MB-U12	12 In. Unistrut Mounting Bracket	550638
MCH3	Mechanical Control Head	551200
NMCH3	Mechanical Control Head	551203
ECH3-24	24VDC Electrical Control Head	551201
ECH3-120	120VDC Electrical Control Head	551202
– – –	8 In. S.S. Actuation Hose	417582
– – –	16 In. S.S. Actuation Hose	31809
– – –	24 In. S.S. Actuation Hose	32336
– – –	42 In. S.S. Actuation Hose	430815
– – –	Male Elbow	31810
– – –	Male Tee	31811
– – –	Male Straight Connector	32338
PDA-D2	Pneumatic Actuating Adaptor	550829
– – –	Swing Check Valve	417788
NF-ABC	Nozzle Assembly	551678
N-LA-ABC	Nozzle Assembly	550646
N-LA-BC	Nozzle Assembly	550342
N-TS	Nozzle Assembly	550337
RPS-M	Remote Mechanical Pull Station	551074
RPS-E2	Remote Electric Pull Station	551166
FKL-1	10 In. Fusible Link Bracket	550131
FKL-1A	8 In. Fusible Link Bracket	550132
FLH-25	Fusible Link Hanger (25)	550876
FL-165	165° F Fusible Link	550368
FL-212	212° F Fusible Link	550365
FL-280	280° F Fusible Link	550366
FL-360	360° F Fusible Link	550009
FL-450	450° F Fusible Link	550367
FL-500	500° F Fusible Link	56816
SM-24	24VDC Solenoid Monitor	550303
SM-120	120VAC Solenoid Monitor	550302
TD-140	140° F Thermal Detector	550351
TD-190	190° F Thermal Detector	550352
TD-225	225° F Thermal Detector	550353
TD-325	325° F Thermal Detector	550354
TD-450	450° F Thermal Detector	550355
TD-600	600° F Thermal Detector	550356
GV-75	3/4 In. Mechanical Gas Valve	550593
GV-100	1 In. Mechanical Gas Valve	550594

COMPONENT LIST
GENERAL PURPOSE SYSTEM (Continued)

MODEL NO.	DESCRIPTION	PART NO.
▸GV-125	1 1/4 In. Mechanical Gas Valve	550595
GV-150	1 1/2 In. Mechanical Gas Valve	550596
GV-200	2 In. Mechanical Gas Valve	551049
GV-250	2 1/2 In. Mechanical Gas Valve	550185
GV-300	3 in. Mechanical Gas Valve	550186
EGVSO-75	3/4 in. Electric Gas Valve	550358
EGVSO-100	1 In. Electric Gas Valve	550359
EGVSO-125	1 1/4 In. Electric Gas Valve	550360
EGVSO-150	1 1/2 in. Electric Gas Valve	550361
EGVSO-200	2 In. Electric Gas Valve	550362
EGVSO-250	2 1/2 In. Electric Gas Valve	550363
▸EGVSO-300	3 In. Electric Gas Valve	550385
MS-SPDT	Micro-Switch – Single Pole Double Throw	551154
MS-DPDT	Micro-Switch – Double Pole Double Throw	551155
MS-3PDT	Micro-Switch – 3 Pole Double Throw	551156
MS-4PDT	Micro-Switch – 4 Pole Double Throw	551157
▸– – –	Alarm Initiating Switch	550077
PS-SPDT-XP	Pressure Switch – Single Pole Double Throw	550052
CO2-6	6 x CO_2 Cartridge	551059
CBP-1	Compression Bearing Corner Pulley	423250
SBP-1	Screw Bearing Corner Pulley	415670
▸WBP-1	Weather Proof Corner Pulley (10 Per Package)	550983
TP-1	Tee Pulley	550166
▸WC-100	Oval Sleeve Crimps (100 Per Package)	550122
– – –	Stop Sleeves (Pack of 10)	24919
– – –	Valve – Piston O-Ring	550636
– – –	Valve – Stem Washer	550284
– – –	Valve – Seat Washer	550021
– – –	Valve – Stem Head	550020
– – –	Valve – Body O-Ring	550029
– – –	Valve – Pressure Gauge	550025
– – –	Valve – Stem	550806
– – –	Valve – Stem O-Ring	550028
– – –	Valve – Conical Spring	550022
▸– – –	Valve – Piston	550805
FR-25sBC	Flow Restrictor	550235
▸– – –	Pressure Bleed Down Adaptor Assembly	551736
– – –	Dry Valve Rebuilding Kit	550037
– – –	Recharge Adaptor	550130
▸– – –	Dry Valve Hydrotest Adaptor	552182

VIKING FIRE PROTECTION INC. 3005 Pitfield boulevard Saint-Laurent, Québec, Canada H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

CHAPTER 3

DESIGN

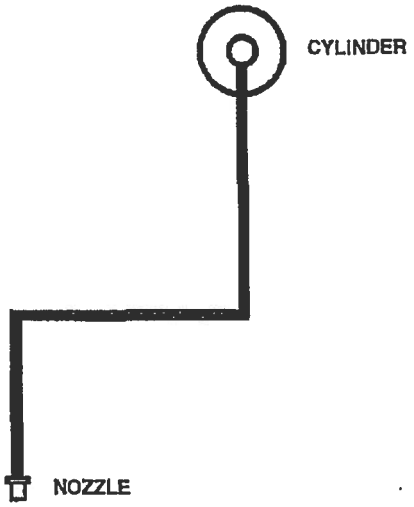
TABLE 3-1

Total Flooding Nozzle Protection Chart

Maximum Dimensions in feet/nozzle for one (1) Model NF-ABC

Side 1 (ft.)	Nozzle Height (ft.)	Maximum Side 2 (ft.)	Side 1 (ft.)	Nozzle Height (ft.)	Maximum Side 2 (ft.)	Side 1 (ft.)	Nozzle Height (ft.)	Maximum Side 2 (ft.)	Side 1 (ft.)	Nozzle Height (ft.)	Maximum Side 2 (ft.)
3	8	16.70	7	8	15.46	11	8	12.92	15	8	7.94
	9	16.70		9	15.46		9	12.92		9	7.94
	10	16.70		10	15.46		10	11.78		10	7.94
	11	16.70		11	15.46		11	10.71		11	7.85
	12	16.70		12	15.43		12	9.82		12	7.20
	13	16.70		13	14.24		13	9.06		13	6.65
	14	16.70		14	13.22		14	8.42		14	6.17
	15	16.70		15	12.34		15	7.85		15	5.76
	16	16.70		16	11.57		16	7.36		16	5.40
	17	16.70		17	10.89		17	6.93		17	5.08
	18	16.70		18	10.29		18	6.55		18	4.80
	19	16.70		19	9.74		19	6.20		19	4.55
	20	16.70		20	9.26		20	5.89		20	4.32
4	8	16.49	8	8	14.97	12	8	12.00	16	8	5.66
	9	16.49		9	14.97		9	12.00		9	5.66
	10	16.49		10	14.97		10	10.80		10	5.66
	11	16.49		11	14.73		11	9.82		11	5.66
	12	16.49		12	13.50		12	9.00		12	5.66
	13	16.49		13	12.46		13	8.31		13	5.66
	14	16.49		14	11.57		14	7.71		14	5.66
	15	16.49		15	10.80		15	7.20		15	5.40
	16	16.49		16	10.13		16	6.75		16	5.06
	17	16.49		17	9.53		17	6.35		17	4.76
	18	16.49		18	9.00		18	6.00		18	4.50
	19	16.49		19	8.53		19	5.68		19	4.26
	20	16.20		20	8.10		20	5.40		20	4.05
5	8	16.22	9	8	14.39	13	8	10.91			
	9	16.22		9	14.39		9	10.91			
	10	16.22		10	14.39		10	9.97			
	11	16.22		11	13.09		11	9.06			
	12	16.22		12	12.00		12	8.31			
	13	16.22		13	11.08		13	7.67			
	14	16.22		14	10.29		14	7.12			
	15	16.22		15	9.60		15	6.65			
	16	16.20		16	9.00		16	6.23			
	17	15.25		17	8.47		17	5.86			
	18	14.40		18	8.00		18	5.54			
	19	13.64		19	7.58		19	5.25			
	20	12.96		20	7.20		20	4.98			
6	8	15.87	10	8	13.71	14	8	9.59			
	9	15.87		9	13.71		9	9.59			
	10	15.87		10	12.96		10	9.26			
	11	15.87		11	11.78		11	8.42			
	12	15.87		12	10.80		12	7.71			
	13	15.87		13	9.97		13	7.12			
	14	15.43		14	9.26		14	6.61			
	15	14.40		15	8.64		15	6.17			
	16	13.50		16	8.10		16	5.79			
	17	12.71		17	7.62		17	5.45			
	18	12.00		18	7.20		18	5.14			
	19	11.37		19	6.82		19	4.87			
	20	10.80		20	6.48		20	4.63			

PCI-17ABC with 1 nozzle



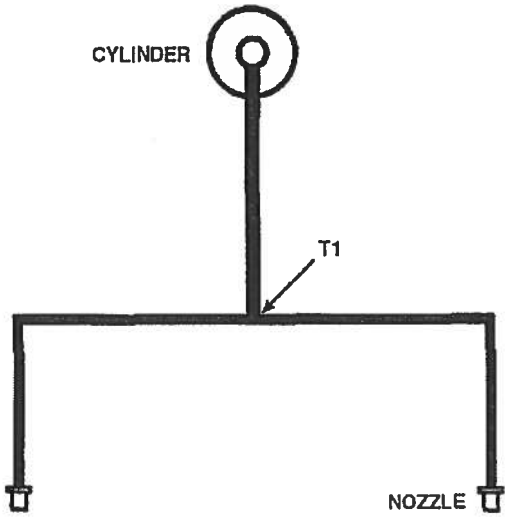
Total Flooding Piping Limits PCI-17ABC

Cylinder Size	Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
▸ PCI-17ABC	1	NF-ABC	Cylinder to Nozzle	3/4 in.	30 ft.	4

NOTE:

1. PCI-17ABC uses one (1) NF-ABC nozzle.
2. ▸ A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the cylinder and T1.

PCI-35ABC with 2 nozzles



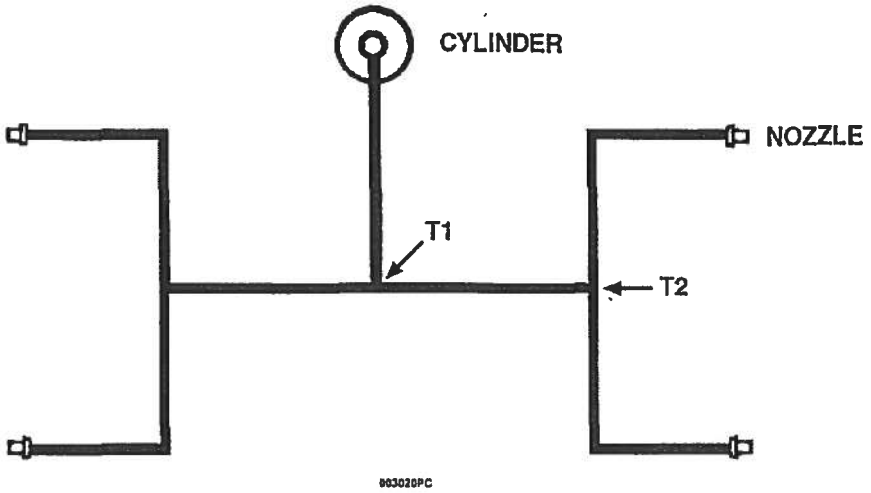
Total Flooding Piping Limits PCI-35ABC

Cylinder Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
PCI-35ABC	2	NF-ABC	Cylinder to T1	3/4 in.	30 ft. (9.1 m)	4
			T1 to Nozzle	3/4 in.	9 ft. (2.7 m)	2

NOTE:

1. PCI-35ABC must always use two (2) NF-ABC nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the cylinder and T1.

PCI-70ABC with 4 nozzles



Total Flooding Piping Limits PCI-70ABC

Cylinder Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
PCI-70ABC	4	NF-ABC	Cylinder to T1	1 in.	30 ft. (9.1 m)	3
			T1 to T2	1 in.	14 ft. (4.3 m)	2
			T2 to Nozzle	3/4 in.	9 ft. (2.7 m)	2

NOTE:

1. PCI-70ABC must always use four (4) NF-ABC nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. T2 to nozzle on the same branch must not exceed 10% of each other. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the cylinder and T1.

Detector Placement.

Thermal detectors are required in all hazard areas protected by the PYRO-CHEM Industrial Fire Suppression Systems if automatic system operation is required. Either mechanical or electrical thermal detectors can be used for automatic system operation. Mechanical detectors (fusible links) are used in conjunction with the PYRO-CHEM Models MCH3 and NMCH3 control devices. Electrical detectors are used in conjunction with the PYRO-CHEM Models ECH3-24 and ECH3-120 Control Heads.

TOTAL FLOODING (DETECTOR SPACING) – THERMAL

Ceiling Height	Spacing
Up to 14 ft. (4.2 m) Height	15 ft. (4.5 m) maximum between detectors 7 ft. 6 in. (2.3 m) max. from wall 225 sq. ft. (20.9 sq. m) max. coverage per detector
Greater than 14 ft. (4.2 m) up to 20 ft. (6.1 m) height	13 ft. (3.9 m) maximum between detectors 6 ft. 6 in. (1.9 m) max. from wall 169 sq. ft. (15.7 sq. m) max. coverage per detector
Greater than 20 ft. (6.9 m) up to 24 ft. (7.3 m)	11 ft. (3.4 m) max. between detectors 5 ft. 6 in. (1.7 m) max. from wall 121 sq. ft. (11.2 sq. m) max. coverage per detector
Greater than 24 ft. (7.3 m) up to 30 ft. (9.1 m)	9 ft. (2.7 m) max. between detectors 4 ft. 6 in. (1.4 m) max. from wall 81 sq. ft. (7.5 sq. m) max. coverage per detector

NOTE: For sloped ceiling (peaked type or shed type) installations, refer to NFPA-72, "National Fire Alarm Code" for detailed spacing requirements.

LOCAL APPLICATION – OVERHEAD (DETECTOR SPACING) – Maximum spacing per detector is 100 ft.^{2} (9.3 m^2) or 5 ft. (1.5 m) from edge of hazard and 10 ft. (3.1 m) between detectors. When detectors are mounted below the ceiling in an open area, heat traps are recommended.

LOCAL APPLICATION – TANKSIDE (DETECTOR SPACING) – Detectors can be located either near the inner tank wall and flammable liquid surface or above the tank. If located above the tank, the rules for local application overhead would apply. If located on the tank wall, the detectors can be mounted horizontally or vertically in the freeboard area, but must be protected from damage during normal working operations. The maximum spacing per detector is 5 ft. (1.5 m) from edge of hazard and 10 ft. (3.1 m) between detectors.

A temperature survey must be performed to determine the maximum ambient temperature of the hazard survey. See Temperature Chart in Chapter 2 – Components.

TOTAL FLOODING (DETECTOR SPACING) – FUSIBLE LINKS

Ceiling Height	Spacing
Up to 14 ft. (4.2 m) Height	10 ft. (3.0 m) maximum detectors 5 ft. (1.5 m) max. from a wall* 100 sq. ft. (9.2 sq. m) max. coverage per detector
Greater than 14 ft. (4.2 m) up to 20 ft. (6.1 m) height	8 ft. (2.4 m) max. between detectors 4 ft. (1.2 m) max. from wall 64 sq. ft. (5.9 sq. m) max. coverage per detector

NOTE: For sloped ceiling (peaked type or shed type) installations, refer to NFPA-72, "National Fire Alarm Code" for detailed spacing requirements.

LOCAL APPLICATION – OVERHEAD (DETECTOR SPACING) – Maximum spacing per fusible link detector is 36 ft.^{2} (3.3 m^2) or 3 ft. (.9 m) from edge of hazard and 6 ft. (1.8 m) between fusible link detectors.

When a detector(s) is mounted more than 1 ft. (.3 m) below ceiling or in an open area, heat trap(s) is recommended. Detectors should be mounted overhead at nozzle height or as close to the hazard as possible without interference, not to exceed 10 ft. (3 m).

Detectors should not be located where they will be susceptible to damage during the normal work operation.

LOCAL APPLICATION – TANKSIDE (DETECTOR SPACING) – Detectors can be located either near the inner tank wall and flammable liquid surface or above the tank. If located above the tank, the rules for local application overhead would apply. If located on the tank wall, the detectors can be mounted horizontally or vertically in the freeboard area but must be protected from damage during normal working operation. Detectors should be located at a maximum spacing per detector of 3 ft. (.9 m) from edge of hazard and 6 ft. (1.8 m) between detectors on the long side of the tank.

*For 14 ft. (4.3 m) wide booths with maximum height of 12 ft. (3.7 m), the detector location off the side wall can be a maximum of 7 ft. (2.1 m).

VIKING FIRE PROTECTION INC. 3005 | Pitfield boulevard | Saint-Laurent, Québec, Canada | H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

CHAPTER 4

INSTALLATION

CHAPTER IV
SYSTEM INSTALLATION

This chapter will detail the basic information necessary for proper installation of the PYRO-CHEM Industrial Fire Suppression System. However, before attempting any installation it is necessary to attend a Factory Certification Training Class and become Certified to install the PYRO-CHEM Industrial Fire Suppression System.

Pipe and fittings for the discharge piping, conduit (EMT), pipe straps, pipe hangers, mounting bolts, and other miscellaneous equipment are not furnished as part of the PYRO-CHEM Industrial Fire Suppression System. These items must be furnished by the installer.

Before attempting any installation, unpack the entire system and check that all necessary parts are on hand. Inspect parts for damage. Verify that cylinder pressure is within the acceptable range as shown on the gauge.

CYLINDER INSTALLATION

The cylinder and valve assembly is shipped with an anti-recoil plug in the valve discharge port.

CAUTION

The anti-recoil plug must remain in the valve discharge port until the discharge piping is connected to the valve.

The cylinder must be mounted vertically with the discharge port facing either left or right. The Models PCI-17 and PCI-25 cylinders must be mounted using a Model MB-15 Mounting Bracket Kit. The Model PCI-35, PCI-50, PCI-70, and PCI-cylinders must be mounted using a Model MB-1 Mounting Bracket Kit.

The bracket must be securely anchored to the wall using bolts or lag screws. The wall to which the bracket is attached must be sufficiently strong to support the cylinder. The bracket should never be fastened to dry wall or similar material. If this type of wall is encountered, studs must be located and the bracket fastened to them. See Figure 4-1.

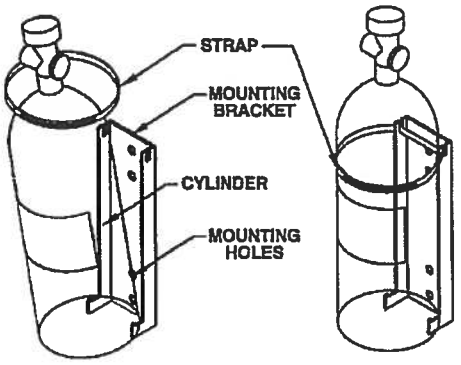


Figure 4-1. Cylinder and Mounting Bracket Installation.
002871PC

CONTROL HEAD INSTALLATION

1. Single Cylinder Installations.

For single cylinder system installations the Model MCH3/ECH3/NMCH3 Control Head can be installed directly onto the cylinder valve. When the control head is properly aligned in the desired position, tighten the knurled locking ring to secure the assembly. See Figure 4-2.

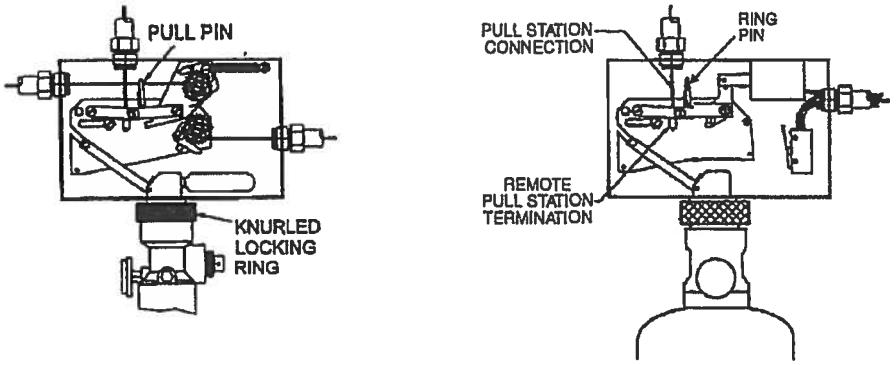


Figure 4-2. Single Cylinder Installation Using Model MCH3/ECH3/NMCH3 Control Head
002872PC/003647PC

FUSIBLE LINK DETECTOR INSTALLATION

Fusible links are always used in conjunction with the Model MCH3 Mechanical Control Head. After mounting the cylinder and control head, the fusible link line can be installed. The first step to installing the fusible link line is to install the detector bracket(s). These brackets must be installed in the plenum area, hazard area, and in each duct. See Chapter III for detector placement guidelines.

Note: Only ML-style Fusible Links can be used.

Connect the fusible link brackets together using 1/2 in. conduit and the conduit connectors supplied in the detector kit (Model FLK-1/1A). A PYRO-CHEM corner pulley must be used whenever a change in conduit direction is necessary. The conduit is connected to the control head through a knockout in the upper left-side corner.

In general, fusible links centered in the detector brackets are connected in series using 1/16 in. diameter stainless steel cable. The spring plate in the control head maintains tension on this series of fusible links. If the tension is released for any reason (i.e., a fusible link separates), the control head will operate and actuate the system. Maximum limitations for the fusible link detection line are as follows:

Fusible links can be installed with or without fusible link hangers (see Chapter II for description).

Fusible Link Line Limitations When Used With Model MCH3 and NMCH3 Control Heads and Part No. 415670 and 423250 Pulley Elbows	
Maximum # of Detectors:	20
Maximum length of cable:	150 ft. (45.7 m)
Maximum # of pulleys:	40

1. Fusible Link Installation Without Hangers.

Begin installing links at the terminal bracket. The link is connected to the far side of the terminal bracket using an "S" hook. The "S" hook must be crimped closed after the link is installed. A tight loop is then made in the cable and secured by the crimp provided. This loop is connected to the other side of the terminal link (see Figure 4-6) and the cable fed through the conduit to the next bracket. The cable proceeding from the terminal link will be used to connect the series links (see Figure 4-7). Series links must be centered in their detector brackets.

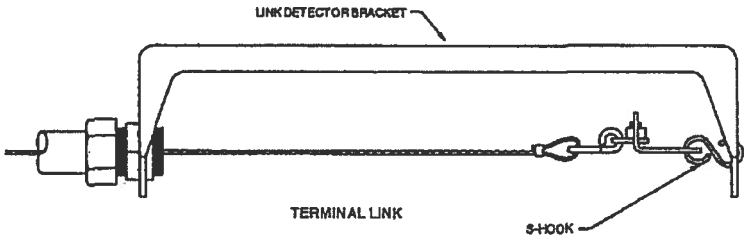


Figure 4-6. Terminal Link Installation.

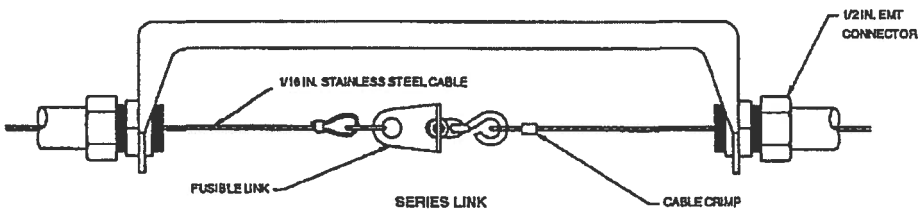


Figure 4-7. Series Link Installation.

After the last link in the series is connected, the cable should be fed through the conduit back to the control head. Thread the cable through the hole in the fusible link ratchet wheel. The line must then be crimped, and the crimp positioned inside the center of the ratchet wheel.

NOTE

Crimps must always be used in conjunction with two (2) cable lengths. Loops are the accepted method of connecting the cable to mechanical components. The crimp must never be used on a single cable. Exception: Single cable crimp allowed in detection and gas valve ratchet wheel using stop sleeve, Part No. 26317 (packages of 10: Part No. 24919).

The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position. See Figure 4-8.

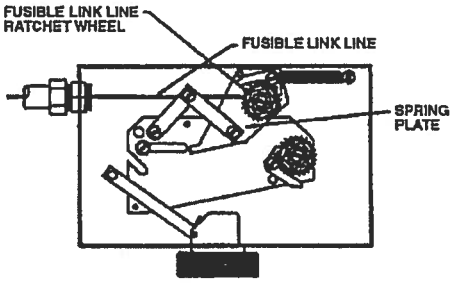


Figure 4-8. Fusible Link Line Termination.
002876PC

2. Fusible Link Installation Using Model FLH-1 Fusible Link Hangers.

Beginning at the control head, feed the stainless steel cable through the conduit and brackets to the terminal bracket in one continuous length. Allow approximately 2.5 in. (6.4 cm) of slack at each bracket for the installation of the Fusible Link Hangers. At the terminal link, a tight loop is made in the cable and secured by the crimp provided. The cable is attached to the far side of the terminal bracket using an "S" hook. The "S" hook must be crimped closed after the cable is installed. See Figure 4-9.

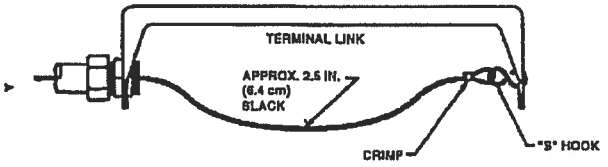


Figure 4-9. Terminal Bracket Connection.
002877PC

Begin installing the Fusible Link Hangers at the terminal bracket and work toward the control head. Loop the cable through the oval opening in the hanger and hook the fusible link on the loop. See Figure 4-10.

Note: Only ML-style Fusible Links can be used

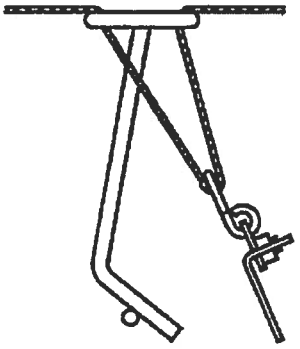


Figure 4-10. Fusible Link Connection.
002878PC

Hook the bottom of the link onto the bottom leg of the hanger. See Figure 4-11.

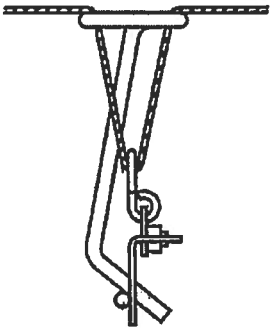


Figure 4-11. Fusible Link/Hanger Connection.
002879PC

Center the hanger/link in the fusible link bracket by sliding it along the link line. This is easily accomplished before any tension is applied to the link line. Repeat this procedure for all fusible links.

After the last hanger/link in the series is connected, the cable should be fed through the hole in the fusible link ratchet wheel. The line must then be crimped, and the crimp positioned inside the center of the ratchet wheel.

NOTE

Crimps must always be used in conjunction with two (2) cable lengths. Loops are the accepted method of connecting the cable to mechanical components. The crimp must never be used on a single cable. Exception: Single cable crimp allowed in detection and gas valve ratchet wheel using stop sleeve, Part No. 26317 (packages of 10: Part No. 24919).

The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position. See Figure 4-8. Check to ensure that the fusible link hanger(s) remain centered in the bracket after the fusible link line is set. See Figure 4-12.

THERMAL DETECTOR INSTALLATION

Thermal detectors are always used in conjunction with the Model ECH3 Electrical Control Head. After mounting the cylinder and control head, the thermal detector(s) can be installed. See Chapter III for detector placement guidelines. Follow the instructions included with the detector for proper detector mounting procedures.

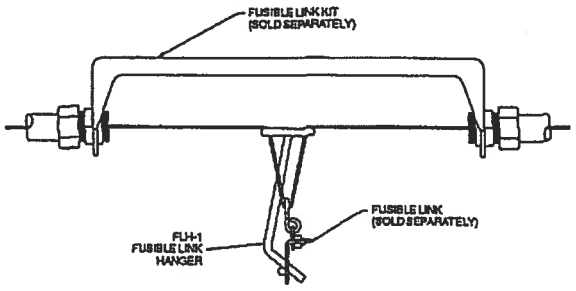


Figure 4-12. Fusible Link/Hanger in Set Position
002850PC

SETTING THE CONTROL HEAD

1. Model MCH3/NMCH3 Mechanical Control Head.

Once the fusible link line is set, the control head can be placed in the set position. To set the control head, the slide plate is moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position. Insert the pull pin into the hole in the slide plate above the latching arm. This will lock the control head in the set position, eliminating accidental actuation during the rest of the installation procedure. See Figure 4-13.

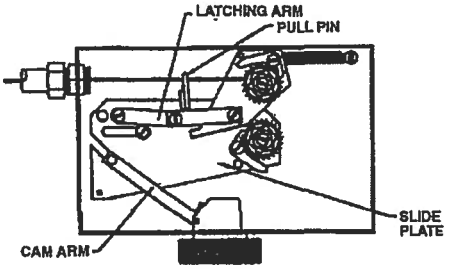


Figure 4-13. Control Head in Set Position.
002880PC

2. Model ECH3 Electrical Control Head.

Once the thermal detectors have been installed, the control head can be placed in the set position. To set the control head, the slide plate is moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position. Insert the pull pin into the hole in the slide plate above the latching arm. This will lock the control head in the set position, eliminating accidental actuation during the rest of the installation procedure.

Once the Model ECH Electrical Control Head is in the set position, it can be connected to the detection/actuation circuit.

NOTE

No electrical connections shall be made inside the control head. All electrical wiring shall exit the control head through the knock-out on the side of the box. All electrical connections must be made in an approved electrical box.

Connect one of the black wires on the solenoid in the control head to the red wire of the Model MS-SPDT Micro Switch. The brown wire from the micro switch is then connected to one side of the first thermal detector in series. Connect the other side of the first thermal detector in series and the remaining black wire on the solenoid in the control head to the appropriate power source after installing the Model SM-24/120 Solenoid Monitor.

CAUTION

The solenoid must never be wired "hot" (not through the micro-switch). If wired this way, the non-field replaceable solenoid will be damaged and the complete control head will require replacement.

NOTE

A Model SM-24/120 Solenoid Monitor must always be used with an Electrical Control Head to supervise the actuation/detection circuit.

The Model ECH3-24 Electrical Control Head requires a UL Listed 24VDC power supply with a minimum 2A rating. The Model ECH3-120 Electrical Control Head requires a 1A, 120VAC power supply.

SOLENOID MONITOR INSTALLATION

1. Solenoid Monitor Installation In Detection Circuit.

After installing the thermal detectors and the control head, the Model SM-120/24 Solenoid Monitor can be installed. The Solenoid Monitor is connected to the wires leading from the last thermal detector. It should be mounted in a location where it can be readily observed.

