


100%
extra

LISTE DE MATERIEL		
QTY	QTY	DESCRIPTION
24223	80	32H STD, 3/4" S PIPE
1	80	32H STD, 1/2" S PIPE
1	80	CL 130, 500 STD, RF, AN FLANGE
2	80	CL 130, GARDLOCK 5500, RING TYPE GASKET 1/8"
8	16	HEAVY HEX NUTS
1	80	CL 130, 4 - 1/2, 505 X 90 STD BOLLTS C/W TWO
10	80	CL 130, RF, GATE VALVE
		PIPE SUPPORT AS PER DETAIL 3, 3MG
		65-403-270-200


PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE

Signature *[Signature]* Date JUL 14 2017

PERMIT NUMBER: P 1180
 NTNU Association of Professional
 Engineers and Geoscientists



2017/07/14



AGNICO EAGLE

AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE

PROJECT: **PORTAL #1**

TITLE: **FABRICATION ISOMETRIC**

FUEL FROM 403P-80-PDI-CC10-029 TO 65THK41610

PROJECT: **AGNICO EAGLE - MELTADINE DIVISION**
403P - COMBUSTIBLE

CONSULTANT: **ULTRAGEN**

PROJECT NO: **591700**

DATE: 2017/06/30

DATE: 2017/06/29

DATE: 2017/06/29

DATE: 2017/06/29

DATE: 2017/06/29

ISSUED FOR CONSTRUCTION

REVISION

OWN: **ULTRAGEN**

PREP: **ULTRAGEN**

DATE: 2017/06/30

DATE: 2017/06/29

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DATE: 2017/06/29

ISSUED FOR CONSTRUCTION

REVISION

OWN: **ULTRAGEN</**

PERMIT TO PRACTICE
LE GROUPE ULTRAGEN LTÉE

Signature: *[Signature]* Date: JUL 17 2017

PERMIT NUMBER: P 1180
NT/NU Association of Professional Engineers and Geoscientists

2017/02/14

LISTE DE MATERIEL

QTE	DA	MATERIEL/CATALOGUE	DESCRIPTION
1	6003 MM	A 320 60 6	320 STD. 3/8 S. PIPE
2	80	A 400 60