The Solenoid Monitor is an end-of-line device that supervises the actuation/detection circuit. It is comprised of a push-type switch with a built-in indicator light, a plug-type relay, a relay socket, and a cover plate. The light, when illuminated, indicates that the detection/actuation circuit is in the normal condition. The Solenoid Monitor also provides two sets of dry contacts. The Solenoid Monitor's cover plate is used to mount the Solenoid Monitor in a standard 6 in. x 4 in. x 3 in. deep electrical box (See **Figure 4-14**).

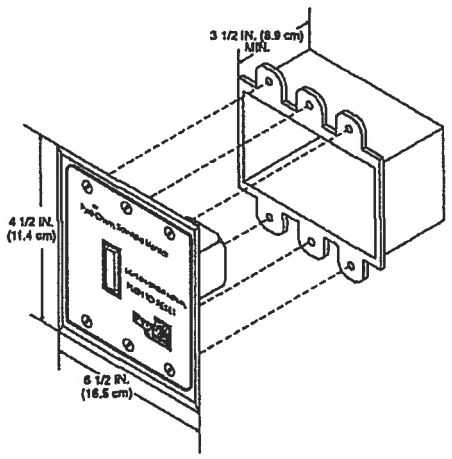


Figure 4-14. Solenoid Monitor Installation.
002881PC

All wire for circuits using the Model SM-24 shall be 18 gauge minimum, or as required by local code. All wire for circuits using the Model SM-120 shall be 14 gauge minimum, or as required by local code. The basic wiring diagram for both the Model SM-24 and Model SM-120 is shown in **Figure 4-14.1.**

After the Solenoid Monitor has been installed, the detection/actuation circuit can be connected to the appropriate power source and energized. To energize the detector/actuation circuit, depress the switch on the Solenoid Monitor. The light will illuminate to indicate that the circuit is properly installed. If the light fails to illuminate, the wiring must be checked.

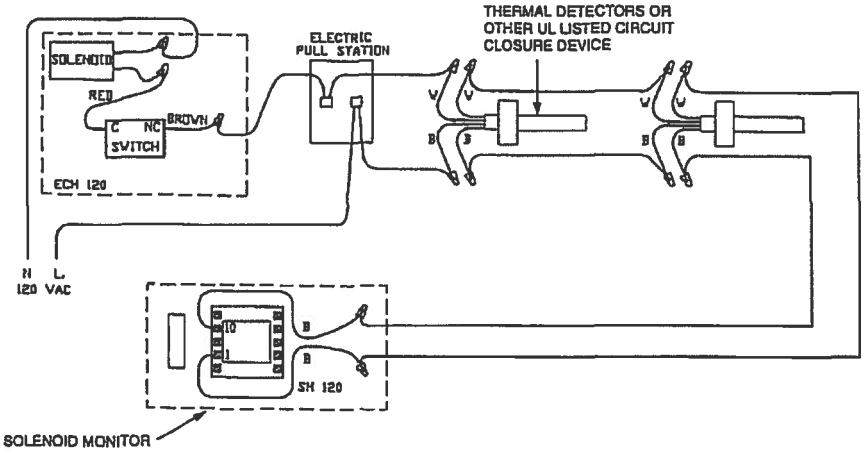


Figure 4-14.1. Wiring Diagram, Solenoid.
002882PC

2. Solenoid Monitor When Used As A Reset Relay

The Model SM-24/120 can be used as a reset relay when required. A reset relay is required whenever an electrical gas shut-off valve is used in conjunction with the Pyro-Chem Booth Industrial Fire Suppression System. For typical wiring connections, see **Figure 4-15.**

REMOTE PULL STATION INSTALLATION

1. Model RPS-M.

The Model RPS-M Remote Mechanical Pull Station is used for remote mechanical actuation of the Model MCH3/ECH3/NMCH3 Control Head. It is to be located near an exit in the path of egress from the hazard area no more than 4 ft. (1.2 m) above the floor.

NOTE

A model RPS-M remote mechanical pull station must be used for manual actuation of a Model NMCH3 releasing device.

The Pull Station can be surface mounted or recessed. It is connected to the control head using 1/16 in. diameter stainless steel cable. The cable enters the pull station box from the bottom, top, either side, or back. The cable enters the control head through the top-center knockout. The cable must be enclosed in 1/2 in. conduit with a PYRO-CHEM corner pulley at each change in conduit direction. Maximum limitations for the Model RPS-M Remote Mechanical Pull Station are as follows:

Model RPS-M Cable Run Limitations When Used With Model MCH3, ECH3, and NMCH3 Control Heads and Part No. 415670 and 423250 Pulley Elbows	
Maximum length of cable:	150 ft. (45.7 m)
Maximum # of pulleys:	40

After mounting the pull station box and conduit, feed the stainless steel cable from the control head, through the conduit, and into the pull station box. Insert the bushing into the pull station's cover plate and secure it with the locknut provided. Feed the cable through the bushing and into the pull handle ensuring that the cable fully crosses the set screw hole. Fasten the cable to the pull handle with the set screw (see **Figure 4-16**).

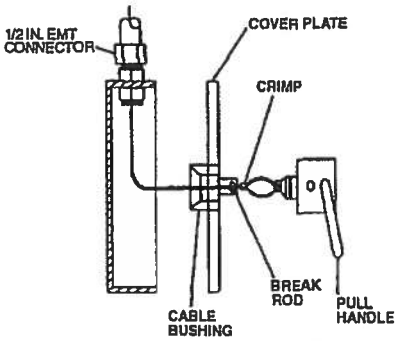


Figure 4-16. Model RPS-M Remote Pull Station Installation.

002884PC

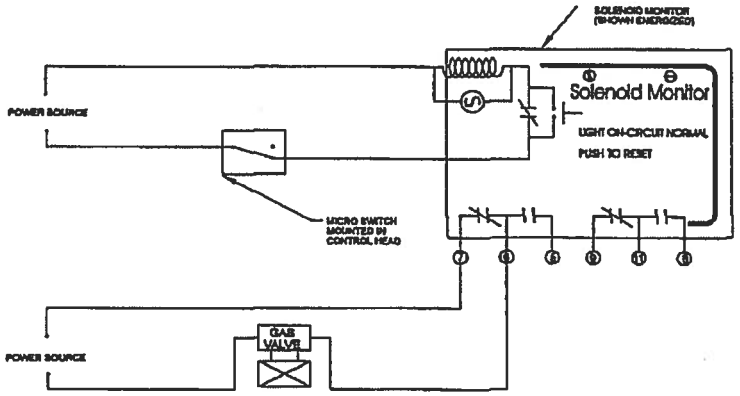


Figure 4-15. Solenoid Monitor Wiring With Electrical Gas Shut-off Valve.

002883PC

NOTE

Crimps must always be used in conjunction with two (2) cable lengths. Loops are the accepted method of connecting the cable to mechanical components. The crimp must never be used on a single cable. Exception: Single cable crimp allowed in detection and gas valve ratchet wheel using stop sleeve, Part No. 26317 (packages of 10: Part No. 24919).

Cut and thread the cable through the hole in the latching arm of the control head and pull the cable tight. Crimp the cable 6 in. (15.2 cm) below the latching arm.

Pull the pull handle until the crimp touches the latching arm. Coil the excess cable in the pull box and attach the cover plate with the four screws provided. Insert the pull handle into the cover plate and insert the pull pin through the bushing and the pull handle. Secure the pull pin with the nylon tie provided. See Figure 4-17.

2. Model RPS-E2.

The Model RPS-E2 remote electrical pull station is used for remote actuation of the Model ECH3 Control Head. It is to be located near an exit in the path of egress from the hazard area no more than 4 ft. (1.2 m) above the floor. The Model RPS-E2 is installed in the detection/actuation circuit and wired in accordance with the instructions included. See Figure 4-14.1 for typical circuit wiring.

GAS SHUT-OFF VALVE INSTALLATION

1. Mechanical Gas Shut-Off Valve Installation.

The Model MCH3/NMCH3 Control Head is used to operate the mechanical gas shut-off valve. This valve is located in the fuel gas supply line. The valve body has an arrow which indicates direction of gas flow through the valve. The gas shut-off valve is spring loaded and requires five pounds of force to hold it open. This force is supplied by a 1/16 in. diameter stainless steel cable that is connected to the control head. After the valve is installed in the gas line, 1/2 in. conduit must be run from the top center knockout of the gas valve box to the lower right-hand knockout in the control head. A PYRO-CHEM corner pulley is used wherever a change in conduit direction is required.

Gas Valve Cable Run Limitations When Used With Model NMCH3 or MCH3 Control Heads and Part No. 415670 and 423250 Pulley Elbows	
Maximum length of cable:	100 ft. (30.5 m)
Maximum # of pulleys:	30

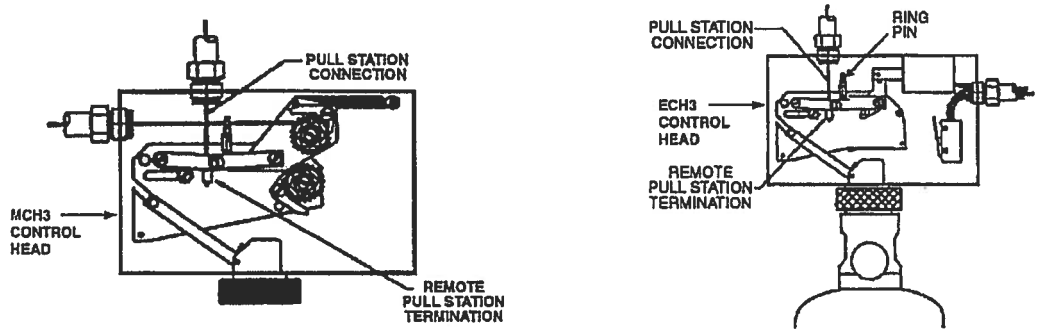


Figure 4-17. Model RPS-M Remote Pull Station Termination.

002885PC/003847PC

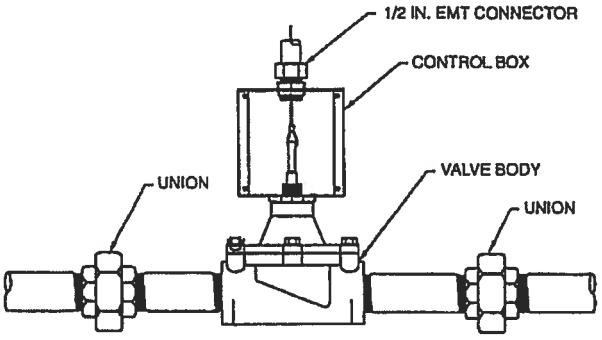


Figure 4-18. Gas Valve Installation.

002886PC

Remove the gas valve cover and thread the stainless steel cable through the conduit back to the control head. Thread the cable through the hole in the gas valve ratchet wheel. The line must then be crimped, and the crimp positioned inside the center of the ratchet wheel.

At the gas valve, loop the cable through the valve stem and secure it with the crimp provided (see Figure 4-18).

▸ Note: See Chapter 2 – Components for maximum dimen-
▸ sion to extend valve stem.

The gas valve line can now be put into a set position by applying tension to the gas valve line. This is accomplished by using a 1/2 in. hex wrench on the gas valve ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the gas valve is fully open. Secure the gas valve cover plate to the gas valve box with the four (4) screws provided. The gas valve line is now in a set position. See Figure 4-19.

CAUTION

Overtightening the gas valve may cause the system not to actuate.

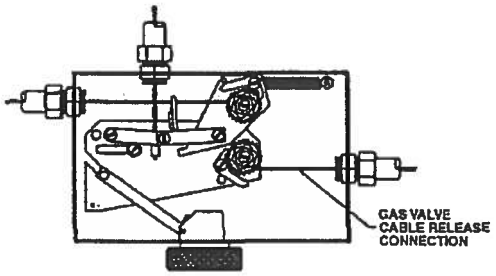


Figure 4-19. Gas Valve Line Termination.
002887PC

2. Electrical Gas Shut-Off Valve Installation.

The Model MCH3/ECH3/NMCH3 Control Head is used to operate the electrical gas shut-off valve. This valve is located in the fuel gas supply line. The valve body has an arrow which indicates direction of gas flow through the valve. A reset relay must always be used with an electrical gas shut-off valve. For proper wiring of the electrical gas shut-off valve, see Figure 4-15.

TEE PULLEY INSTALLATION

The Model TP-1 Tee Pulley is used to connect two (2) mechanical gas valves or two (2) remote mechanical pull stations to a single control head. The cable proceeding from the control head must always enter the branch of the tee pulley. See Figure 4-20.

A tee pulley that is used to close two (2) gas valves can only be used to close gas valves with similar stem travel. Gas valves from 3/4 in. up to 1 1/2 in. can be used on the same tee pulley. A 2 in. gas valve can be used only with another 2 in. gas valve. Gas valves from 2 1/2 in. up to 3 in. can be used on the same tee pulley. As an example, using a 3/4 in. gas valve with a 3 in. gas valve will not allow the 3 in. valve to fully open.

CAUTION

The tee pulley must never be used to connect multiple fusible link lines to a single control head.

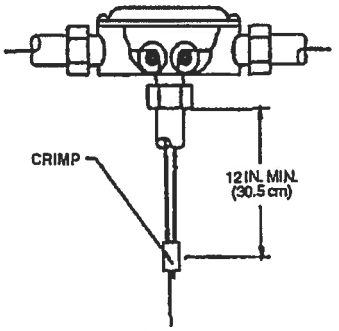


Figure 4-20. Tee Pulley Installation.
002888PC

MICRO SWITCH INSTALLATION

See NFPA 72, "National Fire Alarm Code," Initiating Devices section, for the correct method of wiring connection to the fire alarm panel.

The Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT Micro Switch is available for use where an electrical output is required. These switches can be field installed in the control head. See Figure 4-21 and Figure 4-22 and refer to Instruction Sheet, Part No. 551159, included with switch shipping assembly, for detailed mounting instructions.

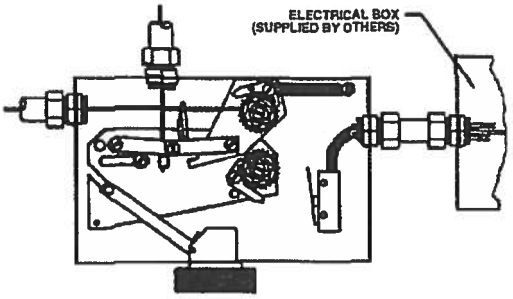


Figure 4-21. Micro Switch Installation in Model MCH3/NMCH3 Control Head.
002889PC

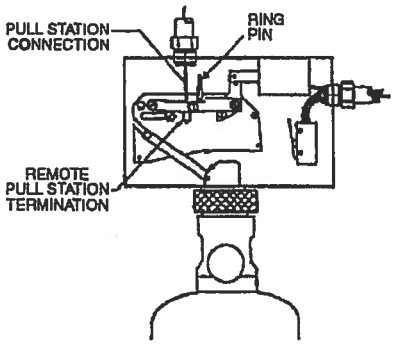


Figure 4-22. Micro Switch Installation in Model ECH3 Control Head.
003647PC

NOTE

The Model ECH3 Control Head is supplied with a Model MS-DPDT Micro Switch. This switch can be used in the actuation/detection circuit and for electrical output.

These switches may be used to provide an electrical signal to the main breaker and/or operate electrical accessories provided the rating of the switch is not exceeded. Wiring connections are shown in **Figure 4-23.** The contact ratings for the switches are as follows:

Contact Ratings For Micro Switches
21 amps, 1 HP, 125, 250, 277 VAC
or 2 HP, 250, 277 VAC

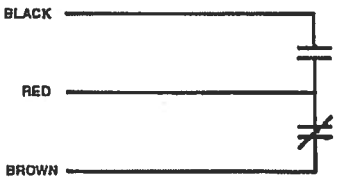


Figure 4-23. Wiring Diagram For Model MS-SPDT Micro Switch.
002863PC

The Alarm Initiating Switch, Part No. 550077, must be used ▸ to close a supervised alarm circuit to the building main fire alarm panel when the control head actuates. This will signal the fire alarm panel that there was a system actuation in the hazard area. This switch can be field installed in the control head. Refer to Instruction Sheet, Part No. 550081, included with the switch shipping assembly, for detailed mounting instructions. Wiring connections are shown in **Figure 4-24.** The switch is rated at 50mA, 28VDC.

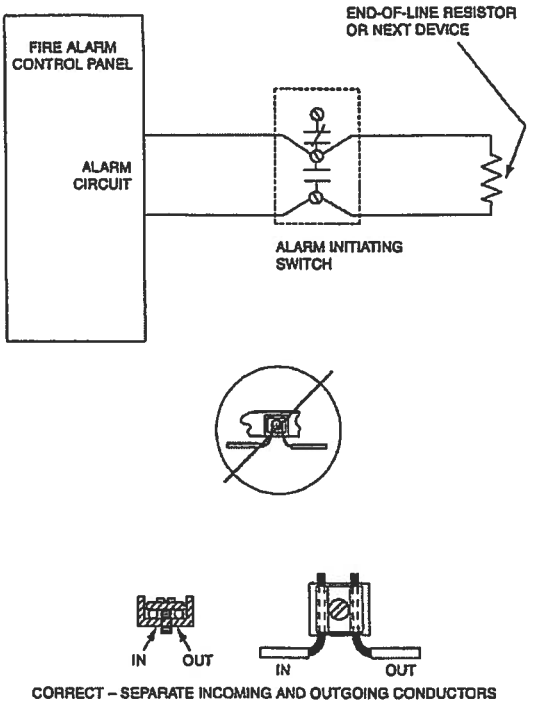


Figure 4-24. Wiring Diagram for Alarm Initiating Switch.
004891/004905

PIPE AND NOZZLE INSTALLATION

General Piping Requirements

1. Use Schedule 40 black iron (if used in a relatively non-corrosive atmosphere), galvanized, chrome-plated, or stainless steel pipe conforming to ASTM A120, A53, or A106. Fittings must be a minimum of 150 lb. Class. However, the PCI 35, 50, and 70 lb. cylinders must have a minimum of two (2) nozzles per cylinder to utilize the 150 lb. Class fittings. If the PCI 35, 50, or 70 lb. cylinder has one (1) nozzle, then a 300 lb. Class fitting must be used. The remaining Monarch cylinders have no limitations for the 150 lb. Class fittings. Distribution pipe sizes are 3/4 in. or 1 in. depending on number of nozzles.
2. Pipe unions are acceptable.
3. Use reducing tees for all pipe splits.
4. Reducing bushings are not acceptable.
5. Cast iron pipe and fittings are not acceptable.
6. **Pipe thread sealant or pipe joint compound is not allowed for distribution piping.**
7. Bell Reducer or any non-restrictive fittings are allowed.
8. Before assembling the pipe and fittings, make certain all ends are carefully reamed and blown clear of chips and scale. Inside of pipe and fittings must be free of oil and dirt.

9. If Teflon tape is used on threaded ends, start at the second male thread and wrap the tape clockwise around the threads, away from the pipe opening.

10. All system piping must comply with Section A-5-9.1 of NFPA-17.

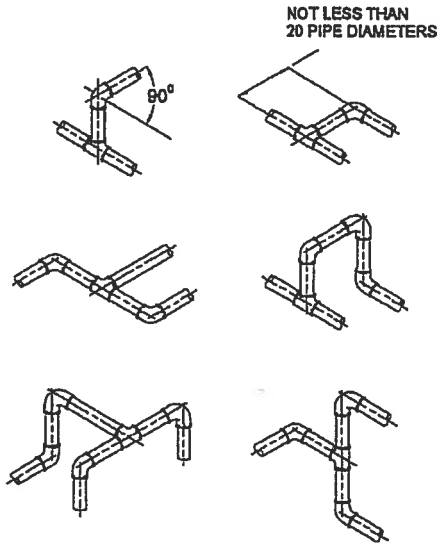


Figure 4-25. Acceptable Piping Methods.
002965PC

CAUTION

Do not apply Teflon tape to cover or overlap the pipe opening, as the pipe and nozzles could become blocked and prevent the proper flow of agent.

TEE POSITIONING

In order to obtain equal distribution at a tee, the dry chemical must enter the side port of the tee and exit through the two end ports. See Figure 4-26.

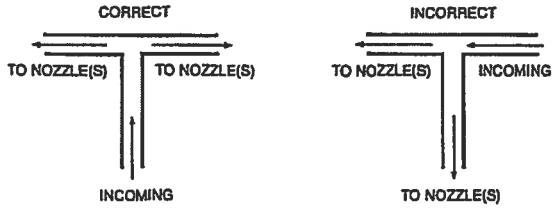


Figure 4-26. Tee Positioning
003126

Hanger/Support Installation

The hanger/supports must be installed in conjunction with the pipe and fittings. The spacing requirements for hangers/supports depend on the pipe size being utilized; refer to the Spacing Guidelines Chart.

PIPE HANGER SPACING GUIDELINES CHART

Distribution Pipe Size	Maximum Spacing Distance Hanger to Hanger	
in.	ft.	m
1/4	4	(1.2)
1/2	6	(1.8)
3/4	8	(2.4)
1	12	(3.6)

Other factors that influence hanger/support spacing are:

- Hanger/Support must be placed within 1 ft. (0.3 m) of the discharge nozzle.

Hanger/Support must be placed between elbows when distance is greater than 2 ft. (0.6 m).

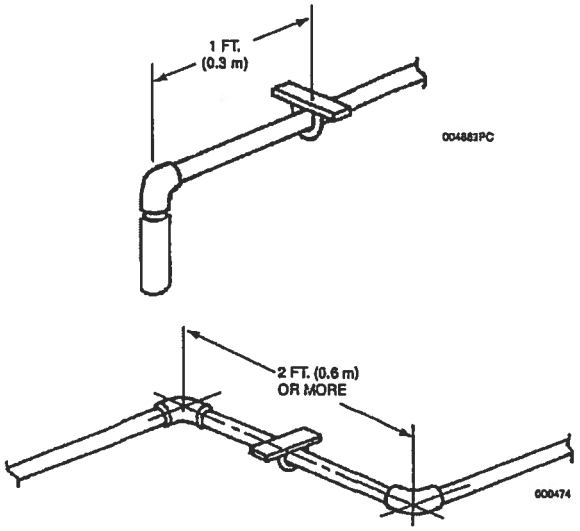


Figure 4-27. Hanger/Support.

MAIN/RESERVE SYSTEM

When a reserve system is being utilized, two 1 in. swing check valves, Part No. 417788, must be installed in the distribution piping network. They should be positioned as close as possible to the "Y" fitting joining the piping from the main and reserve tanks to one common supply pipe. See Figure 4-28. Note: Make certain to install swing check valves in the direction of dry chemical flow as shown with an arrow stamped on the valve body.

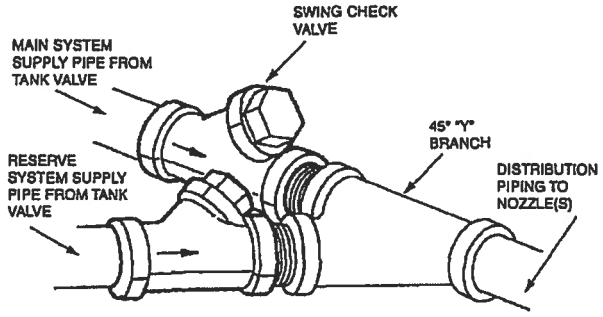


Figure 4-28. Main/Reserve System.

000480

PRESSURE SWITCH INSTALLATION

The Model PS-SPDT-X Pressure Switch is available for use when an electrical output is required. It must be installed in the discharge piping within 12 in. (30.5 cm) of the valve discharge port as shown in Figure 4-29. An inline tee is used for the installation. The switch is isolated from the chemical by a 12 in. to 15 in. (30.5 to 38.1 cm) column of air in the form of a vertical pipe nipple. The switch is then mounted at the top of this nipple.

> **NOTE**
>
> Piping for pressure switch must be included in total cylinder to T1 piping limitations. The fitting used to connect the pressure switch to the distribution piping counts as one (1) elbow in that section.

As an alternate, the switch may be connected directly to the copper tubing of a remotely mounted control head or a PAC cylinder. The PS-SPDT-X counts as one cylinder in this section, and the limitations on copper tubing and/or pipe previously stated in this manual apply.

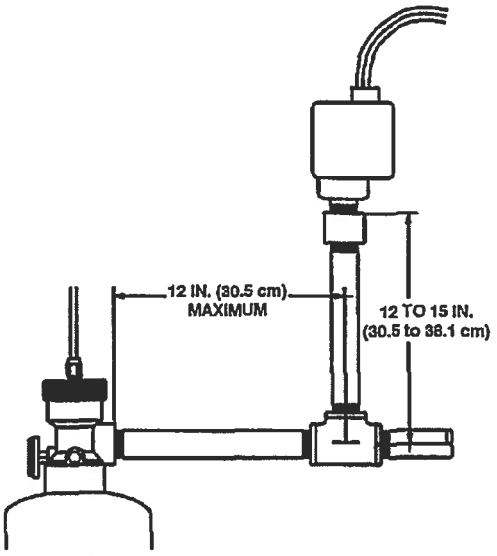


Figure 4-29. Pressure Switch Installation.

003025PC

SYSTEM CHECKOUT AFTER INSTALLATION

1. Model MCH3 Mechanical Control Head.

Before putting the system into service, all components must be checked for proper operation. During this checkout, assure that the carbon dioxide pilot cartridge is not installed in the control head actuator. Remove the pull pin from the hole in the slide plate.

To check satisfactory operation of the control head, cut the terminal link or the "S" hook holding the link. This will relieve all tension on the fusible link line and operate the control head. The slide plate will move fully to the right. The gas valve cable will be released, causing the gas valve to close. Any auxiliary equipment connected to the dry contacts of the solenoid monitor and/or the Micro Switch in the control head will operate.

If any of these events fail to occur, the problem must be investigated and repaired.

Repair the terminal link and put the fusible link line back into the set position. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box.

VIKING FIRE PROTECTION INC. 3005 | Pitfield boulevard | Saint-Laurent, Québec, Canada | H4S 1H4
Tel.: 514.332.5110 Fax: 514.332.6260 info@vikingfire.ca

CHAPTER 5

MAINTENANCE

CHAPTER V
SYSTEM MAINTENANCE

GENERAL

This chapter will detail the basic information necessary for proper maintenance of the PYRO-CHEM Industrial Fire Suppression System. However, before attempting any system maintenance, it is necessary to attend a Factory Certification Training Class and become Certified to Install and maintain the PYRO-CHEM Industrial Fire Suppression System.

MAINTENANCE AFTER SYSTEM DISCHARGE

1. System Cleanup.

The hazard area cleanup after a system discharge is very basic. The dry chemical agent should be cleaned up by either sweeping or vacuuming. Residual dry chemical should be wiped off effected surfaces with a damp cloth.

2. System Cylinder Recharge.

CAUTION

Protective eye goggles and protective footwear must be worn when performing system maintenance.

1. Remove the cylinder from the control head or pneumatic adaptors and inspect for visual damage. If there is any damage the cylinder must be hydrostatically tested before being refilled. If there is no damage, the cylinder can be recharged.
2. Reset all pneumatic actuators (Models PDA-D2) by depressing the check valve on top and relieving the pressure. Remove the pneumatic actuator or control head from the valve and use any 1/4-20 UN screw or bolt to screw into the top of the piston. Pull up on the piston until the piston is flush with the top of the valve body and remove the screw or bolt from the piston.
3. Remove the valve and siphon tube assembly from the cylinder and unscrew the siphon tube from the valve.
4. Inspect the valve to make sure no mechanical damage has occurred. If there is evidence of any damage to the seals, rebuild the valve using the Dry Valve Rebuilding Kit (PYRO-CHEM Part Number 550037).
5. Screw the siphon tube back into the valve.
6. Refill the cylinder with agent. Use the table below for easy reference.

Cylinder	Recharge
PCI-15ABC	12.5 lb. ABC (Part No. 550170)
PCI-17ABC	17 lb. ABC (Part No.550170)
PCI-25sBC	25 lb. BC (Part No.550162)
PCI-25sABC	25 lb. ABC (Part No.550170)
PCI-35ABC	35 lb. ABC (Part No.550170)
PCI-50sBC	50 lb. BC (Part No.550162)
PCI-50sABC	50 lb. ABC (Part No.550170)
PCI-70ABC	70 lb. ABC (Part No.550170)

The Model RC-50ABC (Part No. 550170) is a 50 lb. pail of ABC dry chemical recharge agent available from PYRO-CHEM. The Model RC-50BC (Part No. 550162) is a 50 lb. pail of BC dry chemical recharge agent available from PYRO-CHEM.

7. Insert the siphon tube into the cylinder, and screw the valve onto the cylinder. Make sure that the valve is screwed completely into the cylinder.
8. Attach the Recharge Adaptor (PYRO-CHEM Part No. 550130) to the discharge port of the valve. The adaptor O-ring should be completely inside the discharge port. Attach a source of dry nitrogen to the adaptor.

   Charge the cylinder with dry nitrogen to 350 psi at 70°F.

NOTE

1. The pressure gauge attached to the cylinder valve should not be used to determine when the charging pressure has been reached. A pressure regulator should be used.
2. Higher pressure may be needed during the initial charging stage to blow the agent out of the siphon tube. Secure the cylinder during this stage, as it may jump as the agent is blown from the siphon tube.

9. Slowly disconnect the nitrogen source from the Recharge Adaptor. The cylinder valve will close when the Recharge Adaptor is depressurized. When the valve is closed and the nitrogen source is disconnected from the Recharge Adaptor, remove the recharge adaptor from the valve discharge port. Immediately screw the recoil preventer into the discharge port.

CAUTION

The recoil preventer must remain in the valve discharge port until the cylinder is attached to the piping network.

10. Reinstall the cylinder to the piping network. Reattach the control head or pneumatic adaptor.

3. Piping and Nozzles.

Piping should be blown out with air or dry nitrogen. Nozzle blow off caps should be replaced.

4. System Reset.

All fusible links should be replaced. The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position.

After setting the fusible link line, the system can be put back into service by following the SYSTEM CHECKOUT AFTER INSTALLATION Section of Chapter IV.

REGULAR SYSTEM MAINTENANCE

1. Six (6) Month Maintenance.

1. Check that the hazard has not changed.
2. Check that all nylon ties are in place and the system has not been tampered with.
3. Check the entire system for mechanical damage.
4. Check the solenoid monitor.
5. Disconnect the control head or pneumatic tubing from each agent cylinder. Remove the carbon dioxide pilot cartridge and exercise the control head to ensure it is functioning properly. Make sure the gas shut-off valve and the remote pull station are functioning properly.

> **NOTE**
> Before continuing, remove the cover from the control head and insert the pull pin in the hole in the slide plate above the latching arm. This will secure the system, preventing accidental discharge.

6. Inspect fusible link detectors for excessive grease buildup. Clean or replace links if necessary. Visually inspect thermal detectors.

> **NOTE**
> Methods and frequency of inspection, testing and maintenance of detectors should be in accordance with NFPA-72.

7. Reinstall the carbon dioxide pilot cartridge and replace the control head cover and nylon tie.

> **CAUTION**
> Before screwing the carbon dioxide pilot cartridge into the actuator, ensure that the actuator has an O-ring installed.

8. Inspect the cylinder pressure. Tap the gauge lightly to ensure the needle is moving freely. If the gauge shows a loss in pressure indicated by the needle being below the green band, the tank should be removed and recharged per the SYSTEM CYLINDER RECHARGE section of Chapter V (System Maintenance) in this manual.

2. Annual Maintenance.

1. Inspect as per six (6) month maintenance instructions.
2. Disconnect and remove the discharge piping from the system. Using air or nitrogen, blow out the discharge piping. Replace all nozzle caps.
3. Fixed temperature sensing elements of the fusible alloy type shall be replaced at least annually or more frequently, if necessary, to assure proper operation of the system.
4. Test thermal detectors and remote pull station per SYSTEM CHECKOUT AFTER INSTALLATION section located in Chapter IV (System Installation) of this manual. Per NFPA 72, two (2) or more detectors per circuit should be tested. Note individual detector location and date of testing. Within 5 years, all detectors in system must be tested.
5. Replace the carbon dioxide pilot cartridge, recording the date of installation on the cartridge with a felt-tipped marker.

> **CAUTION**
> Before screwing the carbon dioxide pilot cartridge into the actuator, ensure that the actuator has an O-ring installed.

3. Six (6) Year Maintenance.

1. Inspect as per annual maintenance instructions.
2. Examine the dry chemical. If there is evidence of caking, the dry chemical shall be discarded.

4. Hydrostatic Testing.

The dry chemical agent cylinder(s) and pneumatic cylinder(s) shall be hydrostatically tested at least every twelve (12) years as per NFPA-17.

> **NOTE**
> Refer to NFPA-17 for additional maintenance requirements.

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☑ Complete, no further submission required.

By: Jean-Francois Tremblay Date: 2017-05-02

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-TES-0015 R: Sub001

DOCUMENT FOR INFORMATION

Fuel Tanks Piping

Supply and Installation

Punchlist

Document Number : AEM-GE-ITR-003

Contract Number : C22466T / C22498E

Equipment/System description:

ITEM No	DESCRIPTION	CAT 1	CAT 2	CAT 3	COMMENTS	COMPLETED
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

CAT 1 = Effects commissioning
CAT 2 = Effects operation
CAT 3 = Post operation

TO BE VALIDATED

AT A LATER DATE

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☑ Complete, no further submission required.

By: Jean-Francois Tremblay Date: 2017-05-02

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-TES-0016 R: Sub001

DOCUMENT FOR INFORMATION

Date: _____

To: _____

Project No: _____

Contract No: _____

Contract Title: _____

Contractor: _____

We, _____ (Contractor's Name), the Contractor for the above described contract, hereby certify that we have reviewed the Contract Documents pertaining to:

Contract No.: _____

Contract Name: _____

Partial Completion Certificates: _____

and having physically inspected the Work performed, do hereby file claim for a notice of Final Completion.

I do declare that I am, _____ (Responsible's Name), HAVING AUTHORITY FROM MY COMPANY TO PETITION FOR THE ABOVE REFERRED TO FINAL COMPLETION NOTICE.

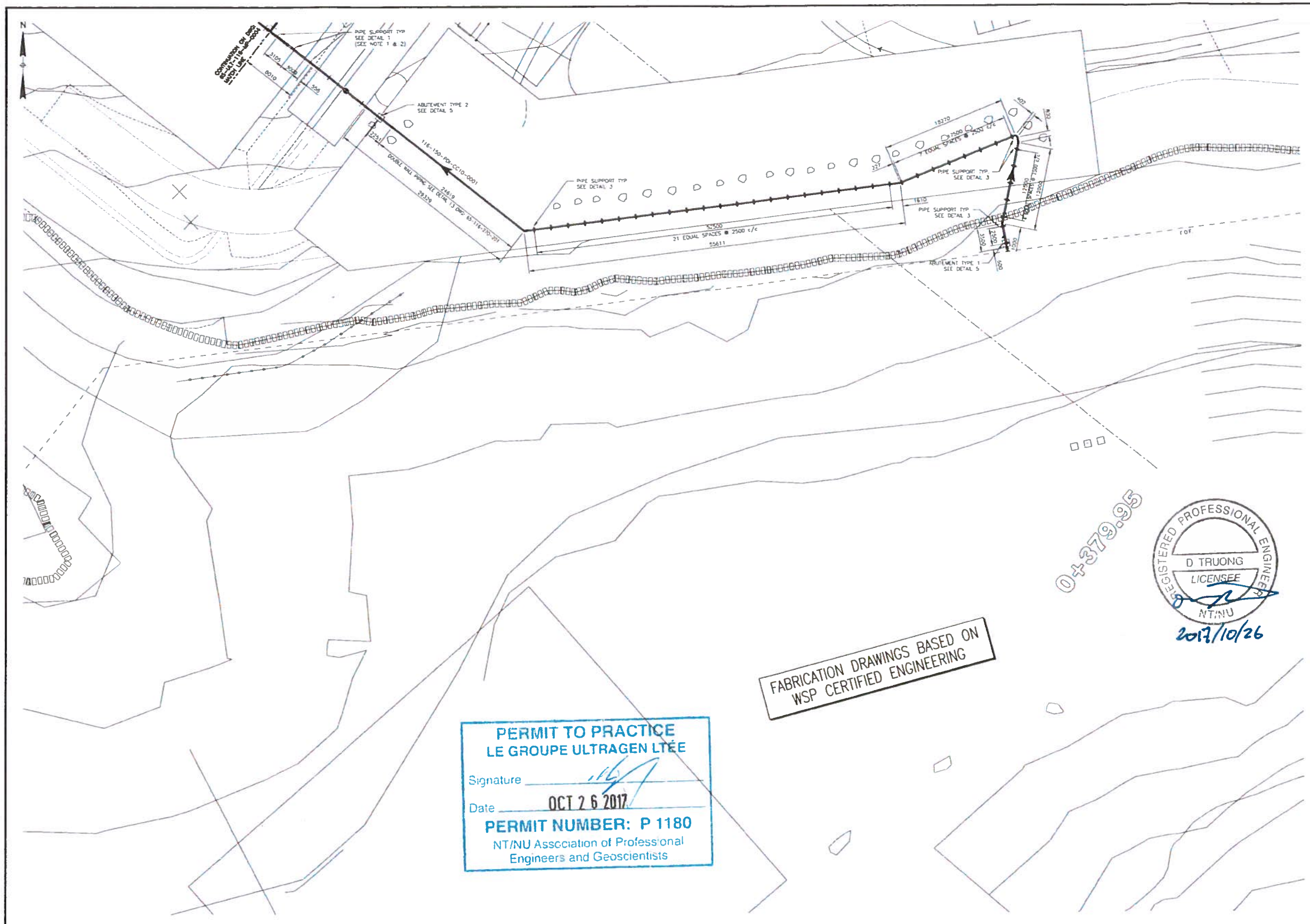
Signature: _____

Name: _____

Title: _____

NE DESSIN DRAWING NO 65-ULT-116-MP-001

FORMAT ARCH D



NOTES GENERALES / GENERAL NOTES

1 GUIDES SHALL BE PLACED AT LEAST 40 TO 60 PIPE DIAMETERS AWAY FROM PIPE EXPANSION LOOPS OR CHANGES IN DIRECTION

2 IN GENERAL, GUIDES USED ON LINES DN 100 AND SMALLER ARE LOCATED AT EVERY OTHER PIPE SUPPORT AND ON LINES DN 150 AND LARGER AT EVERY THIRD SUPPORT

DESSINS EN REFERENCE / REFERENCE DRAWINGS

TYPE / TITLE	# DWG
GENERAL ARRANGEMENT - PLAN VIEWS	65-ULT-116-MP-002
GENERAL ARRANGEMENT - PLAN VIEWS	65-ULT-116-MP-003
FUEL DISTRIBUTION - FLOW DIAGRAM	65-116-205-200
PIPING & PIPE SUPPORT DETAILS	65-116-270-200
PIPING DETAILS	65-116-270-201

AGNICO EAGLE

REV	DATE	DESCRIPTION	DRAWN/CHKD APP	CLIENT
3	2017-10-26	AS BUILT	A.H.	-
2	2017-04-27	PROJECT TITLE REVISED	T.KIM	-
1	2017-09-19	LINE NUMBERS REVISED	T.NG	-
0	2017-05-17	ISSUED FOR CONSTRUCTION	A.H.	-

REVISIONS

MEADOWBANK PROJECT WIDENING

ultragen

NO. PROJET / PROJECT NO 591700

TYPE / TITLE
AGNICO EAGLE - MEADOWBANK DIVISION
116 - FUEL TANK FARM
FUEL DISTRIBUTION
GENERAL ARRANGEMENT
PLAN VIEW

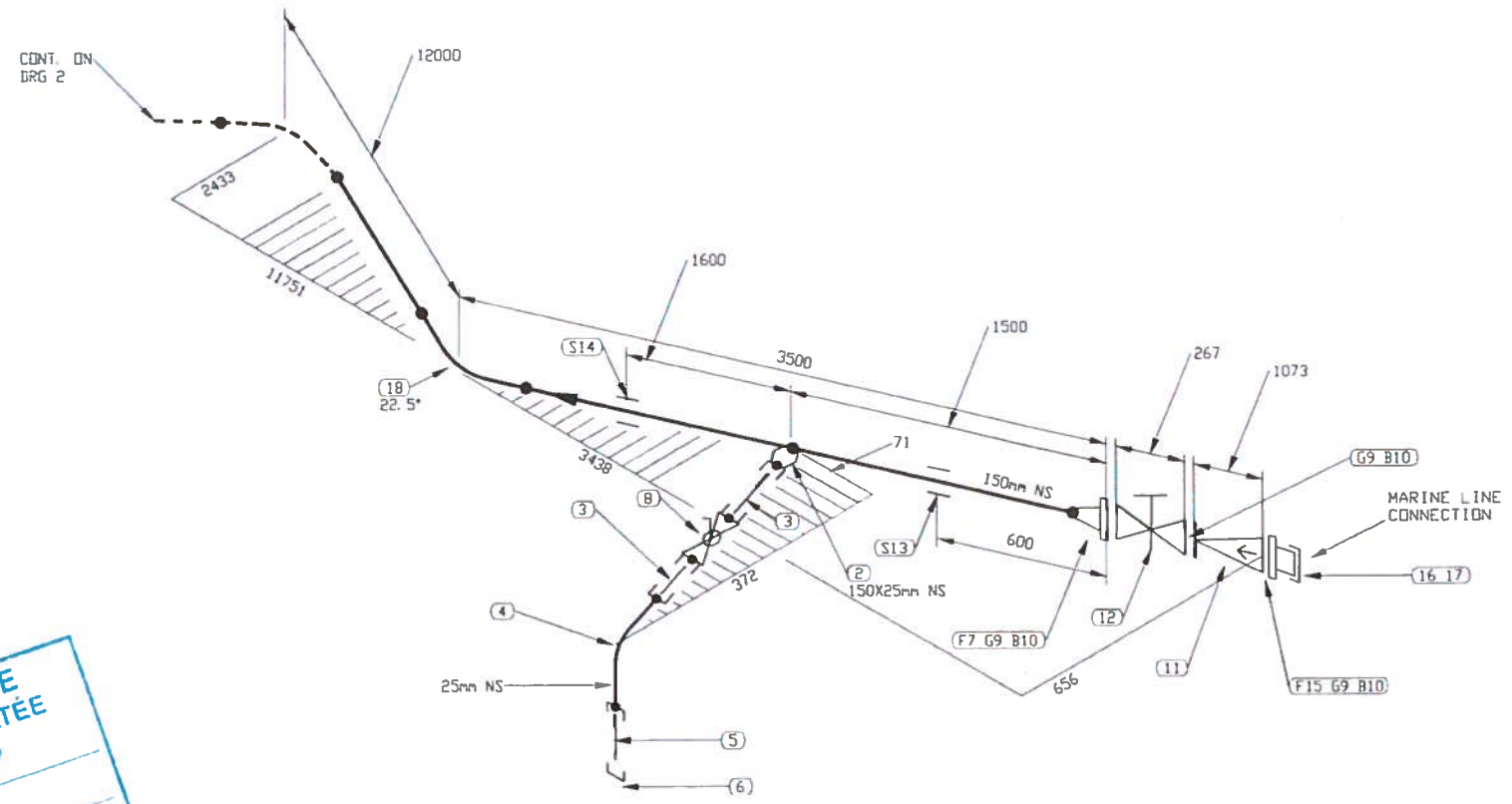
DESSINE PAR / DRAWN BY	A. HEBERT	DATE 2017-05-19
VERIFIE PAR / CHECKED BY	-	-
APPROUVE PAR / APPROVED BY	-	-
ECHELLE / SCALE	1 = 250	DATE 2017-04-28

NO. DESSIN / DRAWING NO. 65-ULT-116-MP-001

NO. PROJET / PROJECT NO	REVISION	FEUILLE / SHT
6515	3	1/1

AE-CAM-ARCH D

FILE NO 65-ULT-116-MP-001.dwg



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	16045 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X25	A 350 Gr. LF2	CL 3000, SOCKOLET
3	2	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBE
4	1	25	A 350 Gr. LF2	CL 3000, SW 90 DEG ELBOW
5	1	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBExTOE
6	1	25	A 350 Gr. LF2	CL 3000, THRD CAP
7	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
8	1	25	BA-29	CL 600, SW, BALL VALVE
9	3	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
10	24	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
11	1	150	CK-29	CL 150, RF, SWING CHECK VALVE
12	1	150	GA-10	CL 150, RF, GATE VALVE
13		150		PIPE GUIDE AS PER DETAIL 4, DWG: 65-116-270-200
14	1	150		PIPE SUPPORT AS PER DETAIL 3, DWG: 65-116-270-200
15	1	150	A 350 Gr. LF2	CL 150, RF, BLIND FLANGE (C/W 4" NPT HOLE)
16	1	100		CAMLOCK F400-SS
17	1	100		CAMLOCK DC400-SS
18	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 22.5

No.	DATE	REVISION	APP.
4	2017/10/13	AS BUILT	A.H
3	2017/09/21	PROJECT TITLE REVISED	KHV
2	2017/09/11	LINE NUMBERS REVISED	QVN
1	2017/06/30	DRAIN REVISED AS PER CLIENT COMMENTS	QVN
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI					65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: –
DATE: –
APP.: –
DATE: –
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

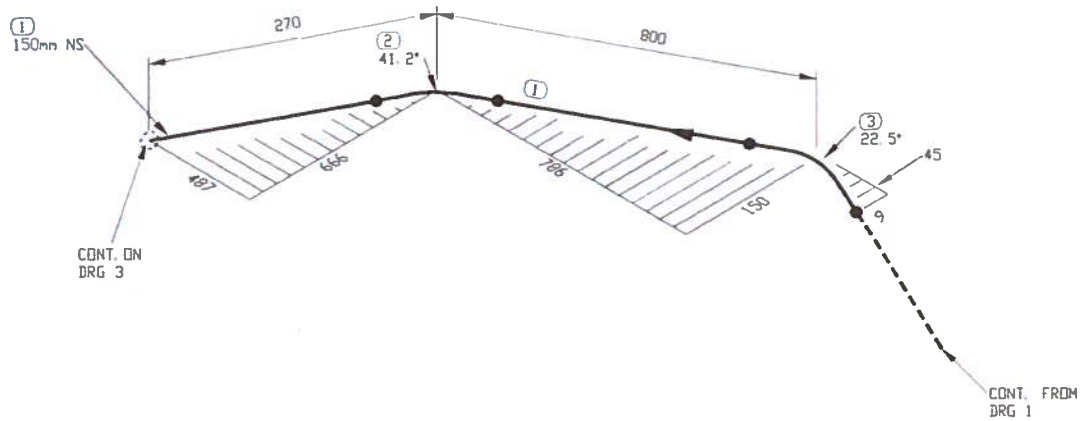
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	1/13	4

116-MN-01, TEMP-01

FICHIER: W:\Agnico Eagle\Meadowe\591700 (Fuel Distribution)\05. Dessins\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-1.DWG

IMPRIMÉ LE: Oct 20, 2017, 9:51am



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	32178 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 41. 16
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 22. 5

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR / APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: –
DATE: –
APP.: –
DATE: –
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE – MELIADINE DIVISION
116 – FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

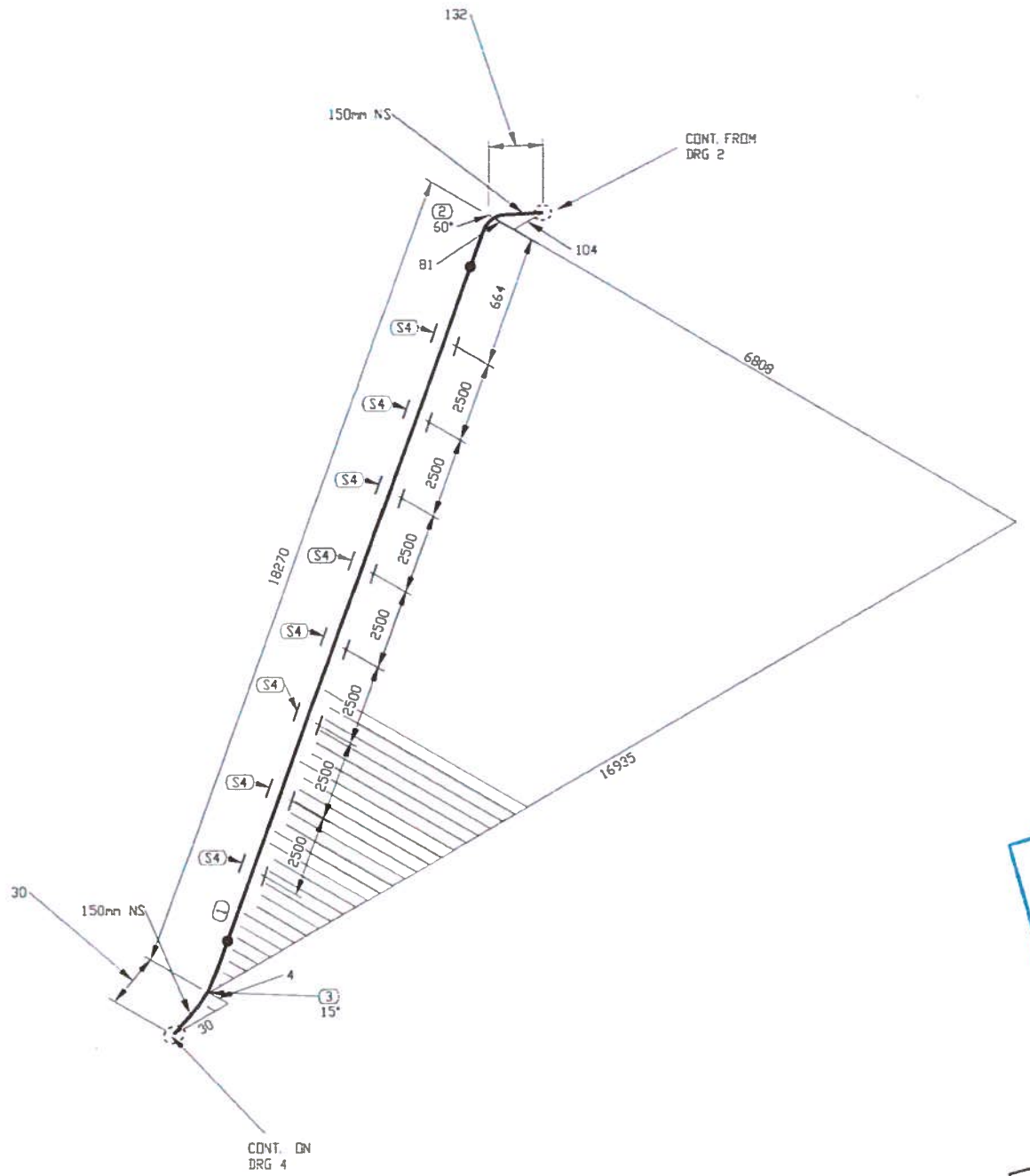
No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	2/13	3

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		–			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin inlet\116-150-PDI-CC10-0001-2.DWG

IMPRIMÉ LE: Oct 20, 2017, 11:46am

116-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	18667 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 60.00
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 15.00
4	8	150		PIPE SUPPORT AS PER DETAIL 3, DWG: 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR / APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

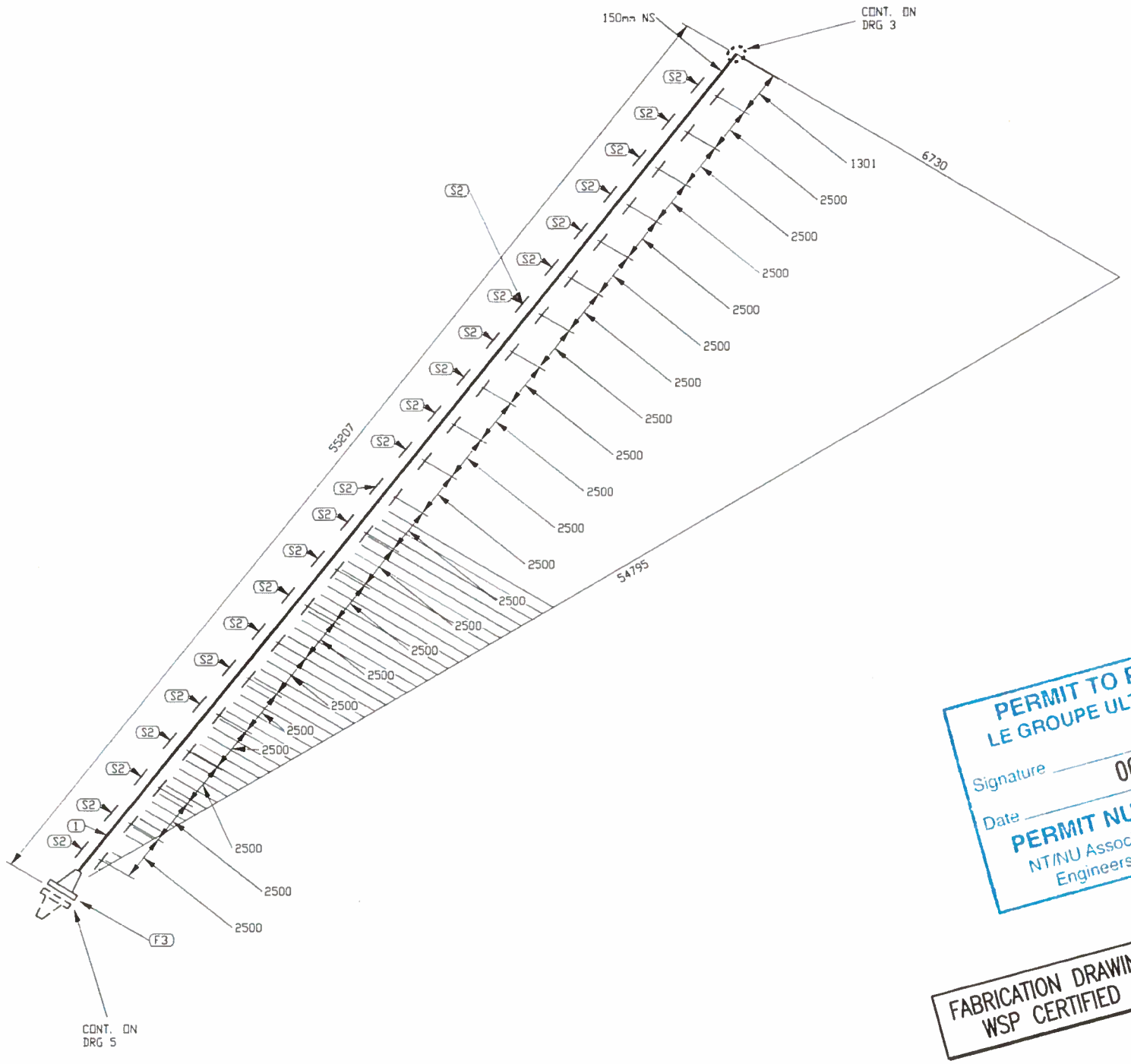
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	3/13	3

116-MN-01

FICHIER: W:\Agnico Eagle\Vehicdine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-3.DWG

IMPRIMÉ LE Oct 13, 2017, 2:44pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	55207 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	23	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-116-270-200
3	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL — REGISTERED PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU — 2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

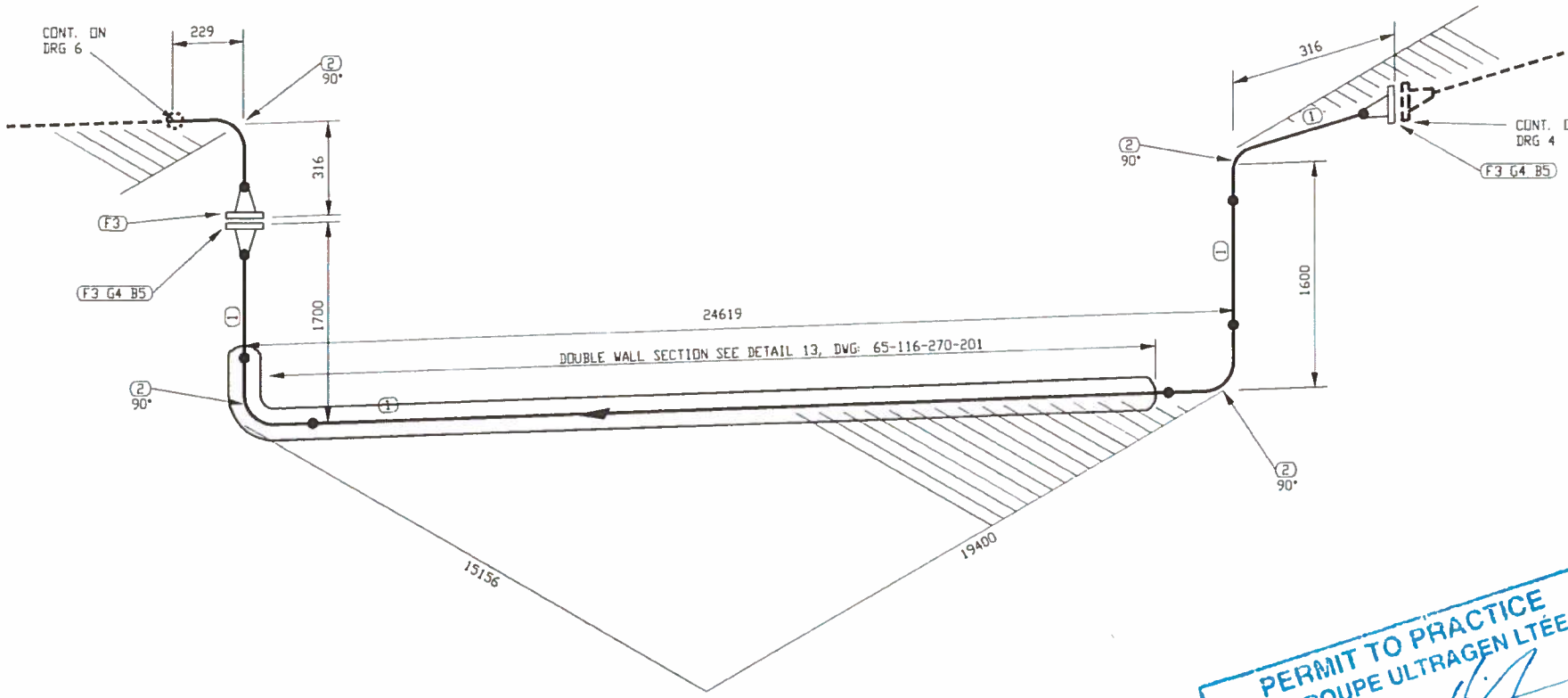
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	4/13	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05 Dessins\02 Tuyauterie\07 Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0001-4.DWG

IMPRIMÉ LE: Oct 13, 2017, 2:40pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	26156 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	4	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW
3	3	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	2	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
6	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

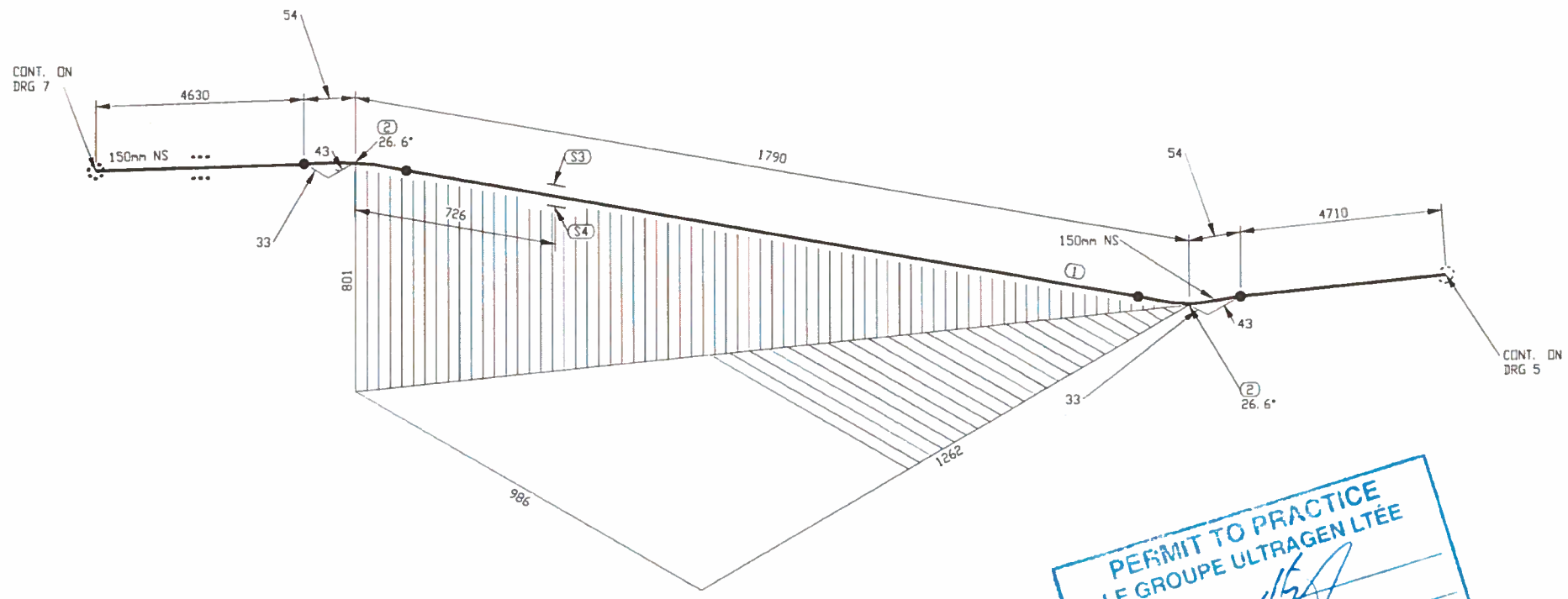
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	5/13	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-5.DWG

IMPRIMÉ LE: Oct 17, 2017, 3:35pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	5344 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 26.57
3	3	150		PIPE SUPPORT AS DETAIL 1, DWG# 65-116-270-200
4	1	150		PIPE SHOE AS PER DETAIL 2, DWG# 65-116-270-200
5	2	150		PIPE SHOE AS PER DETAIL 2, DWG# 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

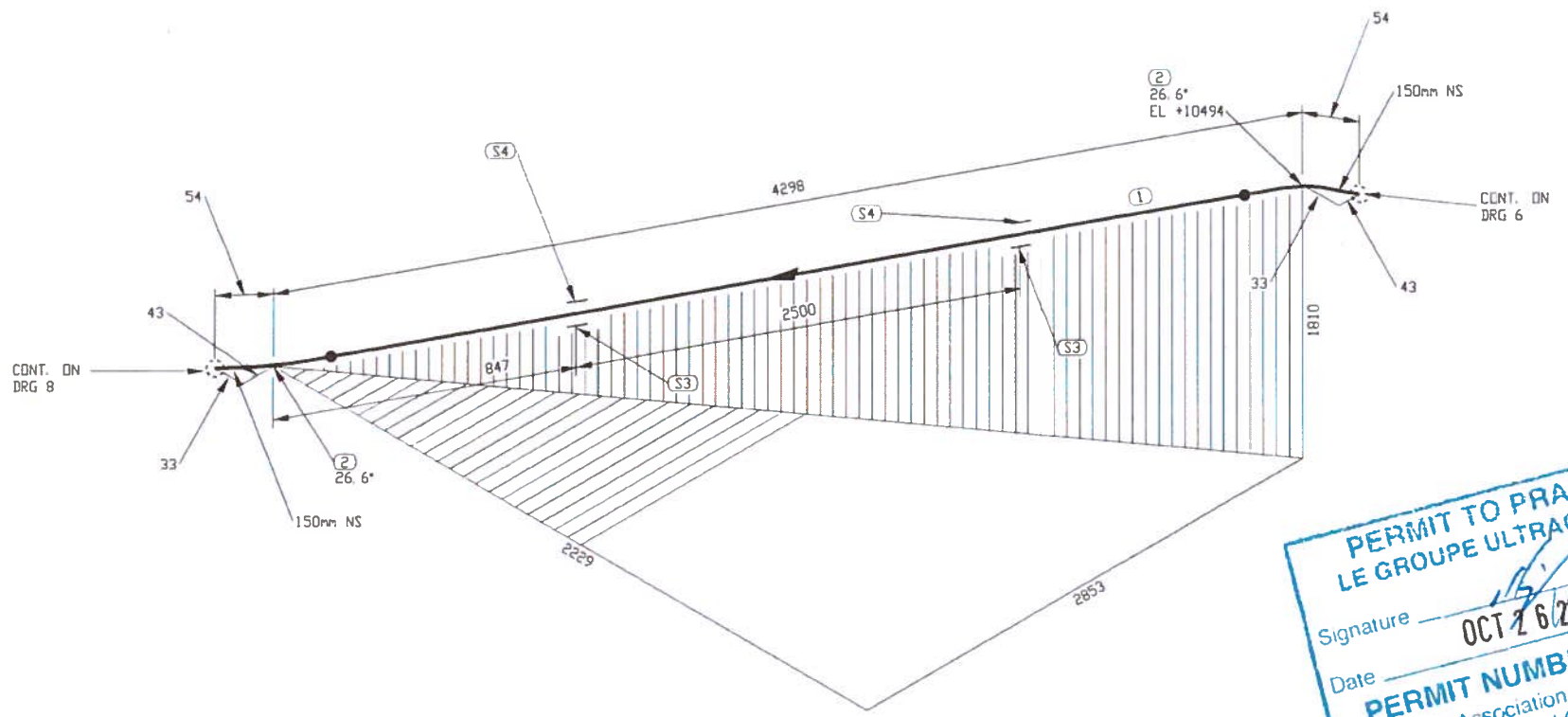
No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	6/13	3

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. hydraulique\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-6.DWG

IMPRIMÉ LE: Oct 13, 2017, 11:57am

116-MN-01



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	3939 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 26.57
3	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR / APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
NT/NU
19/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

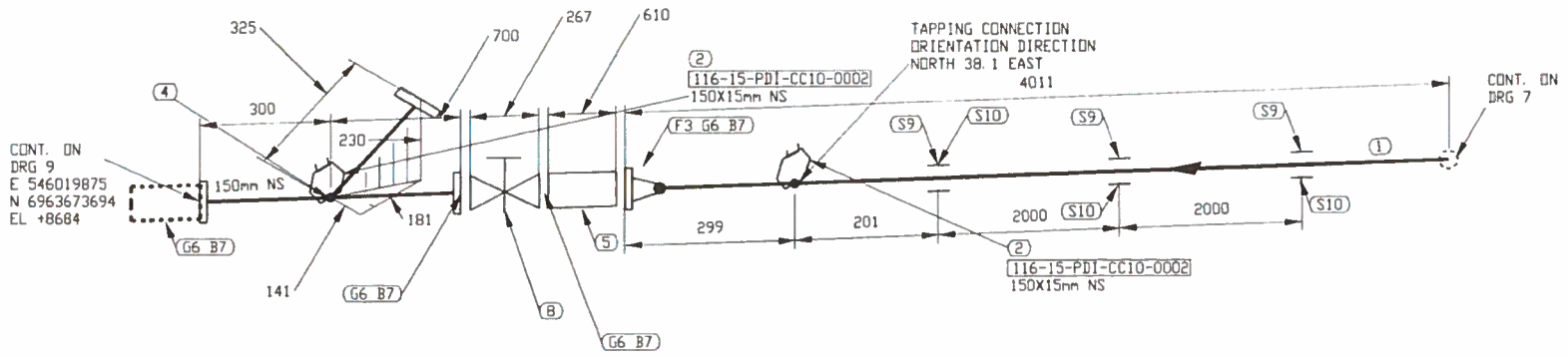
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	7/13	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05 Dessins\02 Tuyauterie\02 Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0001-7.DWG

IMPRIMÉ LE: Oct 13, 2017, 11:37am



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	4914 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150X150		CL 150, PIG CATCHER AS PER DETAIL 8, DWG: 65-116-270-200
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	4	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	32	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	1	150	GA-10	CL 150, RF, CS, FULL PORT GATE VALVE
9	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-116-270-200
10	3	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-116-270-200

No.	DATE	REVISION	PAR / APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
		PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

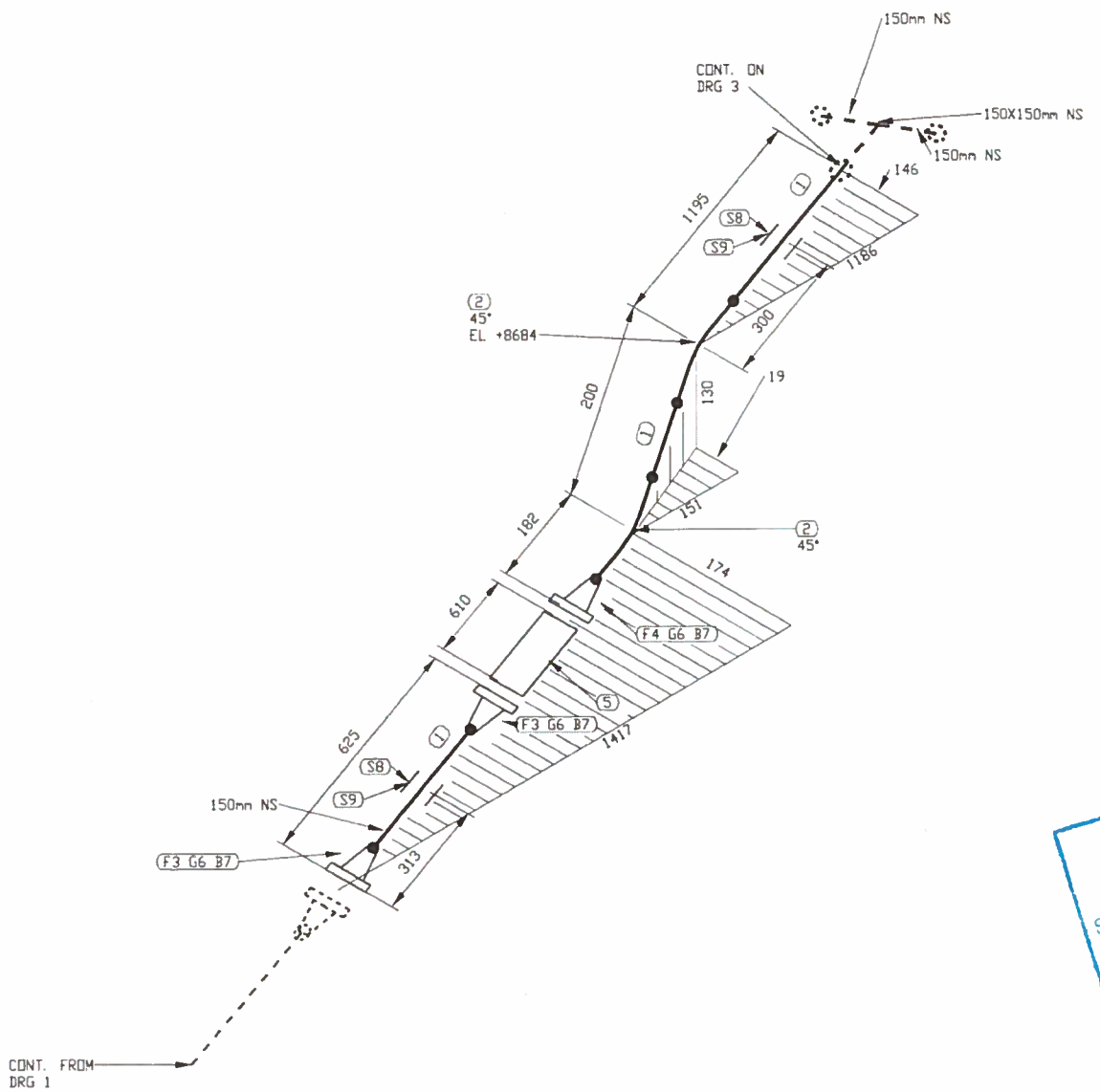
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	8/13	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-B.DWG

IMPRIMÉ LE: Oct 13, 2017, 11:33am



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	1825 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
3	2	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	3	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	24	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-116-270-200
9	2	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA-PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENCE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MEL1ADINE DIVISION
116 - FUEL TANK FARM

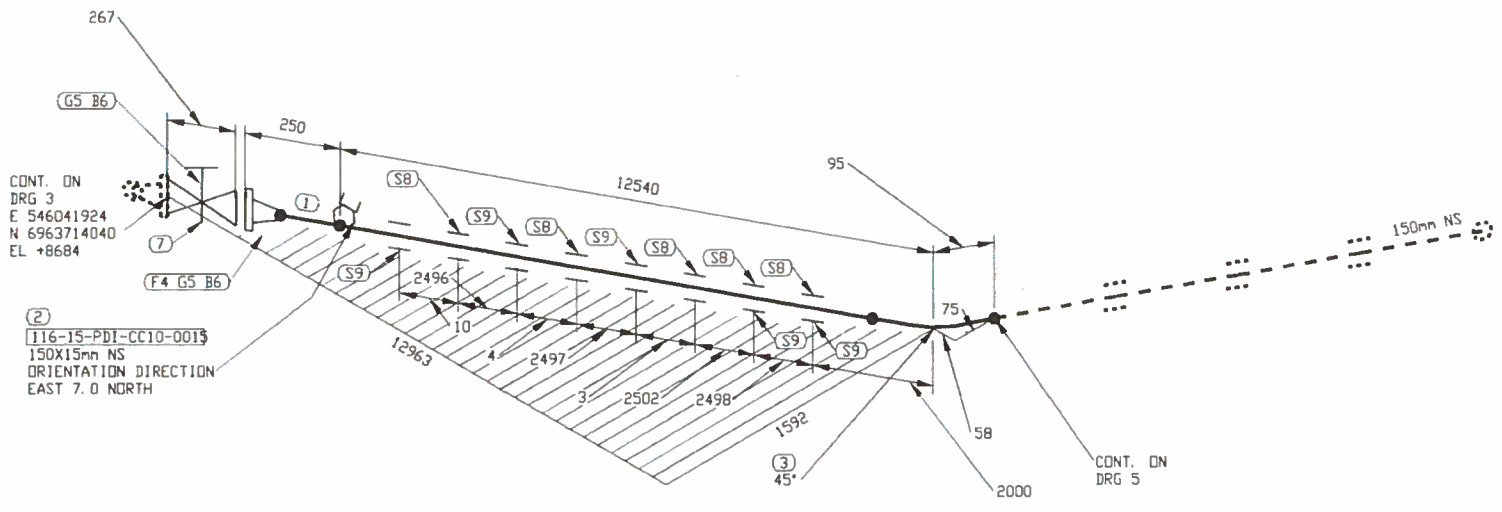
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0006	2/12	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0006-2.DWG

IMPRIMÉ LE: Oct 13, 2017, 3:33pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	12983 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	2	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
6	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
7	1	150	GA-10	CL 150, RF, GATE VALVE
8	5	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-116-270-200
9	5	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR / APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

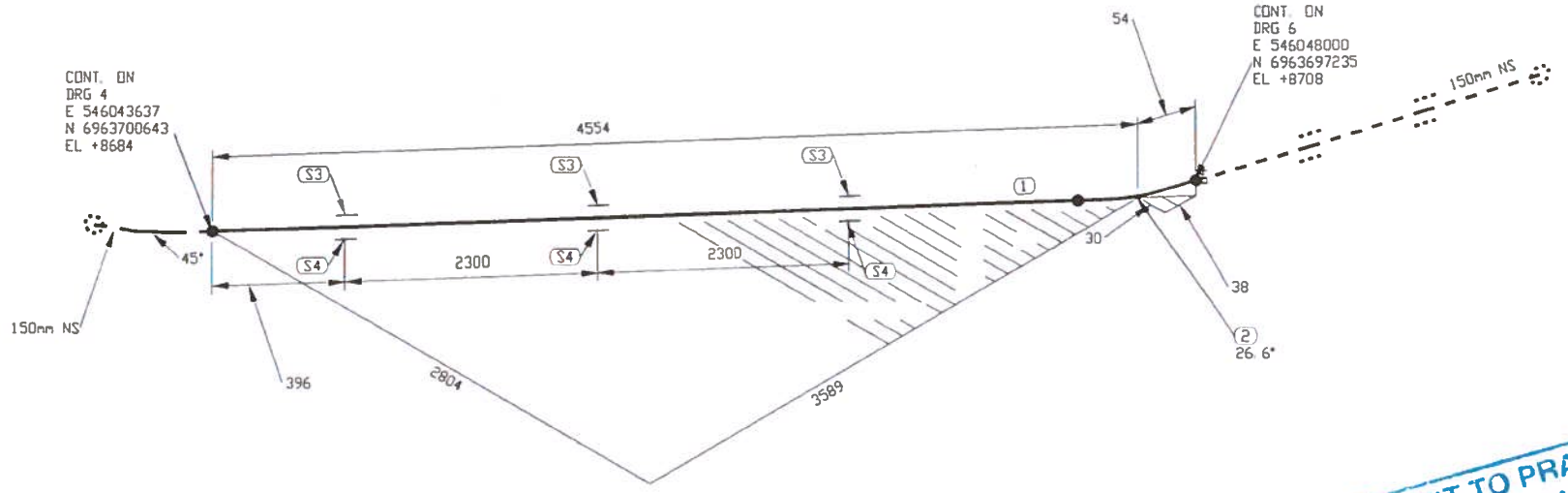
No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0006	4/12	3

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0006-4.DWG

IMPRIMÉ LE: Oct 13, 2017, 3:44pm

116-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	5434 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 26.57
3	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	3	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR APP.
3	2017/10/13	AS BUILT	A.H.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
TRUONG
LICENSEE
NT/NU
2017/10/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

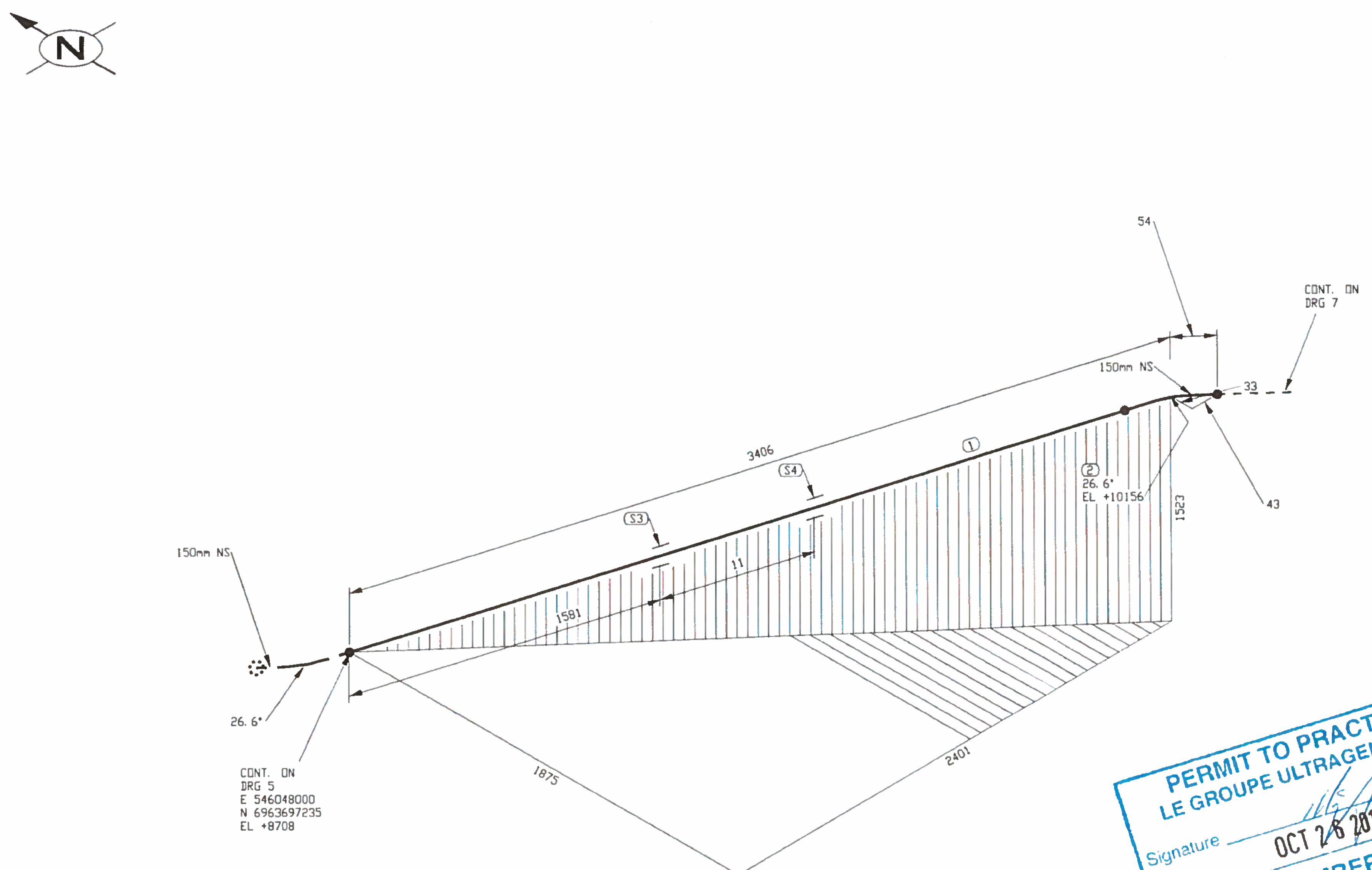
No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0006	5/12	3

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05 Dessins\02 Tuyauterie\02 Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0006-5.DWG

IMPRIMÉ LE: Oct 13, 2017, 3:54pm

116-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	3183 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 26.57
3	1	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR	APP.
3	2017/10/13	AS BUILT	A.H.	
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date OCT 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

CLIENT:

AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/10/26

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

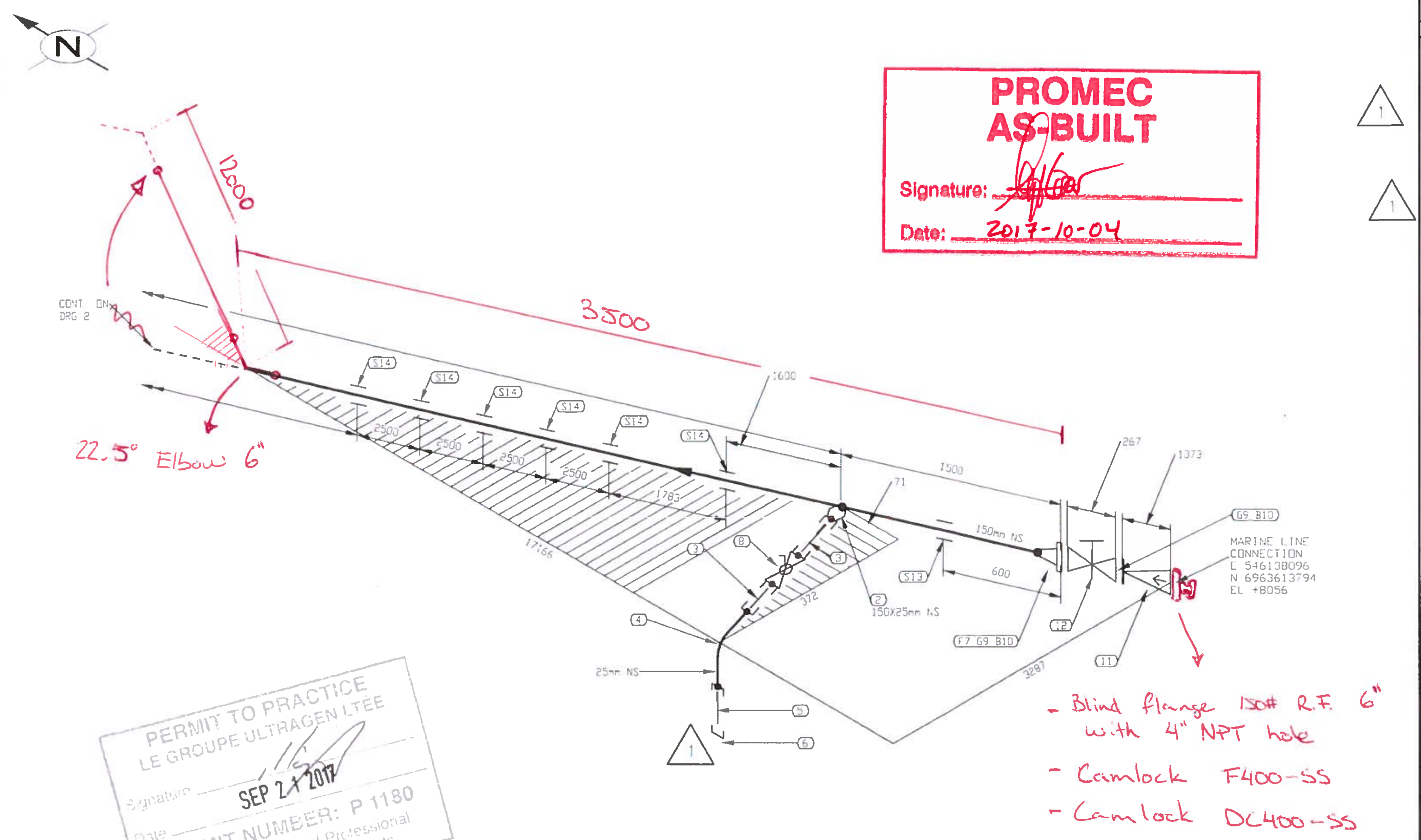
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0006	6/12	3

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0006-6.DWG

IMPRIMÉ LE: Oct 13, 2017, 3:57pm



PROMEC AS-BUILT
Signature:
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date SEP 21 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	16045 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X25	A 350 Gr. LF2	CL 3000, SOCKOLET
3	2	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBE
4	1	25	A 350 Gr. LF2	CL 3000, SW 90 DEG ELBOW
5	1	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBExTOE
6	1	25	A 350 Gr. LF2	CL 3000, THRD CAP
7	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
8	1	25	BA-29	CL 600, SW, BALL VALVE
9	2	150	ASME B16 20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
10	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
11	1	150	CK-29	CL 150, RF, SWING CHECK VALVE
12	1	150	GA-10	CL 150, RF, GATE VALVE
13		150		PIPE GUIDE AS PER DETAIL 4, DWG 65-116-270-200
14	6	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-116-270-200

No.	DATE	REVISION	PAR / APP.
3	2017/09/21	PROJECT TITLE REVISED	KHV
2	2017/09/11	LINE NUMBERS REVISED	OVN
1	2017/06/30	DRAIN REVISED AS PER CLIENT COMMENTS	OVN
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	EPASS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI					65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/09/21

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

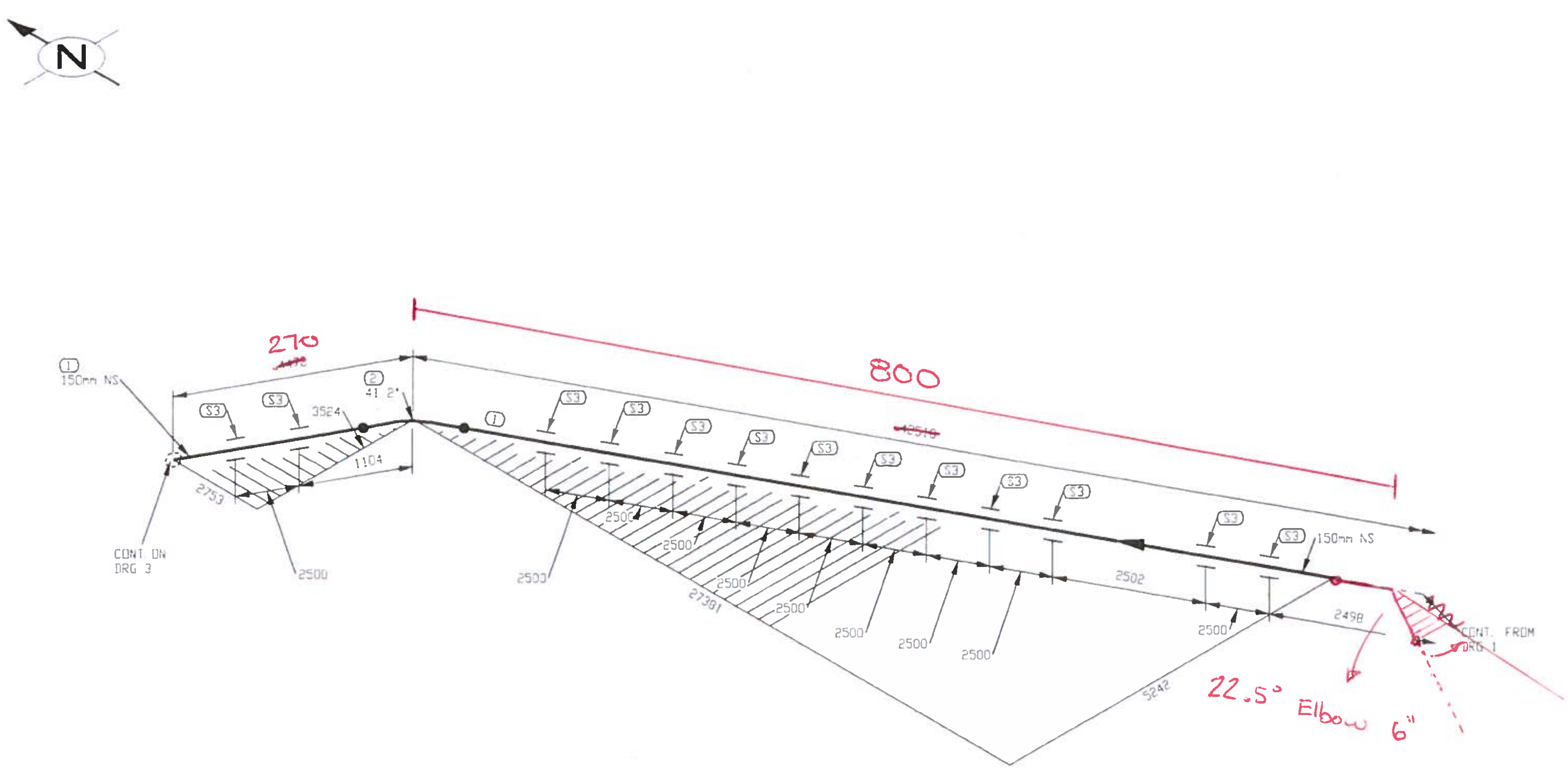
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	1/13	3

116-MN-01, TEMP-01

FICHIER: W:\Agnico-eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isométriques\01. Rankin Inlet\116-150-PDI-CC10-0001-1.DWG

IMPRIMÉ LE: Sep 20, 2017, 2:47pm



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date SEP 2 1 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

PROMEC AS-BUILT
Signature:
Date: 2017-10-04

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	32178 MM	150	A 333 Gr. 6	SCH STD. SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD. BW LR 45 DEG ELBOW TRIM TO 41.15
3	13	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-116-270-200

No.	DATE	REVISION	PAR	APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen — CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER, D. TRUONG, LICENSEE, NT/NU — 2017/09/21

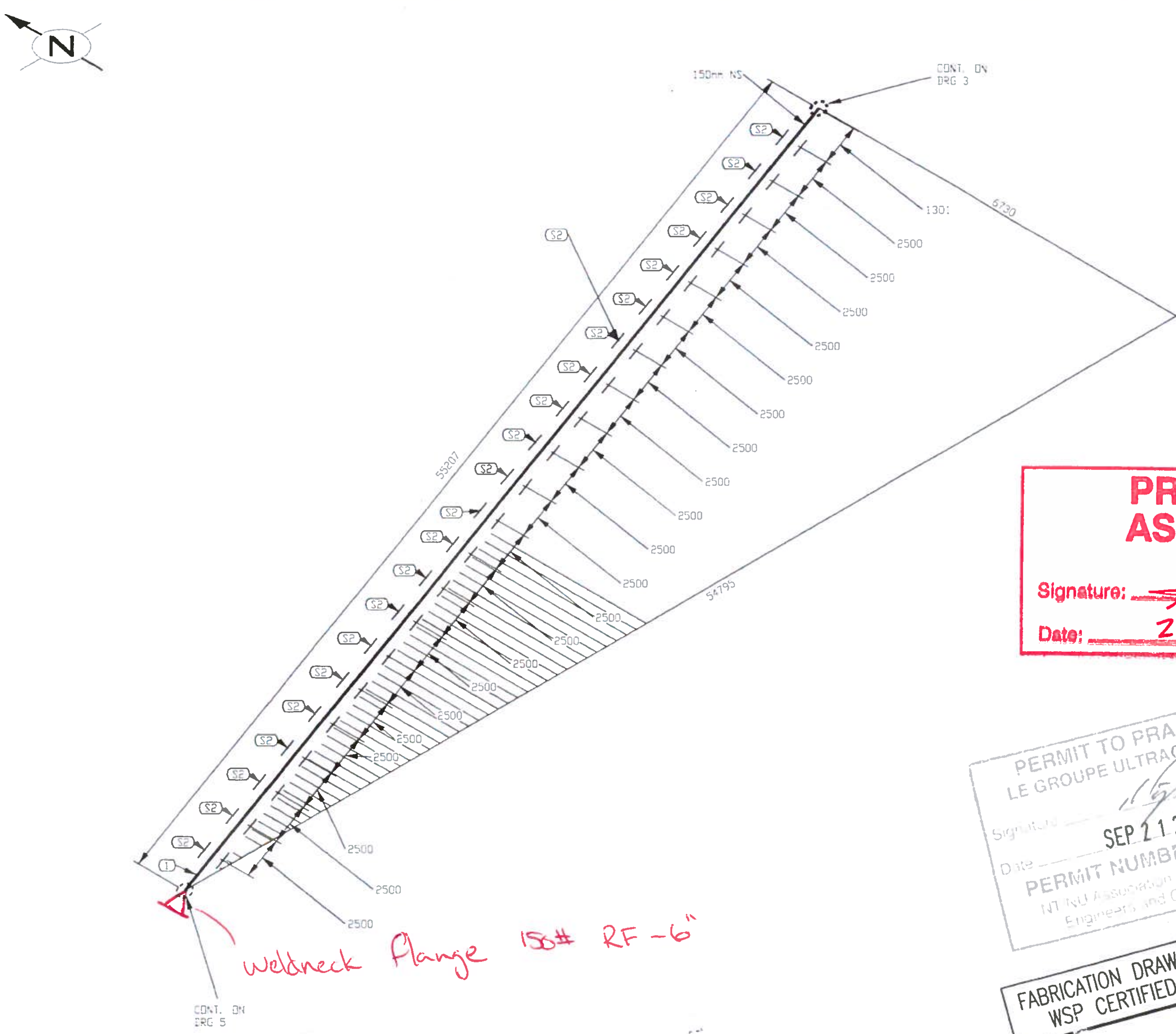
NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION	No. DESSIN	DESSINS DE REFERENCE
116-150-PDI-CC10-0001	CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION / TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG / °F	PSIG	°F	PSIG					

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	2/13	2



PROMEC AS-BUILT
Signature: [signature]
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature [signature]
Date SEP 21 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIE

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	55207 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	23	150		PIPE SUPPORT AS PER DETAIL 3 DWG 65-116-270-200

No.	DATE	REVISION	PAR	APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

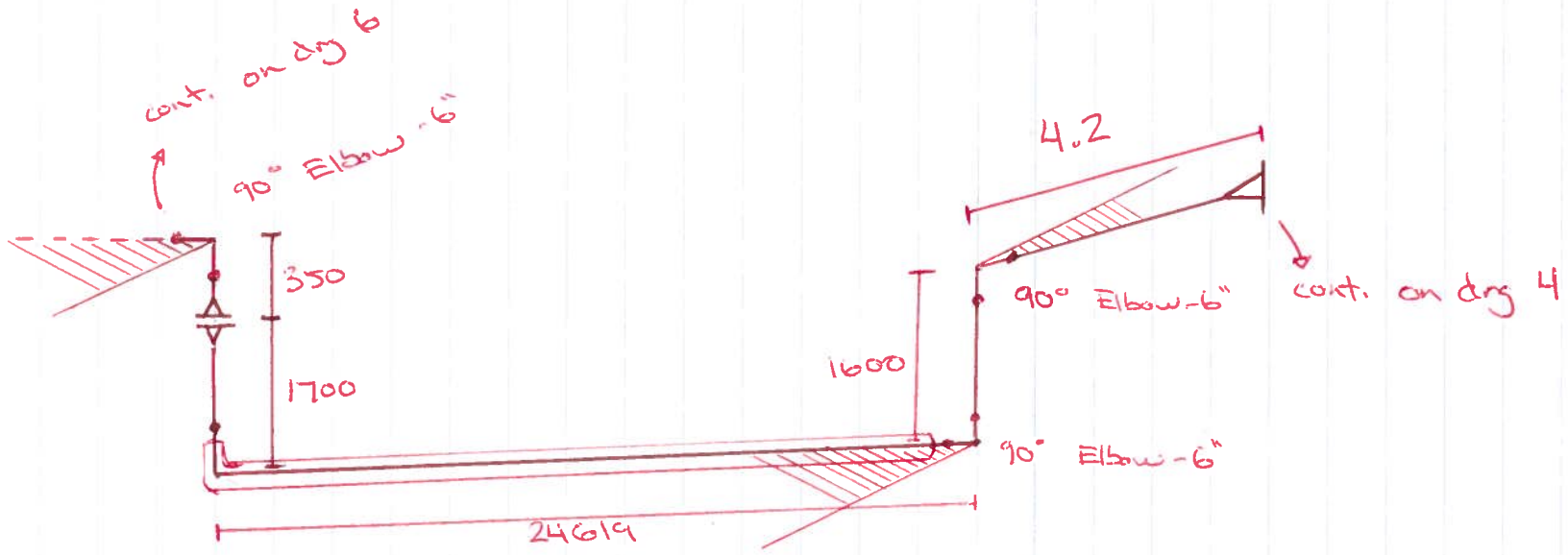
NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER, D. TRUONG, LICENSEE, NT/NU, 2017/09/21

CONC.: KHV	PROJET: AGNICO EAGLE - MELIADINE DIVISION 116 - FUEL TANK FARM
DATE: 2017/04/25	
DESSINÉ PAR: KVE	
DATE: 2017/04/25	TITRE: RANKIN INLET FABRICATION ISOMETRIC MARINE LINE TO 65TNK11601 & 65TNK11602
VER. PAR: -	
DATE: -	
APP.: -	
DATE: -	
ÉCHELLE: AUCUNE	

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	4/13	2

116-MN-01



PROMEC AS-BUILT
Signature:
Date: 2017-10-04

ART.	QUANTITÉ	MATÉRIEL

REV.	DATE	REMARQUE

CLIENT: Agnico Eagle - Meliadine division
116 - Fuel Tank Farm

PROMEC CONSTRUCTION
ISO 9001 : 2008
FS 62557

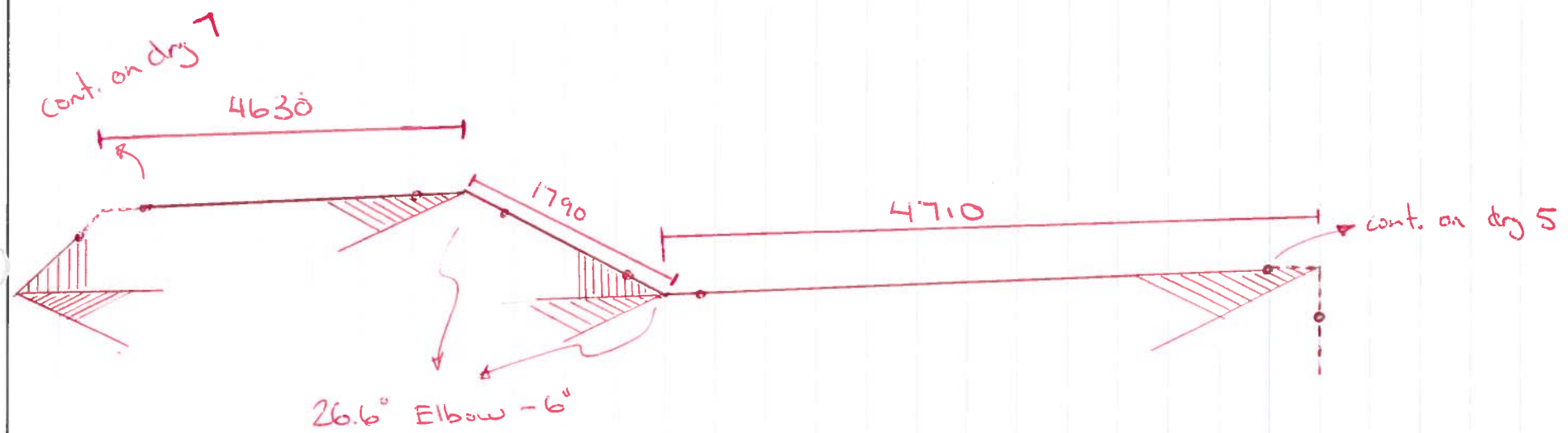
CONTRAT:
REF.:
DESSINÉ PAR:
DATE:
VÉRIFIÉ PAR:
DATE:
DESSIN: 116-150-PDI-CC10-0001 p. 5/13
REV. 3

ASSEMBLÉ PAR:
DATE:
PROCÉDÉ SOUDAGE:
ESSAI(S)/ % RX

IPRN # 63740

22466T

ART.	QUANTITÉ	MATÉRIEL



PROMEC AS-BUILT
Signature:
Date: 2017-10-04

REV.	DATE	REMARQUE

CLIENT: Agnico Eagle - Meliadine division
116 - Fuel Tank Farm

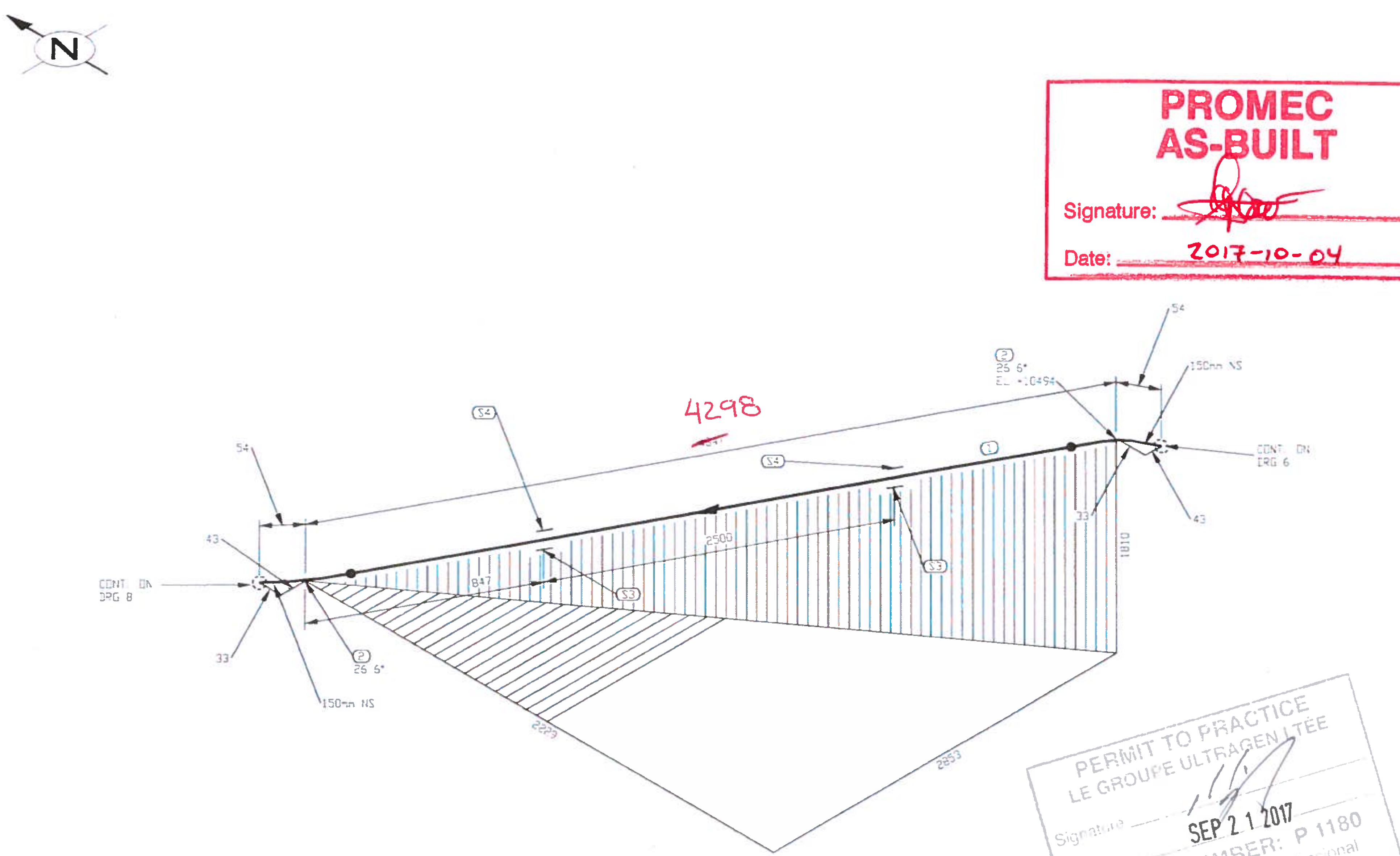
ISO 9001 : 2008
FS 62557

CONTRAT:
REF.:
DESSINÉ PAR:
DATE:
VÉRIFIÉ PAR:
DATE:
DESSIN: 116-150-PD1-CC10-0001
REV. 3

ASSEMBLÉ PAR:
DATE:
PROCÉDÉ SOUDAGE:
ESSAI(S)/ % RX

Page 6/13

IPRN # 63740



PROMEC AS-BUILT
Signature: [signature]
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature [signature]
Date SEP 2 1 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	D.A	MATERIEL/CATALOGUE	DESCRIPTION
1	3939 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 26 57
3	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR	APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER, D TRUONG, LICENSEE, NT/NU, 2017/09/21

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

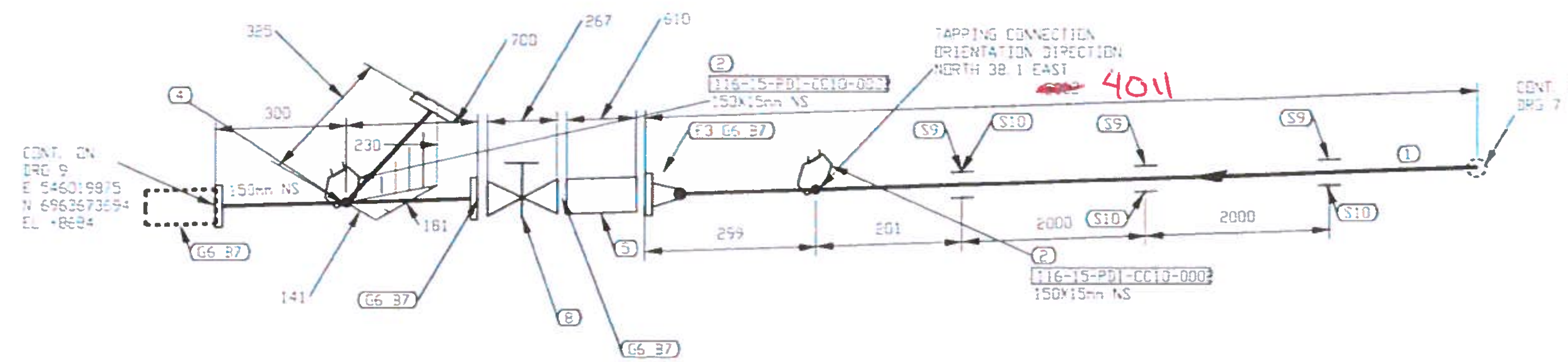
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	7/13	2

116-MN-01

FICHIER: W:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05. Dessins\02. Tuyauterie\02. Isometriques\01. Rankin Inlet\116-150-PDI-CC10-0001-7.DWG

MPEWE LC Sep 20, 2017, 2:44pm



PROMEC AS-BUILT
Signature:
Date: 2017-10-04

LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	4914 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150X150		CL 150, PIG CATCHER AS PER DETAIL 8, DWG 65-116-270-200
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	4	150	ASME B16 20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	32	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	1	150	GA-10	CL 150, RF, CS, FULL PORT GATE VALVE
9	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
10	3	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date SEP 2 1 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR	APP
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D TRUONG — LICENSEE — NT/NU — 2017/09/21

CONC.: KHV	DATE: 2017/04/25
DESSINÉ PAR: KVE	DATE: 2017/04/25
VÉR. PAR: -	DATE: -
APP.: -	DATE: -
ÉCHELLE: AUCUNE	

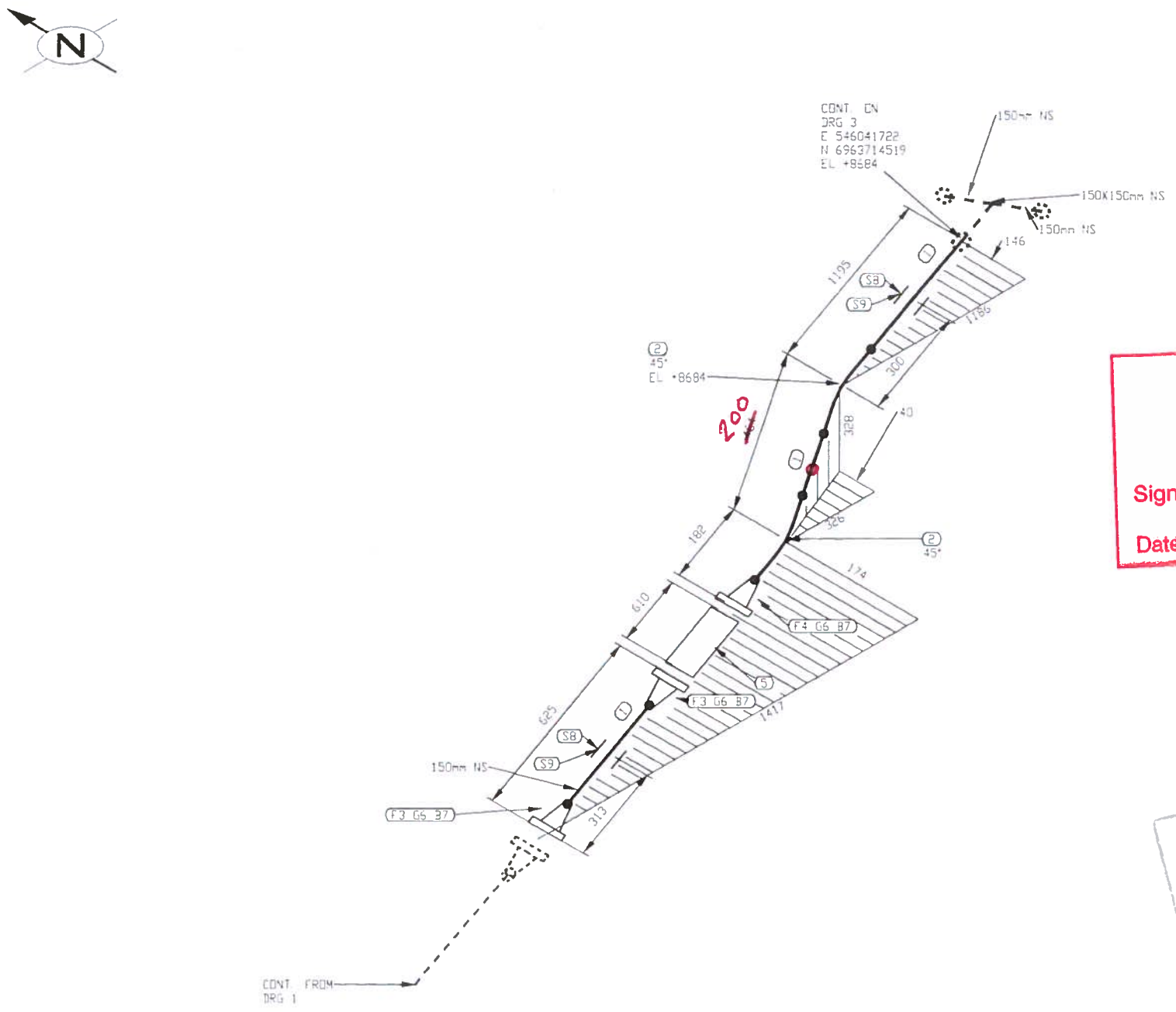
PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0001	8/13	2

NO. DE CONDUITE		SPECIFICATION	PROJUT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
		PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

116-MN-01



PROMEC
AS-BUILT
Signature:
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date SEP 21 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATÉRIEL

No	QTÉ	DA	MATÉRIEL/CATALOGUE	DESCRIPTION
1	1825 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
3	2	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	3	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	24	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
9	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR / APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTÈME REVÊTEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	ÉPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		–			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPÉRATION	TEMPÉRATURE D'OPÉRATION	PRESSION DE CONCEPTION	TEMPÉRATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE RÉFÉRENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
2017/09/21

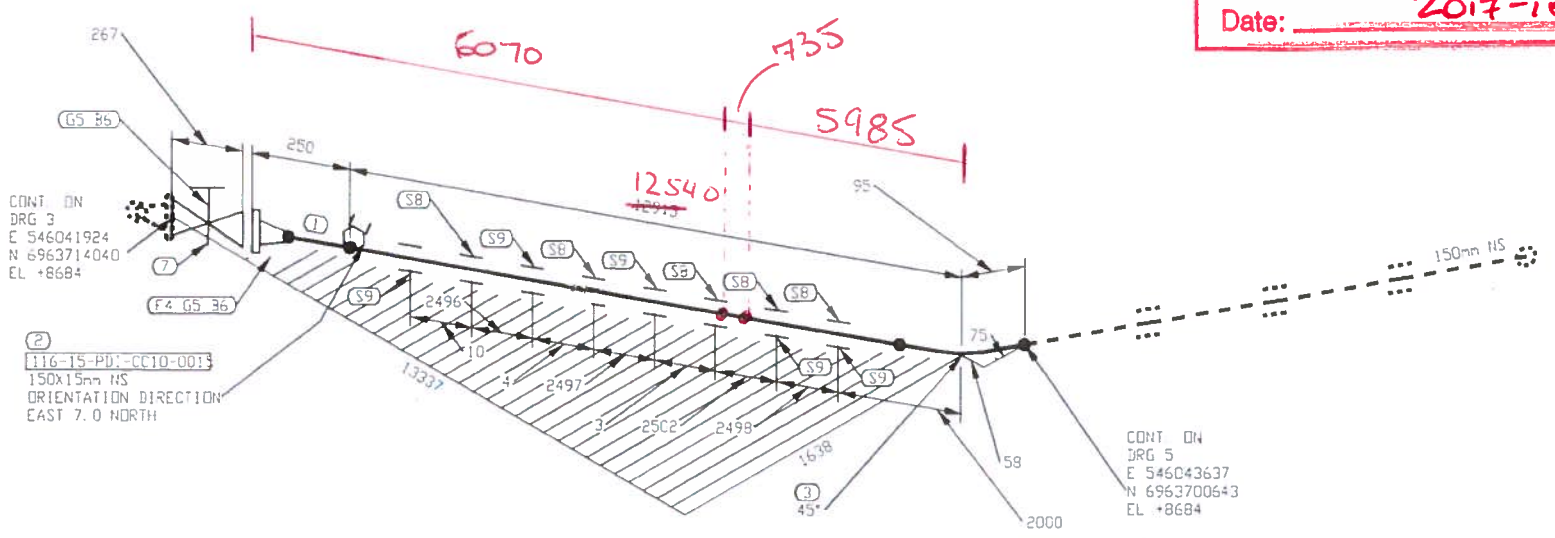
CONC.: KHV DATE: 2017/04/25
DESSINÉ PAR: KVE DATE: 2017/04/25
VÉR. PAR: – DATE: –
APP.: – DATE: –
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE – MELIADINE DIVISION
116 – FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0006	2/12	2

116-MN-01



PROMEC
AS-BUILT
Signature:
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTEE
Signature
Date SEP 21 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	12983 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	2	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
6	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
7	1	150	GA-10	CL 150, RF, GATE VALVE
8	5	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
9	5	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR / APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
2017/09/21

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

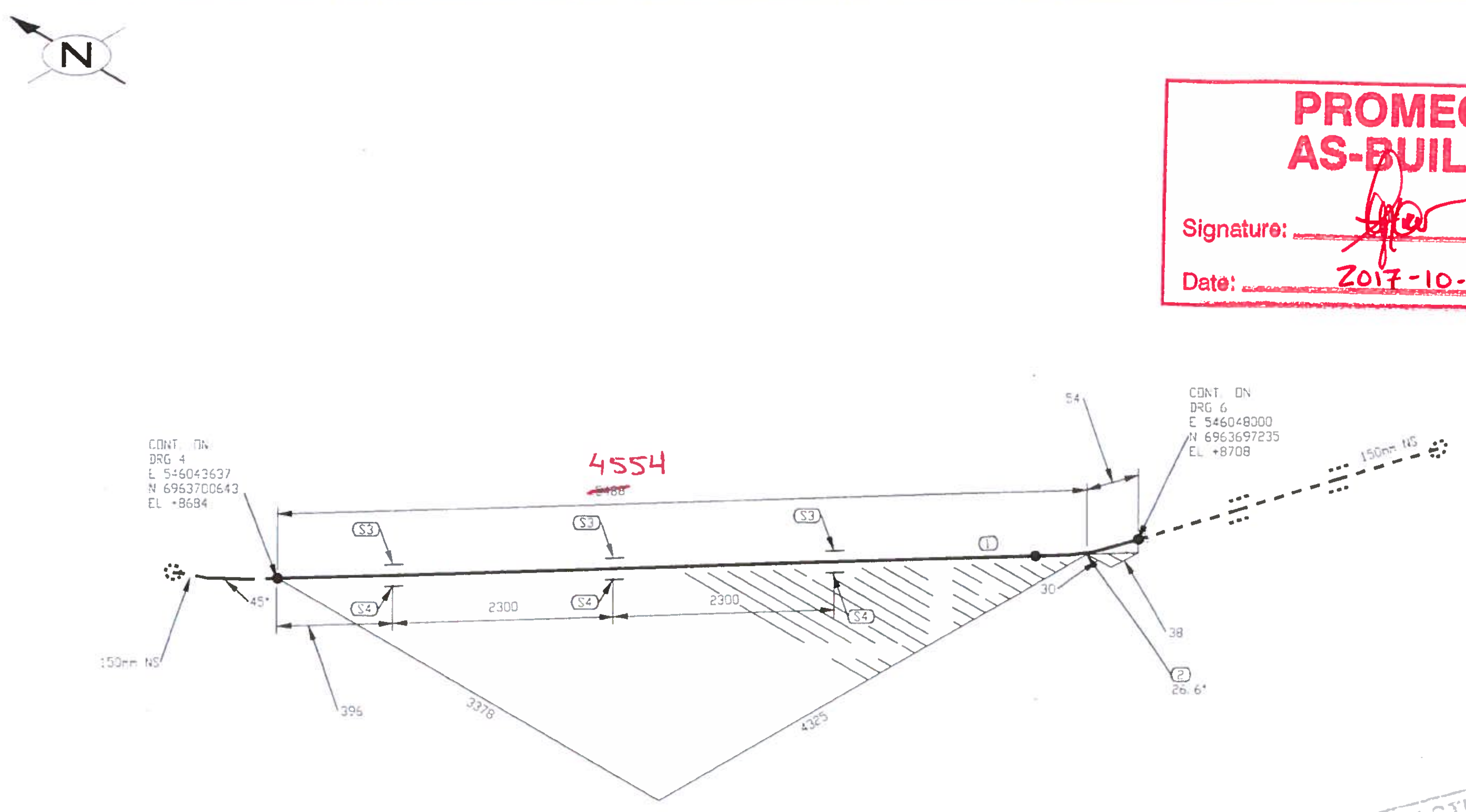
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0006	4/12	2

116-MN-01

FICHIER: M:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\05 Dessins\02 Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0006-4.DWG

TRACÉ LE Sep 20, 2017, 2:45pm



PROMEC AS-BUILT
Signature:
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTEE
Signature
Date SEP 21 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	5434 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 26.57
3	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	3	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	REVISION	PAR	APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV	
1	2017/09/11	LINE NUMBERS REVISED	KHV	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION	No. DESSIN	DESSINS DE REFERENCE
116-150-PDI-CC10-0006		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG					

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/09/21

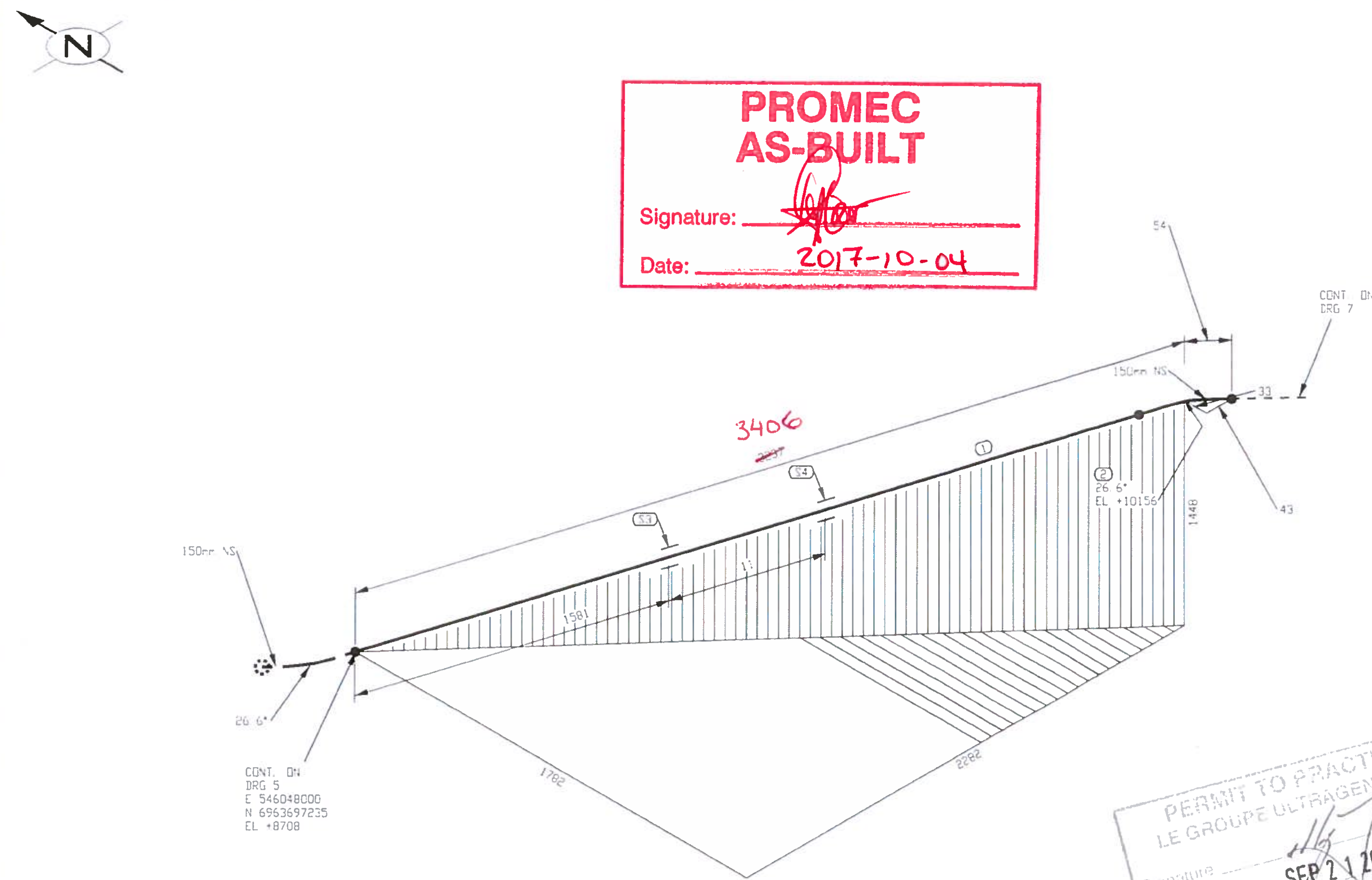
CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	116-150-PDI-CC10-0006	5/12	2

116-MN-01



PROMEC AS-BUILT
Signature: [signature]
Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature [signature]
Date SEP 2 1 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATÉRIEL

No	QTÉ	DA	MATÉRIEL/CATALOGUE	DESCRIPTION
1	3183 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 26 57
3	1	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-116-270-200
4	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-116-270-200

No.	DATE	RÉVISION	PAR APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPÉCIFICATION	PRODUIT	SYSTÈME REVÊTEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	ÉPAISS. D'ISOLATION		
116-150-PDI-CC10-0006		CC10	PDI		–			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPÉRATION	TEMPÉRATURE D'OPÉRATION	PRESSION DE CONCEPTION	TEMPÉRATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE RÉFÉRENCE

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D TRUONG — LICENSEE — NT/NU — 2017/09/21

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

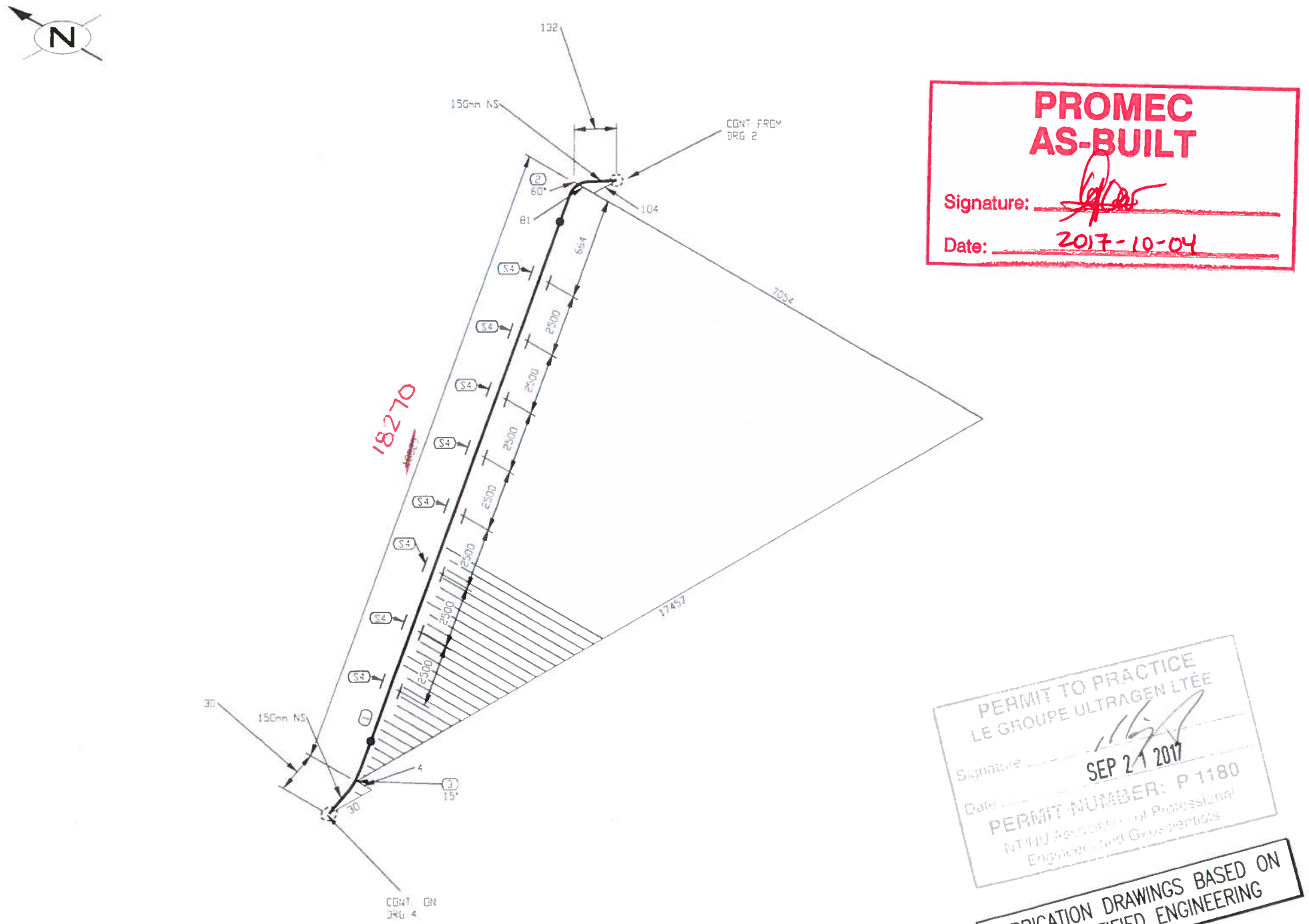
PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0006	6/12	2

116-MN-01

IMPRIMÉ LE Sep 20, 2017, 2:45pm



PROMEC AS-BUILT

Signature: _____

Date: 2017-10-04

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature _____
Date SEP 21 2017
PERMIT NUMBER: P 1180
NTNU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	18667 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 60.00
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 15.00
4	8	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-116-270-200

No.	DATE	REVISION	PAR / APP.
2	2017/09/21	PROJECT TITLE REVISED	KHV
1	2017/09/11	LINE NUMBERS REVISED	KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
116-150-PDI-CC10-0001		CC10	PDI		-			65-116-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-116-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
NTNU
2017/09/21

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
116 - FUEL TANK FARM

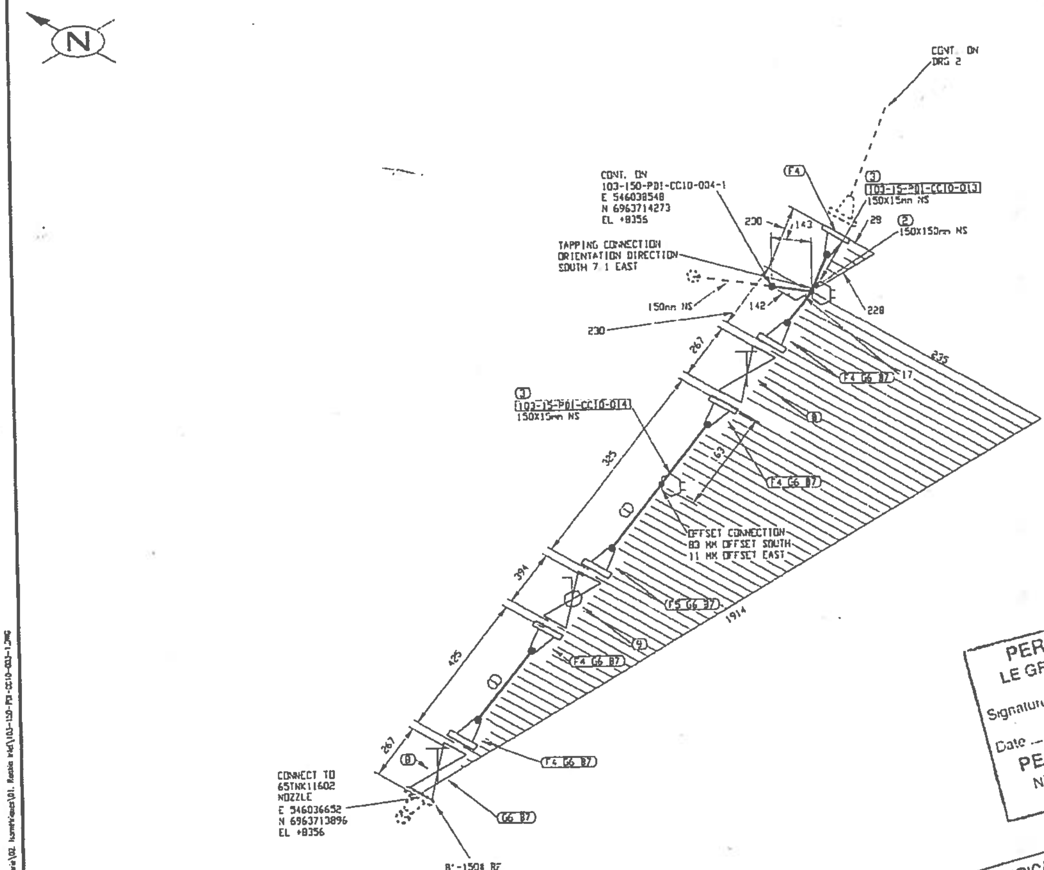
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	RÉV.
6515	116-150-PDI-CC10-0001	3/13	2

116 MN-01

FICHIER: K:\Agnico Eagle\Welcome\591700 (Fuel Distribution)\05. Dessins\02 Ingénierie\02 Isométriques\01 Rankin Inlet\116-150-PDI-CC10-0001-STD.dwg
IMPRIMÉ LE Sep 20, 2017, 3:44pm

Denis l



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	402 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X150	A 420 Gr. WPL6	SCH STD, BV STRAIGHT TEE
3	2	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
4	5	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
6	6	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	48	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	2	150	GA-10	CL 150, RF, GATE VALVE
9	1	150	BA-31	CL 150, RF, BALL VALVE

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature [signature]
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	1/12	0

103-MN-01

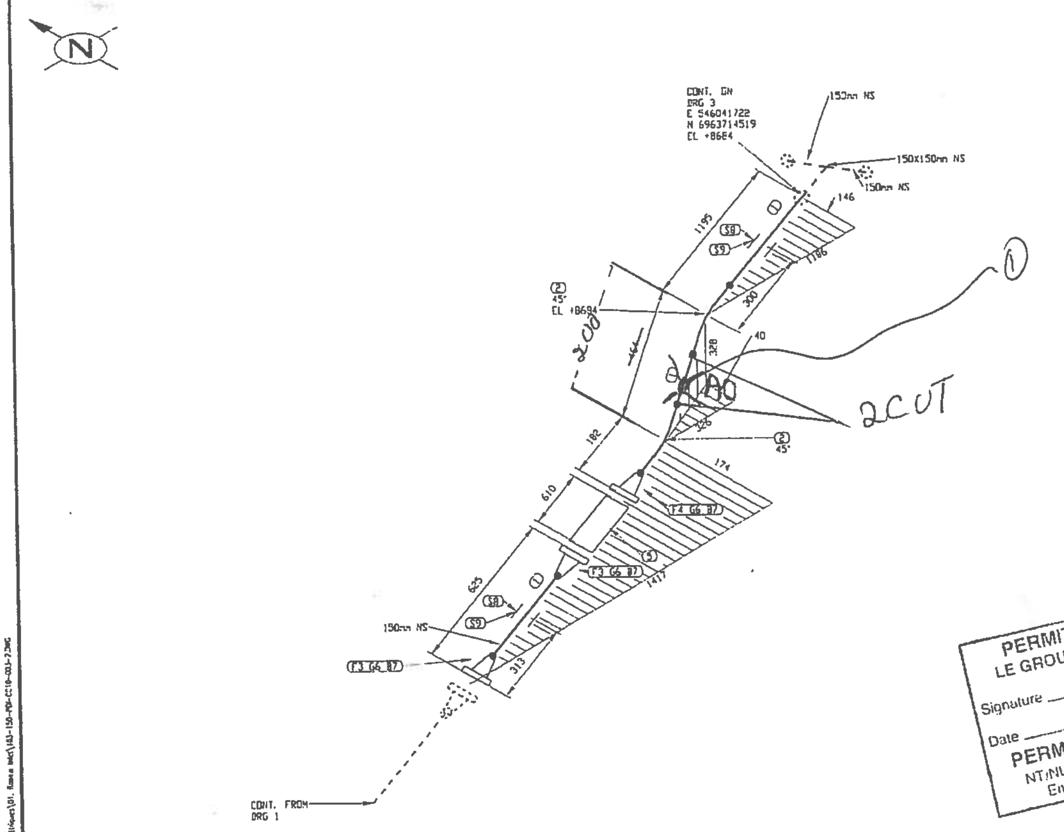
NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION	No. DESSIN	DESSINS DE REFERENCE
103-150-PDI-CC10-003	CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
							65-103-205-200	P&ID

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	°F	PSIG	°F	PSIG			

2017/05/26

FICHIER: ...\103-150-PDI-CC10-003-1.DWG

IMPRIME LE: May 17, 2017, 3:16pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	1825 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BV LR 45 DEG ELBOW
3	2	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	3	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	24	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-103-270-200
9	2	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER, D TRUONG, LICENSEE, NT/NU

2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	?/12	0

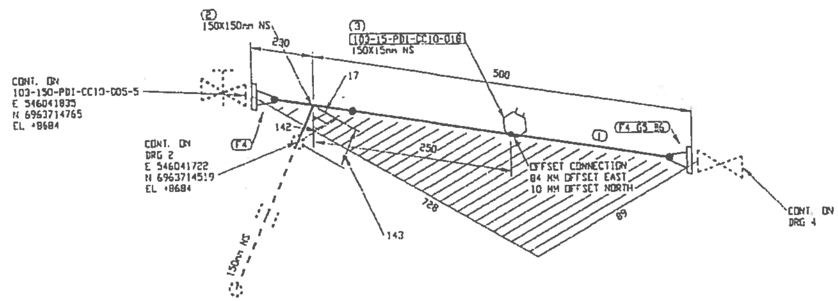
103-MN-01

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPASS. D'ISOLATION
103-150-PDI-CC10-003	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSG	°F	PSG	°F	PSG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

IMPRIMÉ LE: May 17, 2017, 3:17pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	270 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X150	A 420 Gr. WPL6	SCH STD, BW STRAIGHT TEE
3	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
4	2	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
6	8	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1150
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KYE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

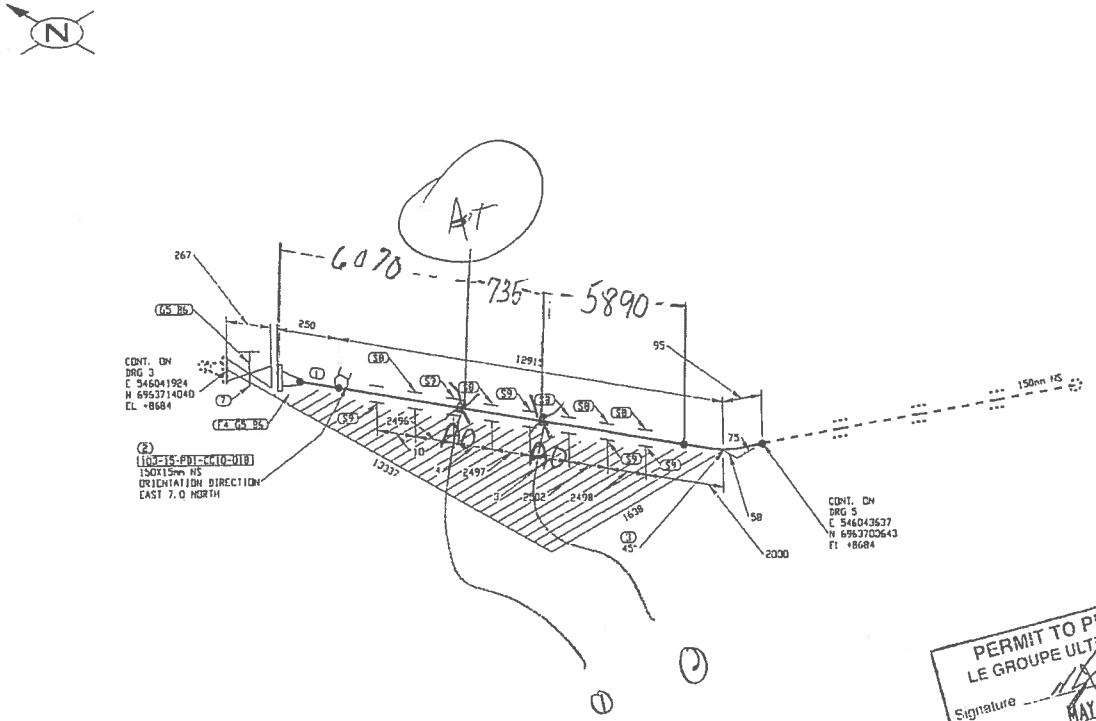
No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	3/12	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION
103-150-PDI-CC10-003		CC10	PDI		-		
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	°F	PSIG	°F	PSIG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

IMPRIME LE: May 17, 2017, 3:30pm

103-HN-01



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 16 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	12983 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 420 Gr. WPL6	SCH STD, SW LR 45 DEG ELBOW
4	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	2	150	ASME B16.20	CL 150, GARLOCK 9500, RING TYPE GASKET 1/8" THK
6	16	19	A 193 B7/A 194 2H	CL 150, Ø - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
7	1	150	GA-IC	CL 150, RF, GATE VALVE
8	5	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-103-270-200
9	5	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-103-270-200

No.	DATE	REVISION	
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV / PAR / APP.

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-003		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	T	PSIG	T	PSIG				No. DESSIN	DESSINS DE REFERENCE

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUDNG
LICENSEE
NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

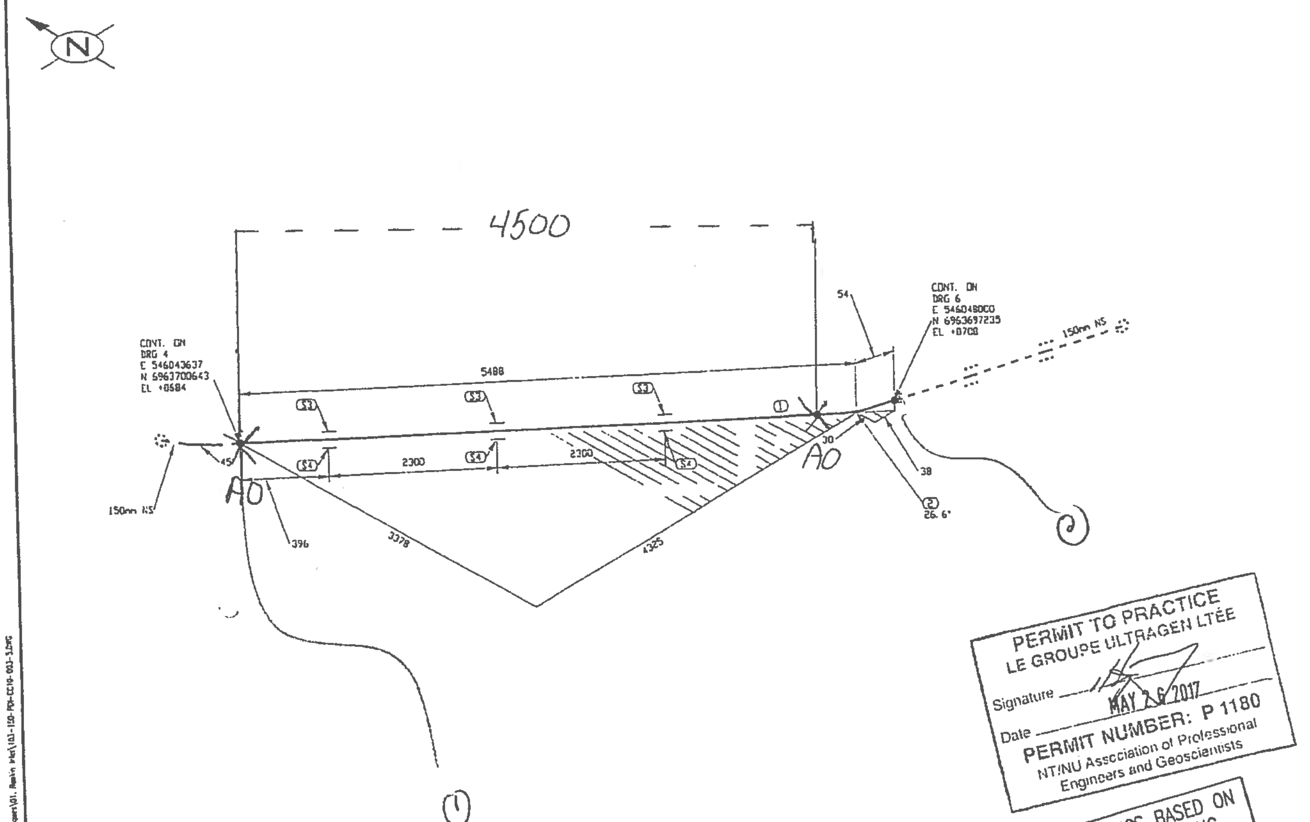
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	4/12	0

103-MM-01

FICHIER: N:\Agnico Eagle\Meliadine\591700 (Fuel Distribution)\03. Isométriques\01. Rankin Inlet\103-150-PDI-CC10-003-ISO.DWG

IMPRIMÉ LE: May 17, 2017, 3:12pm



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	5434 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BV LR 90 DEG ELBOW TRIM TO 26.57
3	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
4	3	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen — CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KYE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	5/12	0

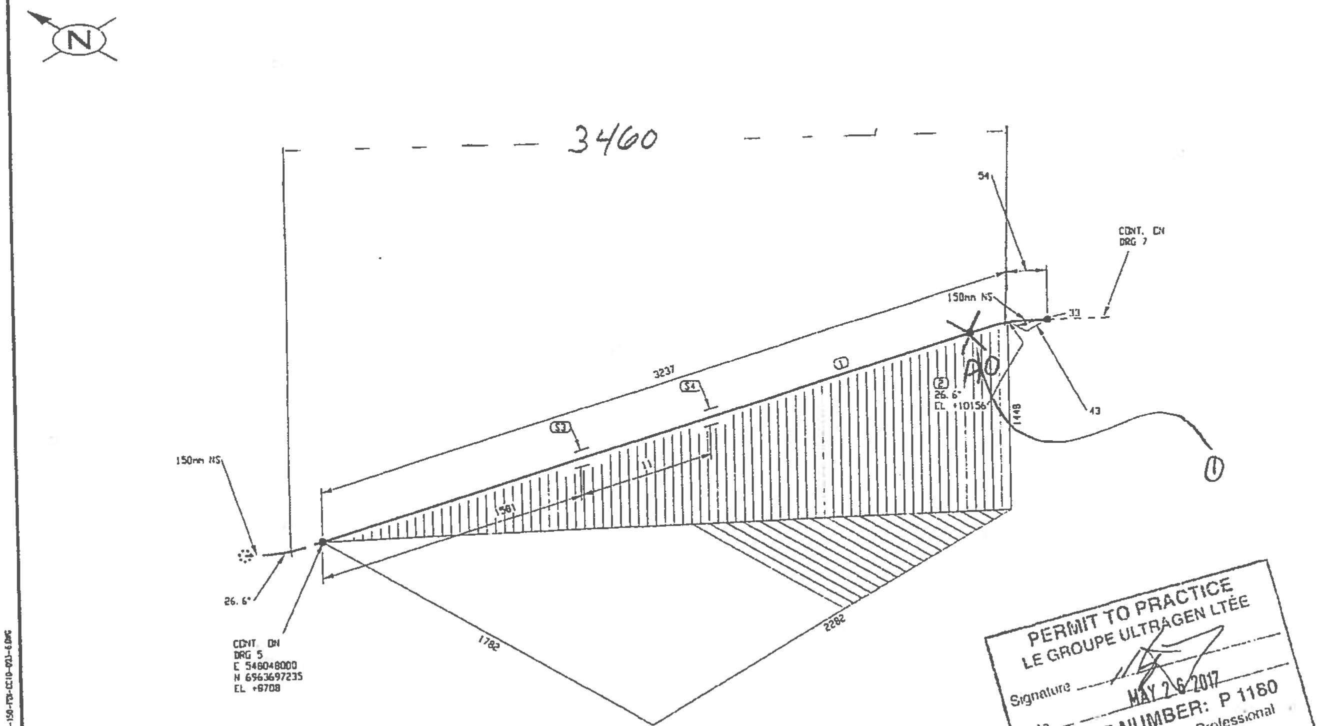
NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION
103-150-PDI-CC10-003	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSG	°F	PSG	°F	PSG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-MN-01

IMPRIME LE: May 18, 2017, 11:40am



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	3183 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 26.57
3	1	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
4	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature ________
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVC
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	6/12	0

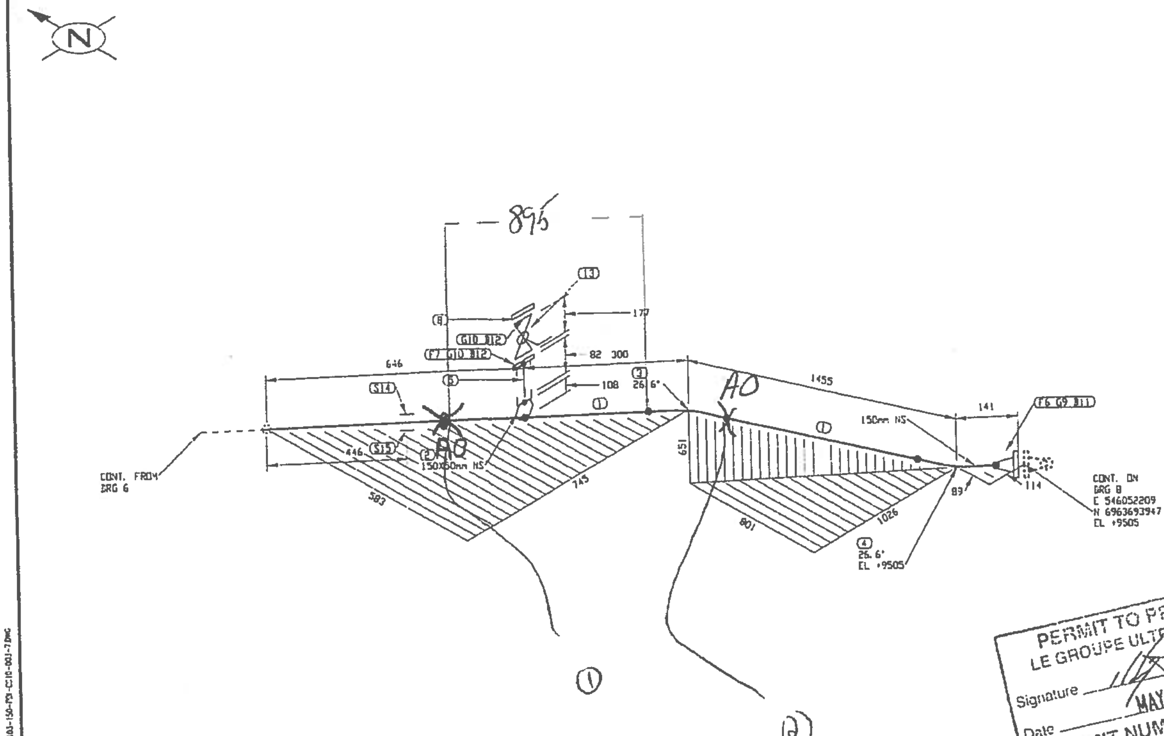
NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION
103-150-PDI-CC10-003	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	°F	PSIG	°F	PSIG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-MN-01

IMPRIME LE: May 17, 2017, 1:25pm



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	2239 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X50	A 350 Gr. LF2	CL 3000, SOCKOLET
3	1	150	A 420 Gr. WPL6	SCH STD, BV LR 45 DEG ELBOW TRIM TO 26.57
4	1	150	A 420 Gr. WPL6	SCH STD, BV LR 90 DEG ELBOW TRIM TO 26.57
5	1	50	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBE
6	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
7	1	50	A 350 Gr. LF2	CL 150, SCH 80, RF, SW FLANGE
8	1	50	A 350 Gr. LF2	CL 150, RF, BLIND FLANGE
9	1	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
10	2	50	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
11	8	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 x 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
12	8	16	A 193 B7/A 194 2H	CL 150, 4 - 15.875 x 85 STUD BOLTS c/w TWO HEAVY HEX NUTS
13	1	50	BA-30	CL 150, RF, BALL VALVE
14	1	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
15	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA-PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU

2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	7/12	0

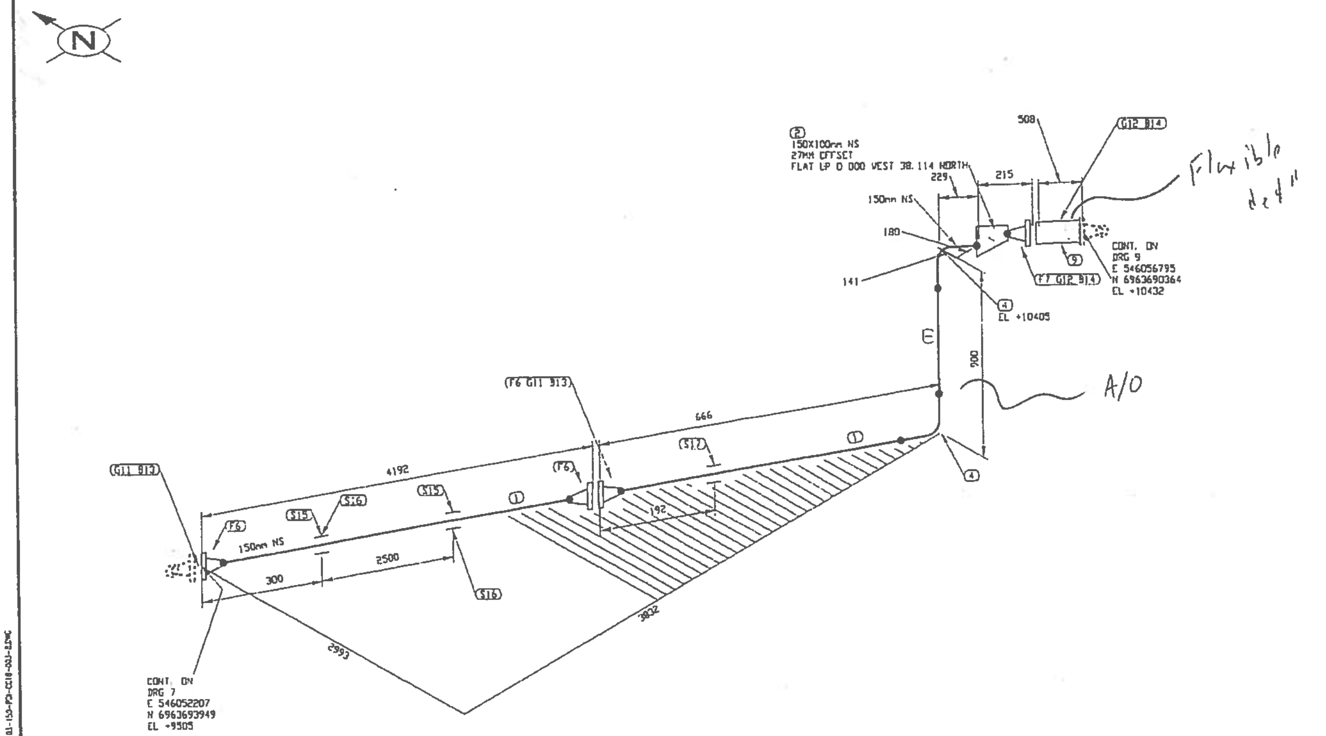
NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPASS. D'ISOLATION
103-150-PDI-CC10-003		CC10	PDI		-		
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	°F	PSIG	°F	PSIG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-HN-01

IMPRIME LE: May 23, 2017, 3:59pm

TCS



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	4810 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X100	A 420 Gr. WPL6	SCH STD, BW ECC RED
3				
4	2	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW
5				
6	3	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
7	1	100	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
8				
9	1	100 —		(TCS METER UNIT) Flexible
10				
11	2	150	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
12	2	100	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
13	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
14	16	16	A 193 B7/A 194 2H	CL 150, 8 - 15.875 X 90 STUD BOLTS c/w TWO HEAVY HEX NUTS
15	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200
16	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
17	1	150		ABUTMENT TYPE 2 AS PER DETAIL 5, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU

2017/05/26

CONC.: KHV DATE: 2017/04/25
DESSINÉ PAR: KVE DATE: 2017/04/25
VER. PAR: - DATE: -
APP.: - DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

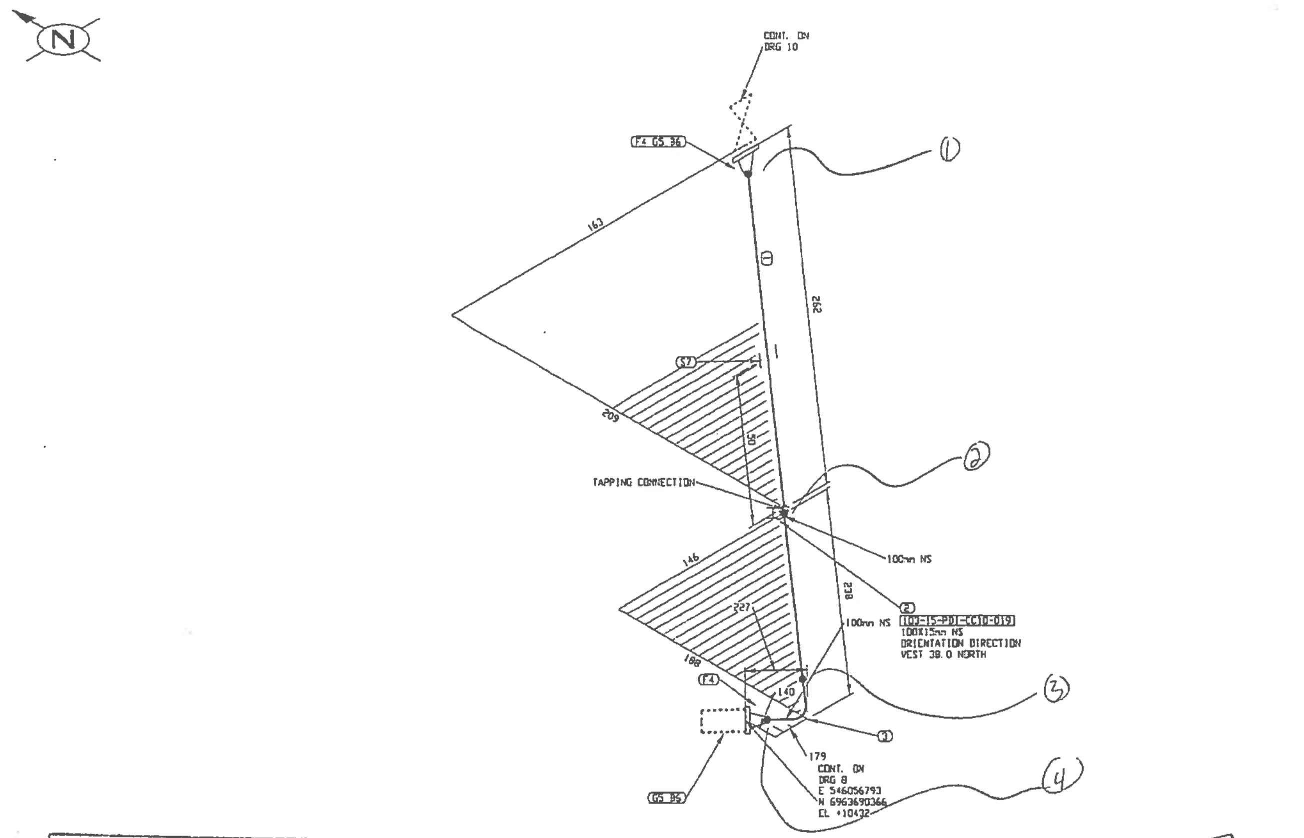
No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	8/12	0

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPASS. D'ISOLATION
103-150-PDI-CC10-003	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	°F	PSIG	°F	PSIG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-MN-01



PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	272 MM	100	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	100X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	100	A 420 Gr. WPL6	SCH STD, BV LR 90 DEG ELBOW
4	2	100	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	2	100	ASME 316.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
6	16	16	A 193 B7/A 194 2H	CL 150, 8 - 15.875 X 90 STUD BOLTS c/w TWO HEAVY HEX NUTS
7	1	100		PIPE BRACKET C150x12x300 WELDED TO CONTAINER C/W U-BOLT

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER D TRUONG LICENSEE NT/NU 2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

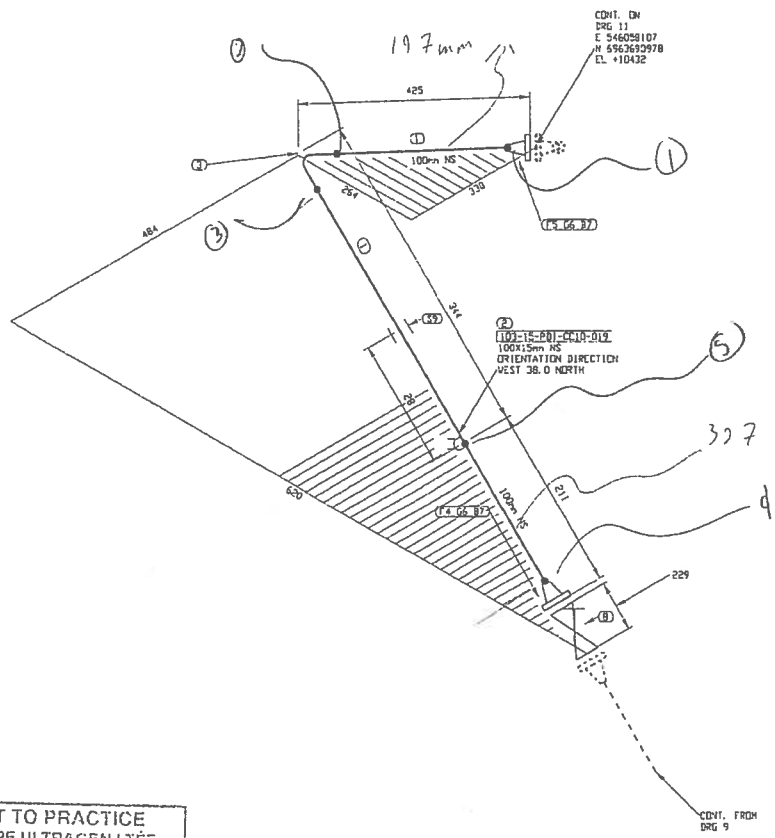
PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	9/12	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-003		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

103-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	527 MM	100	A 333 Gr. 6	SCH STD, SMLS PIPE
2	:	100X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	:	100	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW
4	1	100	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	100	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
6	2	100	ASME B16.20	CL 150, GARLOCK 5500, RING TYPE GASKET 1/8" THK
7	:6	16	A 193 B7/A 194 2H	CL 150, 8 - 15.875 X 90 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	1	100	GA-10	CL 150, RF, GATE VALVE
9	1	100		PIPE BRACKET C150x12x300 WELDED TO CONTAINER C/W U-BOLT

No.	DATE	REVISION	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV / PAR

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSE
NUNAVUT
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

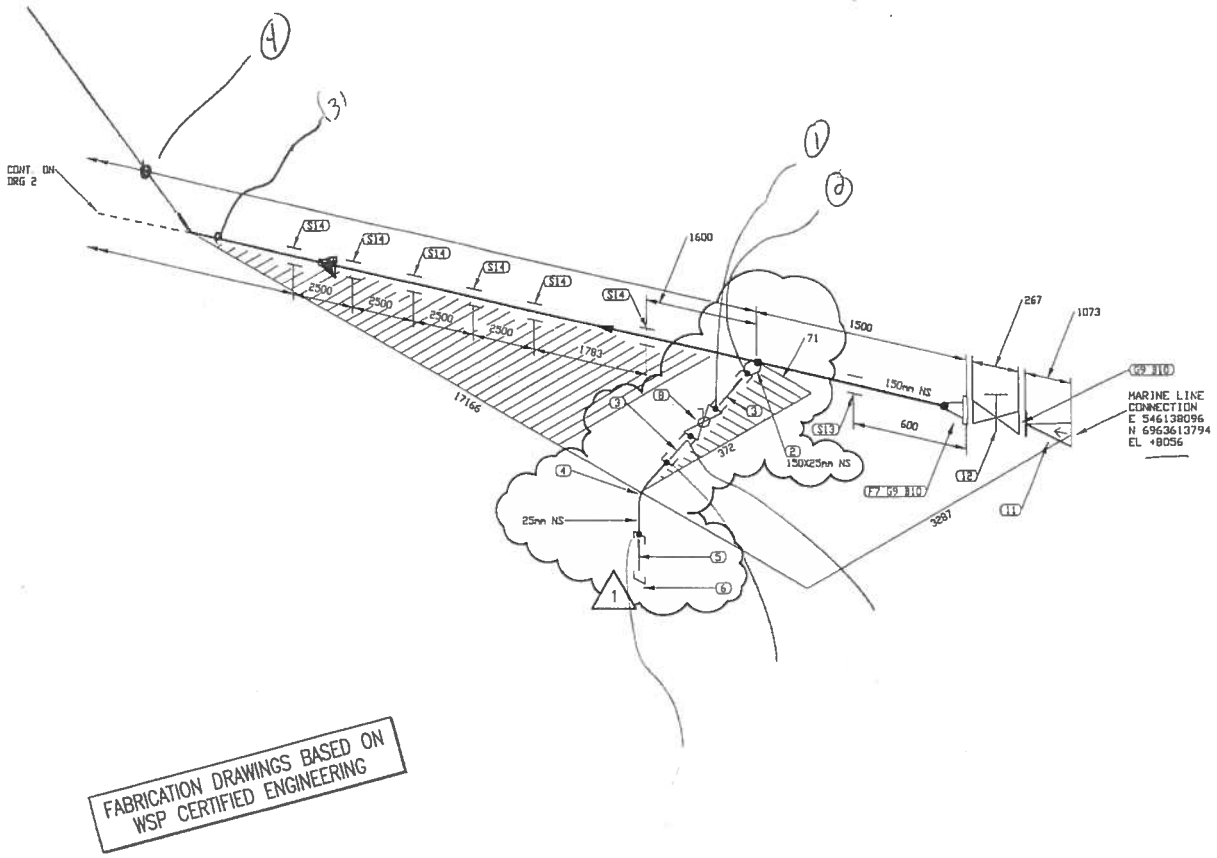
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
DIESEL FROM 65TNK11601 & 65TNK11602 TO PUMPING STATION

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-003	10/12	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-003		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

103-MN-01

IMPRIMÉ LE: May 17, 2017, 3:36pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	16045 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X25	A 350 Gr. LF2	CL 3000, SOCKOLET
3	2	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PBE
4	1	25	A 350 Gr. LF2	CL 3000, SW 90 DEG ELBOW
5	1	25	A 333 Gr. 6	SCH 80, NIPPLE x 75mm LG PDExTOE
6	1	25	A 350 Gr. LF2	CL 3000, THRD CAP
7	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
8	1	25	BA-29	CL 600, SW, BALL VALVE
9	2	150	ASME B16.20	CL 150, GARLOCK 9500, RING TYPE GASKET 1/8" THK
10	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
11	1	150	CK-29	CL 150, RF, SWING CHECK VALVE
12	1	150	GA-10	CL 150, RF, GATE VALVE
13		150		PIPE GUIDE AS PER DETAIL 4, DWG 65-103-270-200
14	6	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-103-270-200

No.	DATE	REVISION	PAR / APP.
1	2017/06/30	DRAIN REVISED AS PER CLIENT COMMENTS	QVN / KHV
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV /

CLIENT: AGNICO EAGLE

NUQSANA-PRONEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-001		CC10	PDI					65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

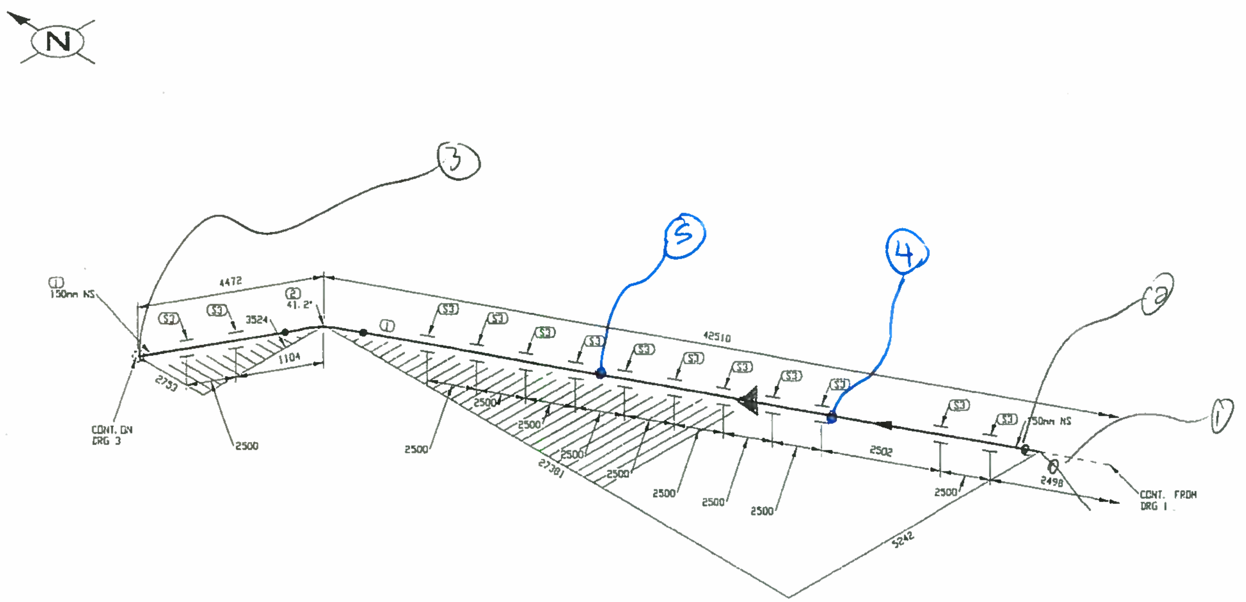
PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	1/13	1

103-MN-01, TEMP-01

IMPRIMÉ LE: Jul 05, 2017, 10:31:xx



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	32178 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 41.16
3	13	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER, D. TRUONG, LICENSEE, NT/NU

2017/05/26

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION	No. DESSIN	DESSINS DE REFERENCE
103-150-PDI-CC10-001	CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
							65-103-205-200	P&ID

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSIG	T	PSIG	T	PSIG			

CONC.: KHV DATE: 2017/04/25
DESSINÉ PAR: KVE DATE: 2017/04/25
VÉR. PAR: - DATE: -
APP.: - DATE: -
ÉCHELLE: AUCUNE

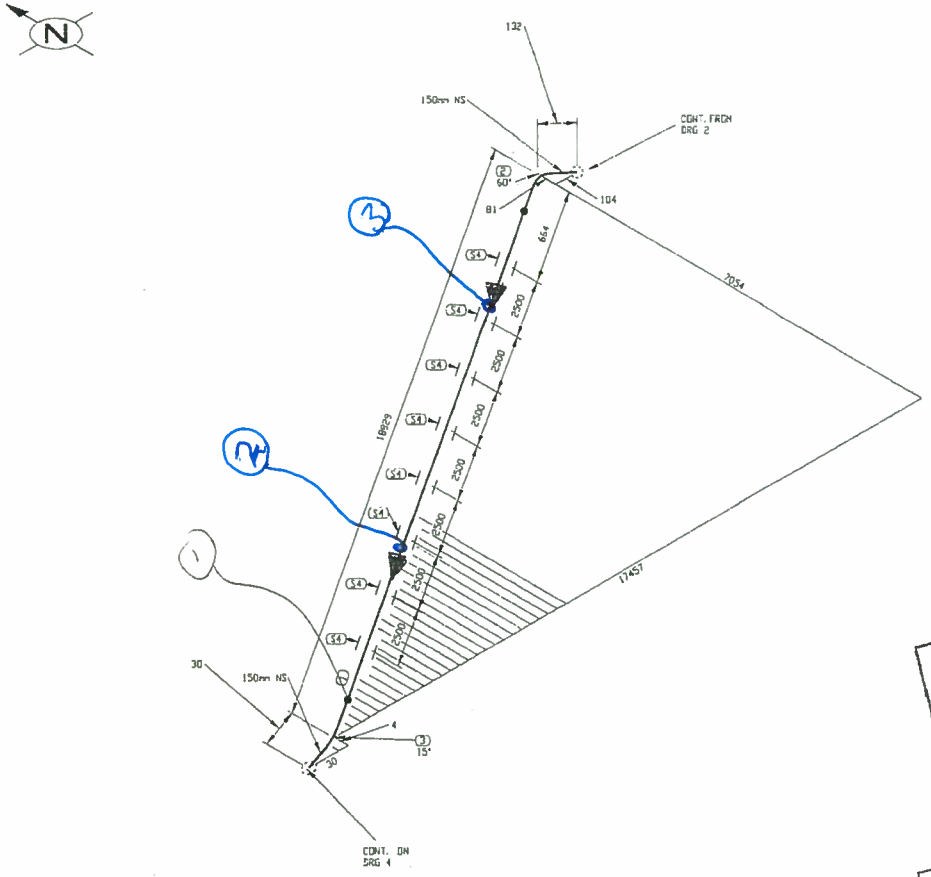
PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	2/13	0

103-MN-01

IMPRIMÉ LE: May 17, 2017, 3:04pm



LISTE DE MATERIEL

No.	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	18667 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BV LR 90 DEG ELBOW TRIM TO 60.00
3	1	150	A 420 Gr. WPL6	SCH STD, BV LR 90 DEG ELBOW TRIM TO 15.00
4	8	150		PIPE SUPPORT AS PER DETAIL 3, DWG 65-103-270-200

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT:

AGNICO EAGLE

NUQSANA-PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VÉR. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MEADOWBANK DIVISION
103 - COMBUSTIBLE

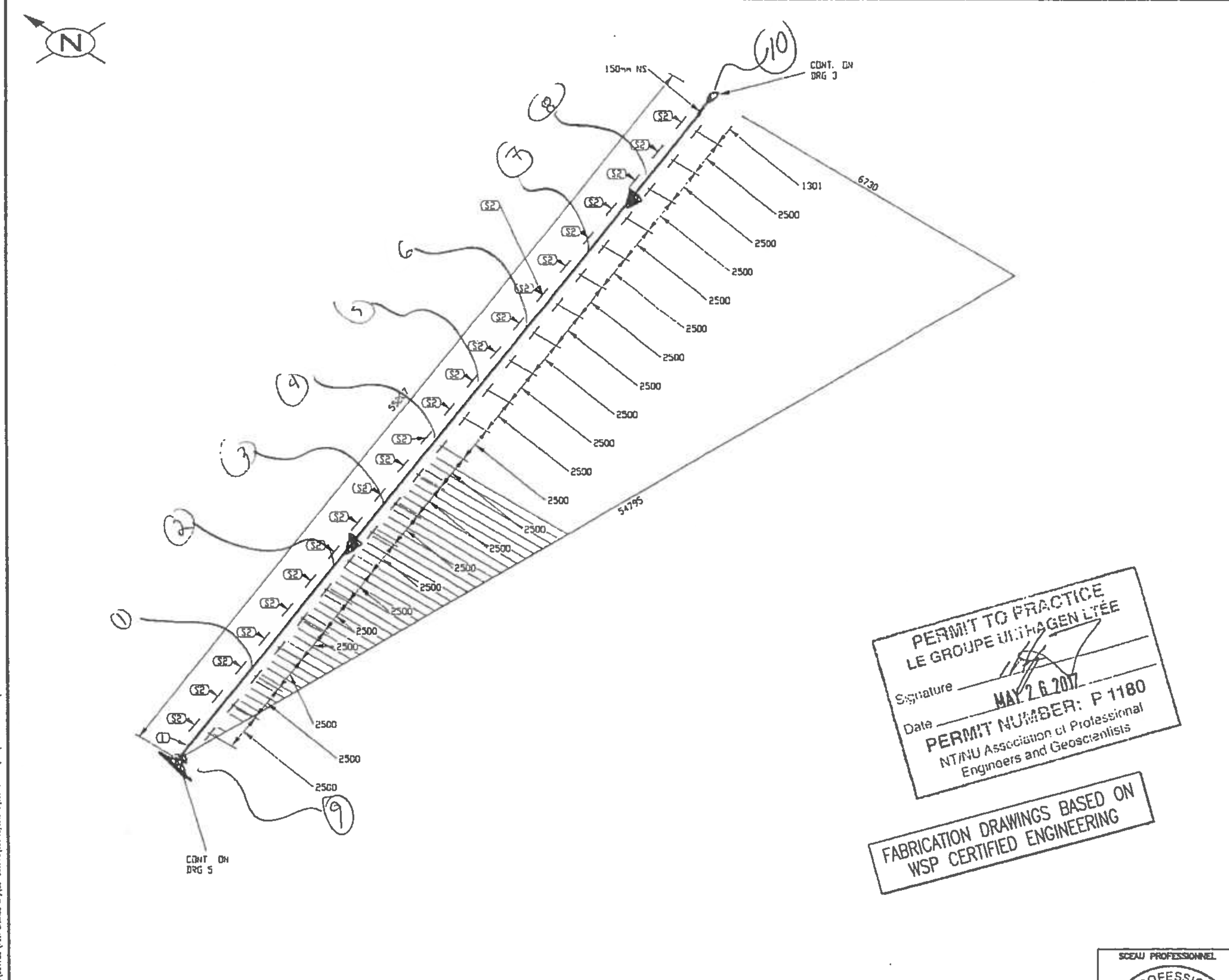
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	3/13	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-001		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

103-MN-01

IMPRIMÉ LE: May 17, 2017, 1:04pm



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	55207 MM	150	A 333 Gr 6	SCH STD, SMLS PIPE
2	23	150		PIPE SUPPORT AS PER DETAIL 3, DWG: 65-103-270-200

No.	DATE	REVISION	PAR	APP
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

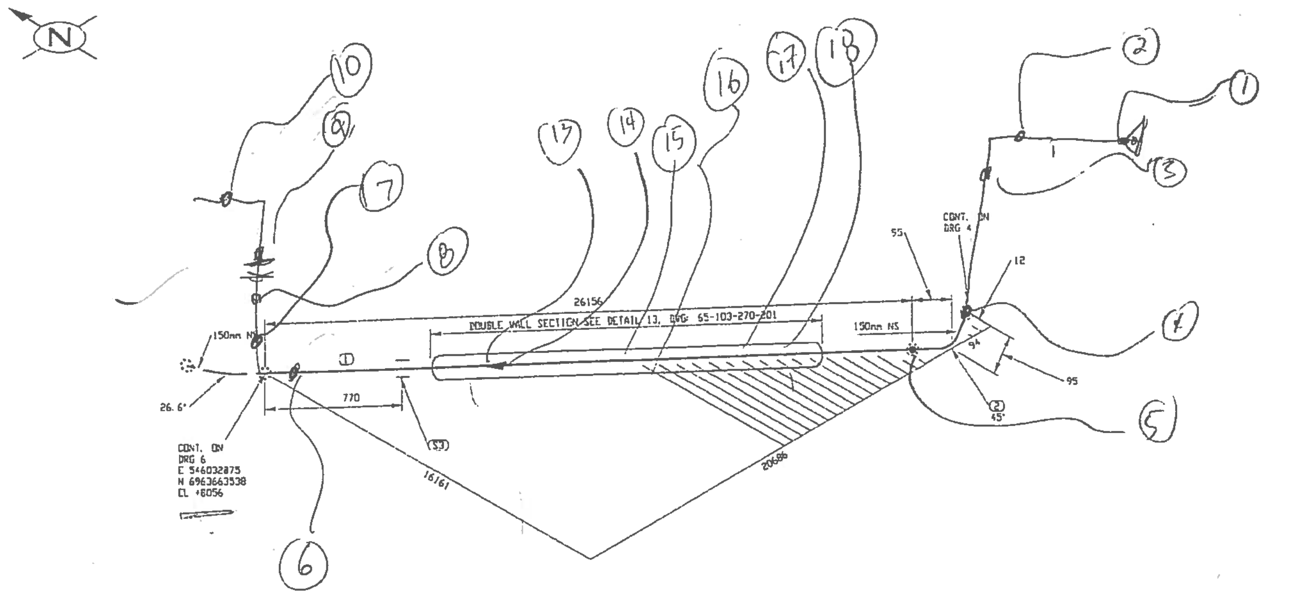
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	4/13	0

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTÈME REVÊTEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	ÉPAISS. D'ISOLATION	No. DESSIN	DESSINS DE RÉFÉRENCE
103-150-PDI-CC10-001	CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS

PRESSION D'OPÉRATION	TEMPÉRATURE D'OPÉRATION	PRESSION DE CONCEPTION	TEMPÉRATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	No. DESSIN	DESSINS DE RÉFÉRENCE
PSIG	T	PSIG	T	PSIG				65-103-205-200	P&ID

103-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	26156 MM	150	A 333 Gr 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr WPL6	SCH STD, BV LR 45 DEG ELBOW
3	1	150		ABUTEMENT TYPE 2 AS PER DETAIL 5, DWG: 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA-PROMEC MINING

ultragen — CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D. TRUONG — LICENSEE — NT/NU

2017/05/26

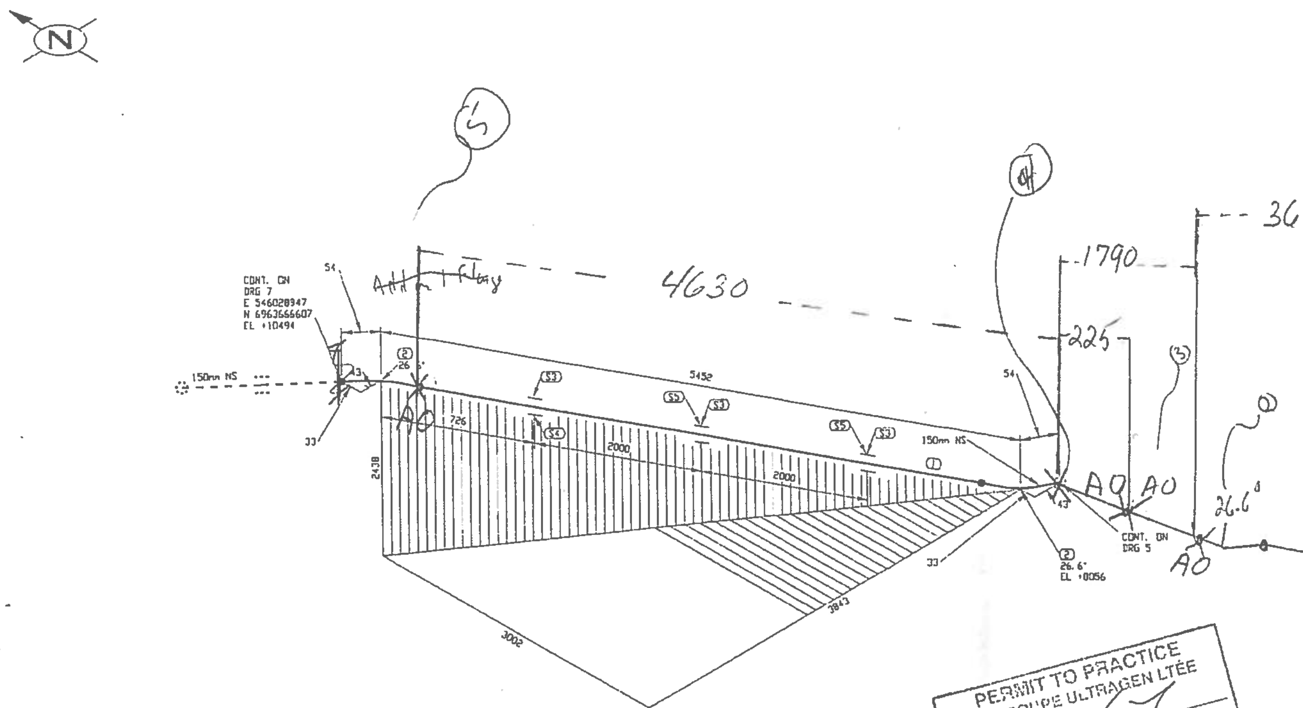
NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPASS. D'ISOLATION		
103-150-PDI-CC10-001		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

CONC.: KHV	PROJET: AGNICO EAGLE - MELIADINE DIVISION 103 - COMBUSTIBLE
DATE: 2017/04/25	
DESSINE PAR: KVE	
DATE: 2017/04/25	TITRE: RANKIN INLET FABRICATION ISOMETRIC MARINE LINE TO 65TNK11601 & 65TNK11602
VER. PAR: -	
DATE: -	
APP.: -	
DATE: -	
ECHELLE: AUCUNE	

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	5/13	0

103-MN-01

IMPRIME LE: May 18, 2017, 11:57am



LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	5344 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW TRIM TO 26.57
3	3	150		PIPE SUPPORT AS DETAIL 1, DWG 65-103-270-200
4	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200
5	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER — D TRUONG — LICENSEE — NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINÉ PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ÉCHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

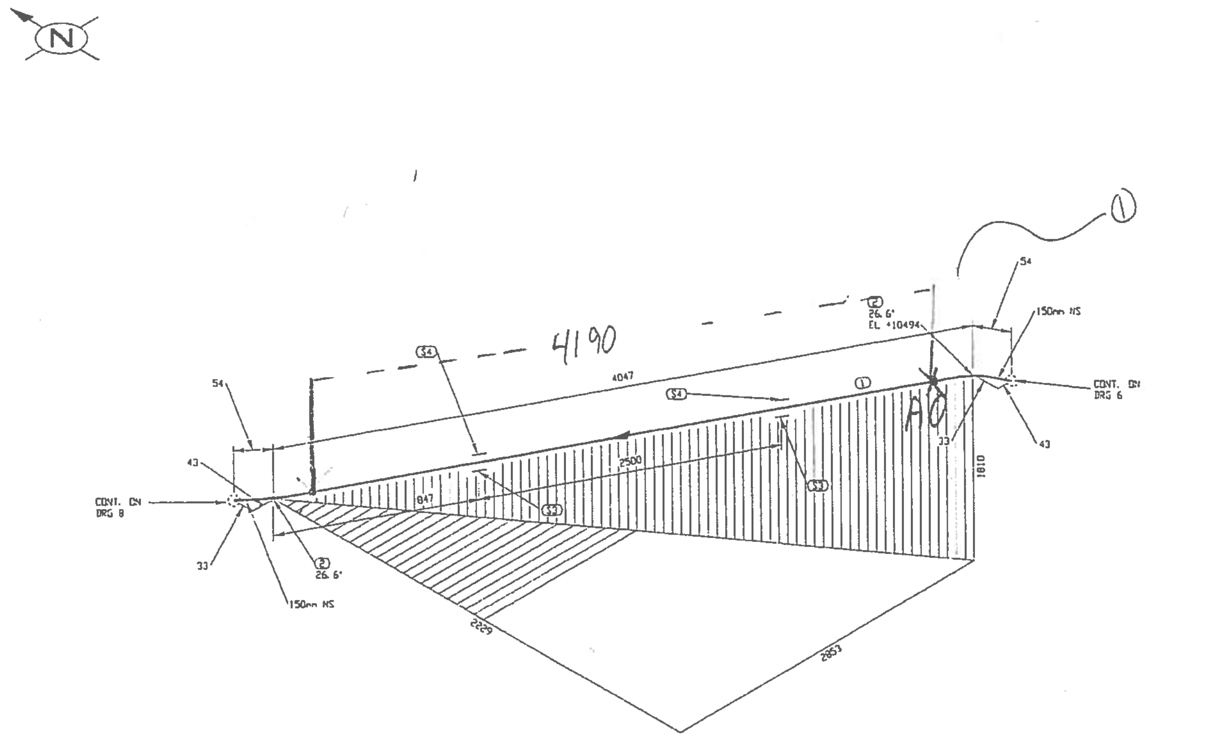
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	6/13	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-001		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	T	PSIG	T	PSIG				No. DESSIN	DESSINS DE REFERENCE

IMPRIMÉ LE: May 17, 2017, 3:35pm

103-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	3939 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150	A 420 Gr. WPL6	SCH STD, BV LR 45 DEG ELBOW TRIM TO 26.57
3	2	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
4	2	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER D TRUONG LICENSEE NT/NU 2017/05/26

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION	No. DESSIN	DESSINS DE REFERENCE
1C3-150-PDI-CC10-001	CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION / TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION / TEMPERATURE DE CONCEPTION		PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSG / T	PSG / T		PSG					

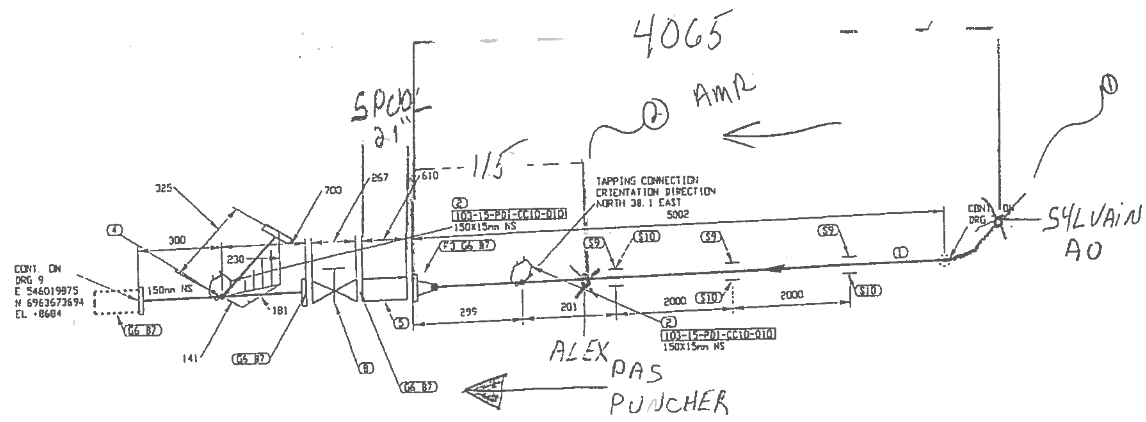
CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	7/13	0

103-MN-01



LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	4914 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	2	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
4	1	150X150		CL 150, PIG CATCHER AS PER DETAIL 8, DWG 65-103-270-200
5	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
6	4	150	ASME B16.20	CL 150, GARLOCK 3500, RING TYPE GASKET 1/8" THK
7	32	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 x 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	1	150	GA-10	CL 150, RF, CS, FULL PORT GATE VALVE
9	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
10	3	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature ______
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER D. TRUONG LICENSEE
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVE
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	8/13	0

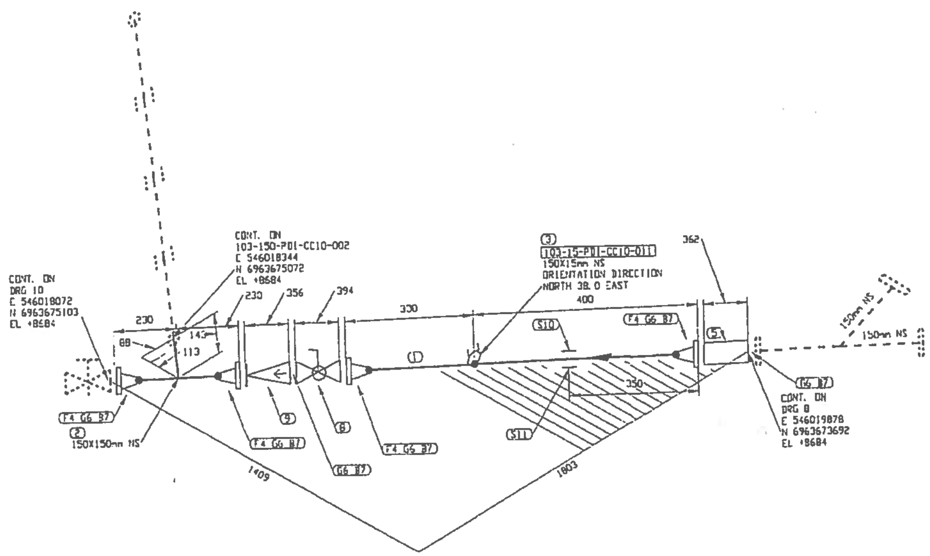
NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION
103-150-PDI-CC10-001	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSG		PSG	°F	PSG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-HN-01

IMPRIME LE: May 17, 2017, 3:34pm



LISTE DE MATERIEL

No	QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	525 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X150	A 420 Gr. WPL6	SCH STD, BW STRAIGHT TEE
3	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
4	4	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
5	1	150		CL 150, IFLOW INDICATOR 'VISI-FLO'
6	6	150	ASME B16.20	CL 150, GARLOCK 3500, RING TYPE GASKET 1/8' THK
7	48	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
8	1	150	BA-31	CL 150, RF, BALL VALVE
9	1	150	CK-29	CL 150, RF, SWING CHECK VALVE
10	1	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
11	1	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	PAR	APP
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 6 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER D TRUONG LICENSEE NT/NU 2017/05/26

CONC.: KHV DATE: 2017/05/25
DESSINE PAR: KVE DATE: 2017/04/25
VER. PAR: - DATE: -
APP.: - DATE: -
ECHELLE: AUCUNE

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11601 & 65TNK11602

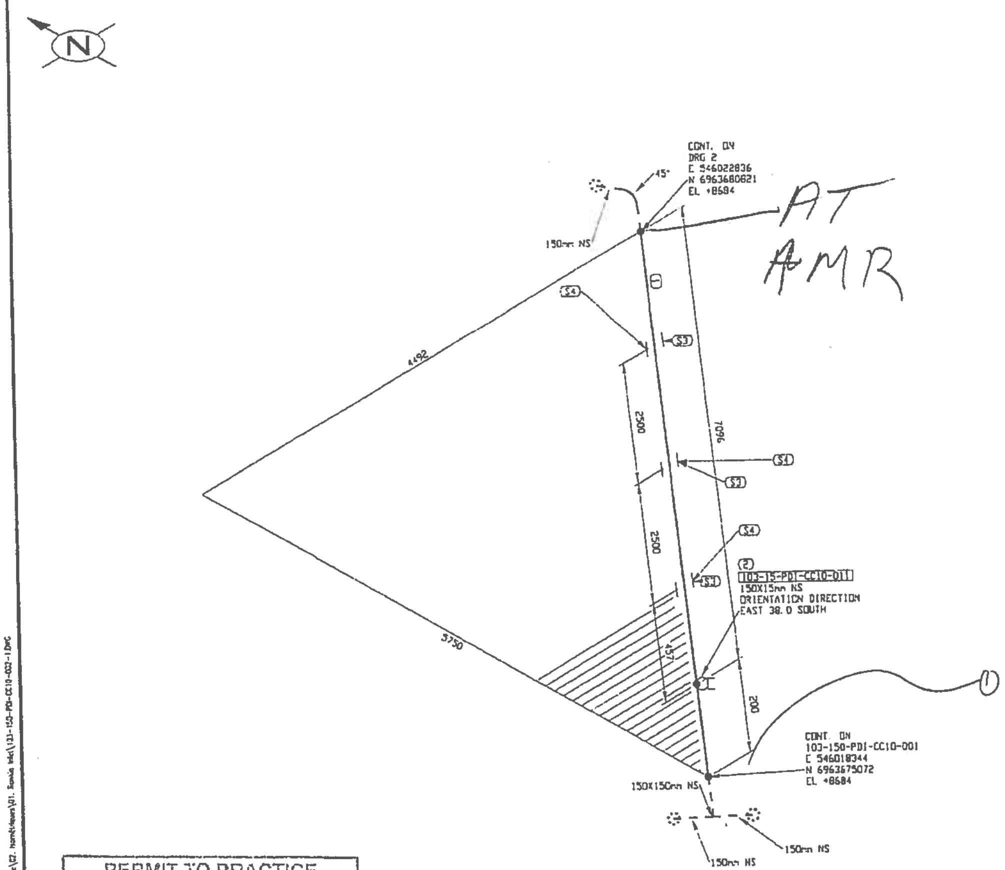
No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-001	9/13	0

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION
103-150-PDI-CC10-001	CC10	PDI		-		

PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE
PSG	T	PSG	T	PSG			

No. DESSIN	DESSINS DE REFERENCE
65-103-270-200	PIPE SUPPORT DETAILS
65-103-205-200	P&ID

103-MN-01



FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

LISTE DE MATERIEL

No	QTE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	7296 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150X15	A 350 Gr. LF2	CL 3000, THREDOLET
3	3	150		PIPE SUPPORT AS PER DETAIL 1, DWG: 65-103-270-200
4	3	150		PIPE SHOE AS PER DETAIL 2, DWG: 65-103-270-200

No.	DATE	REVISION	PAR	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV	

CLIENT: AGNICO EAGLE

NUQSANA PROMEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

SCEAU PROFESSIONNEL: REGISTERED PROFESSIONAL ENGINEER D TRUONG LICENSEE NT/NU
2017/05/26

CONC.: KHV
DATE: 2017/04/25
DESSINE PAR: KVC
DATE: 2017/04/25
VER. PAR: -
DATE: -
APP.: -
DATE: -
ECHELLE: AUCUNE

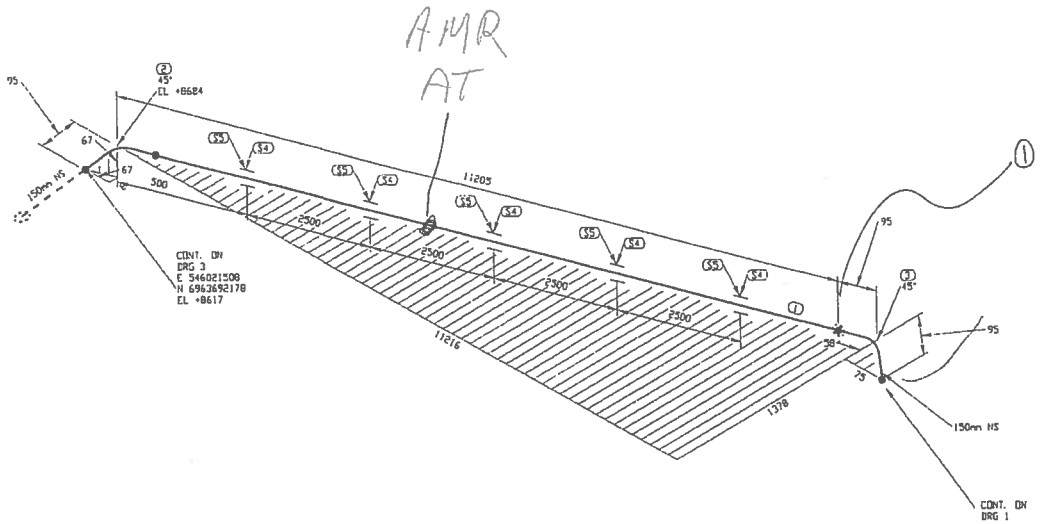
PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-002	1/3	0

NO. DE CONDUITE	SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-002	CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200 P&ID
		PSIG	°F	PSIG				No. DESSIN / DESSINS DE REFERENCE

103-MN-01



LISTE DE MATERIEL

No	DIE	DIA	MATERIEL/CATALOGUE	DESCRIPTION
1	11110 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
2	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
3	1	150	A 420 Gr. WPL6	SCH STD, BW LR 90 DEG ELBOW TRIM TO 45.00
4	5	150		PIPE SUPPORT AS PER DETAIL 1, DWG 65-103-270-200
5	5	150		PIPE SHOE AS PER DETAIL 2, DWG 65-103-270-200

No.	DATE	REVISION	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 26 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D. TRUONG
LICENSEE
NT/NU

2017/05/26

CLIENT: AGNICO EAGLE

NUQSANÂ PROMEC MINING

ultragen

CONSULTANT PROJECT NO. 591700

CONC.: KHV	
DATE: 2017/04/23	
DESSINE PAR: KVE	
DATE: 2017/04/25	
VER. PAR: -	
DATE: -	
APP.: -	
DATE: -	
ÉCHELLE: AUCUNE	

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

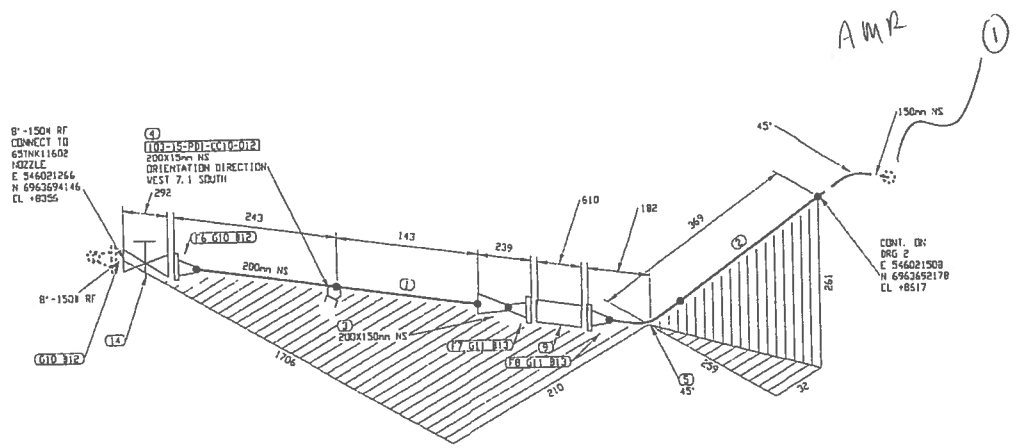
TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 65TNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-002	2/3	0

NO. DE CONDUITE		SPECIFICATION	PRODUIT	SYSTEME REVETEMENT	CODE DE COULEUR	ISOLATION ET TRACAGE	EPAISS. D'ISOLATION		
103-150-PDI-CC10-002		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPERATION	TEMPERATURE D'OPERATION	PRESSION DE CONCEPTION	TEMPERATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE REFERENCE

IMPRIMÉ LE: May 17, 2017, 3:16pm

103-MN-01



LISTE DE MATERIEL

No	QTE	D-A	MATERIEL/CATALOGUE	DESCRIPTION
1	286 MM	200	A 333 Gr. 6	SCH STD, SMLS PIPE
2	274 MM	150	A 333 Gr. 6	SCH STD, SMLS PIPE
3	1	200X150	A 420 Gr. WPL6	SCH STD, BW CONC RED
4	1	200X15	A 350 Gr. LF2	CL 3000, THREDOLET
5	1	150	A 420 Gr. WPL6	SCH STD, BW LR 45 DEG ELBOW
6	1	200	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
7	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
8	1	150	A 350 Gr. LF2	CL 150, SCH STD, RF, WN FLANGE
9	1	150		CL 150, SINGLE BRAIDED HOSE ASSEMBLY
10	2	200	ASME B16.20	CL 150, GARLOCK 9500, RING TYPE GASKET 1/8" THK
11	2	150	ASME B16.20	CL 150, GARLOCK 9500, RING TYPE GASKET 1/8" THK
12	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 110 STUD BOLTS c/w TWO HEAVY HEX NUTS
13	16	19	A 193 B7/A 194 2H	CL 150, 8 - 19.05 X 100 STUD BOLTS c/w TWO HEAVY HEX NUTS
14	1	200	GA-10	CL 150, RF, GATE VALVE

No.	DATE	REVISION	APP.
0	2017/05/15	ISSUED FOR CONSTRUCTION	KHV

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE
Signature
Date MAY 2 8 2017
PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

FABRICATION DRAWINGS BASED ON WSP CERTIFIED ENGINEERING

SCEAU PROFESSIONNEL
REGISTERED PROFESSIONAL ENGINEER
D TRUONG
LICENSEE
NT/NU
2017/05/26

CLIENT: AGNICO EAGLE

NUQSANA-PRONEC MINING

ultragen
CONSULTANT PROJECT NO. 591700

CONC.: KHV	DATE: 2017/04/25
DESSINÉ PAR: KVE	DATE: 2017/04/25
VÉR. PAR: -	DATE: -
APP.: -	DATE: -
ÉCHELLE: AUCUNE	

PROJET: AGNICO EAGLE - MELIADINE DIVISION
103 - COMBUSTIBLE

TITRE: RANKIN INLET
FABRICATION ISOMETRIC
MARINE LINE TO 6STNK11602

No PROJET	No DESSIN	PAGES	REV.
6515	103-150-PDI-CC10-002	3/3	0

NO. DE CONDUITE		SPÉCIFICATION	PRODUIT	SYSTÈME REVÊTEMENT	CODE DE COULEUR	ISOLATION ET TRAÇAGE	ÉPAISS. D'ISOLATION		
103-150-PDI-CC10-002		CC10	PDI		-			65-103-270-200	PIPE SUPPORT DETAILS
PRESSION D'OPÉRATION	TEMPÉRATURE D'OPÉRATION	PRESSION DE CONCEPTION	TEMPÉRATURE DE CONCEPTION	PRESSION D'ESSAI	CLASSE D'INSPECTION	CODE DE SERVICE	TRAITEMENT THERMIQUE	65-103-205-200	P&ID
PSIG	°F	PSIG	°F	PSIG				No. DESSIN	DESSINS DE RÉFÉRENCE

103-MN-01

APPENDIX K

Inspection Report – Rankin Inlet Fuel Modules

AGNICO EAGLE

Vendor Document Status

1 ☐	Proceed to next submission and status.
2 ☐	Proceed with exceptions as noted to next submission and status.
3 ☐	Do not proceed. Revise as noted and resubmit next submission and status.
4 ☑	Complete, no further submission required.

By: **Date:**

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-QCR-0002 **R:** Sub002

DOCUMENT FOR INFORMATION

GROUPE PROMEC INC.

22466T / 22498E

FUEL MODULES

AGNICO EAGLE

MÉLIADINE

6515-C-270-007

TABLE OF CONTENT

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☒ Complete, no further submission required.

By: LUC SÉNÉCAL Date: 2017-07-10

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-TES-0007 R: Sub002

DOCUMENT FOR INFORMATION

Inspection and Testing Plan

NUQSANA PROMEC MINING

AGNICO EAGLE

Contract title:	Meliadine Fuel Tanks Piping Supply and Installation	**ITP #**	**AEM-ITP-003**
Contract number:	6515-C-270-007	**Area**	**rankin inlet**
Promec Ref.:	C22498E	**System**	**ALL**
		Discipline	**Electrical Instrumentation**
Approved on :	_____	**Approval Signature**	
Approved by:	_____		

Updated on: 2017-04-26

Legend

H - Hold
W - Witness
I - Inspect
R - Review

Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria (Specifications, Drawings, Industry Code, Regulatory Authority, Manufacturers O&M manual, Controlling Procedure, Quality/Engineering Bulletins, Other/ Site Quality Plan, Contractor Quality Manuals, etc.)	Verification Point				Verification Document(s) 1. List ONLY the Form(s) applicable to Installation. 2. ▲ Commissioning Required Document
				Contractor		Client		
				H W I R	Initials & Date	H W I R	Initials & Date	
1.0	**GENERAL**							
1.1	Inspection and Test Plan	Promec / CLIENT		H/R				Approved ITP
1.2	Document review (Acquire and review all applicable documentation)	Promec / CLIENT	Quality Plan	H/R				
1.3	Procedures Submitted and Approved (Cable Installation, Testing, etc.)	Promec / CLIENT	Quality Plan	H/R				All Applicable Approved Procedures
1.4	Drawing Index (IFC) to Latest Revision	Promec	Quality Plan	I/R				VDRL
2.0	**ITP SPECIFIC**							
2.1	Non-Conformance Report & Log (Both CLIENT & Contractor Issued)	Promec / CLIENT	Quality Plan	H/R				AEM-GE-ITR-002 (Non-Conformance Report) ▲ AEM-GE-LOG-002 (Non-Conformance Log)
2.2	Inspect Material/Equipment for Damages or Deficiencies	Promec	Quality Plan	I/R				AEM-GE-ITR-005 (Inspection Deficiency Report) ▲ AEM-GE-LOG-004 (Inspection Deficiency Log)

Inspection and Testing Plan

NUQSANA PROMEC MINING

AGNICO EAGLE

Contract title:	Meliadine Fuel Tanks Piping Supply and Installation	**ITP #**	**AEM-ITP-003**	**Updated on:** 2017-04-26
Contract number:	6515-C-270-007	**Area**	**rankin inlet**	
Promec Ref.:	C22498E	**System**	**ALL**	
Approved on :	_____	**Discipline**	**Electrical Instrumentation**	
Approved by:	_____			

Approval Signature

Legend

H - Hold
W - Witness
I - Inspect
R - Review

Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria (Specifications, Drawings, Industry Code, Regulatory Authority, Manufacturers O&M manual, Controlling Procedure, Quality/Engineering Bulletins, Other/ Site Quality Plan, Contractor Quality Manuals, etc.)	Verification Point				Verification Document(s) 1. List ONLY the Form(s) applicable to installation. 2. ▲ Commissioning Required Document
				Contractor		Client		
				H W I R	Initials & Date	H W I R	Initials & Date	
3.0	**Electrical & Instrumentation**							
3.1	All Certified Test Records • Fire Alarm Cert's - (Engineer's Stamp; Vendor Test Documents) • CSA Approval Documentation	Promec / CLIENT	AEM-IN-PRO-001 (Instrumentation Installation and Testing Procedure)	I/R				▲Third Party Document
3.2	Electrical Equipment Installation Inspection Record	Promec / CLIENT	AEM-EL-PRO-004 (Electrical Apparatus Equipment and Support Installation Procedure)	W/R				AEM-EL-ITR-001 (General Report)
3.3	Distribution Panel Inspection & Test Record	Promec / CLIENT	AEM-EL-PRO-004 (Electrical Apparatus Equipment and Support Installation Procedure)	W/R				AEM-EL-ITR-001 (General Report)
3.4	Distribution Transformer Field Inspection Test Record	Promec / CLIENT	AEM-EL-PRO-004 (Electrical Apparatus Equipment and Support Installation Procedure)	W/R				AEM-EL-ITR-001 (General Report)
3.5	PCR Installation and Inspection	Promec / CLIENT	AEM-IN-PRO-001 (Instrumentation Installation and Testing Procedure)	W/R				AEM-IN-ITR-005A (PCR Panel Report)
3.6	Heating Device Installation Record	Promec / CLIENT	AEM-EL-PRO-004 (Electrical Apparatus Equipment and Support Installation Procedure)	I/R				AEM-EL-ITR-002 (Heating Unit Report)
3.7	Cable tray Inspection Record	Promec / CLIENT	AEM-EL-PRO-003 (Cable Tray Installation Procedure)	I/R				AEM-GE-ITR-006 (Miscellaneous Field Report)
3.8	Power/Control Cables Installation Test Record	Promec / CLIENT	AEM-EL-PRO-001 (Cable Installation and Testing Procedure)	W/R				AEM-EL-ITR-003 (Megger Cable Report) AEM-EL-ITR-004 (Continuity Test Report)
3.9	Low Voltage Cable Installation Test Record	Promec / CLIENT	AEM-EL-PRO-001 (Cable Installation and Testing Procedure)	W/R				AEM-EL-ITR-003 (Megger Cable Report)

Inspection and Testing Plan

NUQSANA PROMEC MINING

AGNICO EAGLE

Contract title: Meliadine Fuel Tanks Piping Supply and Installation
Contract number: 6515-C-270-007
Promec Ref.: C22498E

Approved on : _____
Approved by: _____

Approval Signature

ITP # AEM-ITP-003
Area rankin inlet
System ALL
Discipline Electrical Instrumentation

Updated on: 2017-04-26

Legend
H - Hold
W - Witness
I - Inspect
R - Review

Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria (Specifications, Drawings, Industry Code, Regulatory Authority, Manufacturers O&M manual, Controlling Procedure, Quality/Engineering Bulletins, Other/ Site Quality Plan, Contractor Quality Manuals, etc.)	Verification Point				Verification Document(s) 1. List ONLY the Form(s) applicable to installation. 2. ▲ Commissioning Required Document
				Contractor		Client		
				H W I R	Initials & Date	H W I R	Initials & Date	
3.10	Instrument Cable Installation Test Record	Promec / CLIENT	AEM-EL-PRO-001 (Cable Installation and Testing Procedure)	I/R				AEM-EL-ITR-004 (Continuity Test Report)
3.11	Grounding System (Grid & Pile Grounds) Installation Inspection and Test Record	Promec / CLIENT	AEM-EL-PRO-002 (Grounding Installation and Testing Procedure)	H/R				AEM-GE-ITR-006 (Miscellaneous Field Report)
3.12	Branch cct Test Record (Lights, Receptacles, Heaters, etc.)	Promec / CLIENT	(Instrumentation Installation and Testing Procedure)	I/R				AEM-EL-ITR-001 (General Report)
3.13	Fire Alarm Panel and Device Installation Record	Promec / CLIENT	(Instrumentation Installation and Testing Procedure)	I/R				AEM-EL-ITR-001 (General Report)
3.14	Instrumentation Installation Test Record (Powered Instruments)	Promec / CLIENT	(Instrumentation Installation and Testing Procedure)	W/I/R				AEM-IN-ITR-003A (Level Transmitter) AEM-IN-ITR-004C (Pressure Switch) AEM-IN-ITR-006A (On/Off Valve) AEM-IN-ITR-001B (Flow Switch) AEM-IN-ITR-001C (Flow Transmitter) AEM-IN-ITR-002A (Push Button Station) AEM-IN-ITR-007 (Miscellaneous Instruments)
3.15	Instrumentation Installation Test Record (Non-powered instruments)	Promec / CLIENT	AEM-IN-PRO-001 (Instrumentation Installation and Testing Procedure)	I/R				AEM-IN-ITR-004A (Pressure Indicator) AEM-IN-ITR-004B (Pressure Safety Valve)

Inspection and Testing Plan

NUQSANA PROMEC MINING

AGNICO EAGLE

Contract title: Meliadine Fuel Tanks Piping Supply and Installation
Contract number: 6515-C-270-007
Promec Ref.: C22498E

Approved on : _____
Approved by: _____

Approval Signature

ITP # AEM-ITP-003
Area rankin inlet
System ALL
Discipline Electrical Instrumentation

Updated on: 2017-04-26

Legend
H - Hold
W - Witness
I - Inspect
R - Review

Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria (Specifications, Drawings, Industry Code, Regulatory Authority, Manufacturers O&M manual, Controlling Procedure, Quality/Engineering Bulletins, Other/ Site Quality Plan, Contractor Quality Manuals, etc.)	Verification Point				Verification Document(s) 1. List ONLY the Form(s) applicable to installation. 2. ▲ Commissioning Required Document
				Contractor		Client		
				H W I R	Initials & Date	H W I R	Initials & Date	
3.16	Motor/Install/Megger/Rotation Test and Polarization Records	Promec / CLIENT	AEM-EL-PRO-004 (Electrical Apparatus Equipment and Support Installation Procedure)	W/R				AEM-EL-ITR-005 (Motor Report)
3.17	Instrument Loop Test (Pre-Commissioning / Commissioning Activity	Promec / CLIENT	(Instrumentation Installation and Testing Procedure)	I/R				AEM-GE-ITR-006 (Miscellaneous Field Report)
4.0	**FINAL TURNOVER**							
4.1	Construction Completion (Contractor Punchlist & Joint Walkdown Punchlist)	Promec / CLIENT	Quality Plan	H/R				▲ AEM-GE-ITR-003 (Punchlist)
4.2	Final Acceptance of Turnover Package	Promec / CLIENT	Quality Plan	H/R				Signed ITP History Docket
4.3	Declaration of Completion	Promec	Quality Plan	H/R				AEM-GE-ITR-004 (Notice of Final Completion)
4.4	As-Built Drawings	Promec	Quality Plan	H/R				All Required As-Built Drawings
END								

PROMEC's Representatives			CLIENT's Representative	
QA/QC	Project Manager			
Name	Name		Name	
Signature	Signature	Date	Signature	Date

TO BE VALIDATED

AT A LATER DATE

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☒ Complete, no further submission required.

By: LUC SÉNÉCAL Date: 2017-07-10

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-TES-0001 R: Sub002

DOCUMENT FOR INFORMATION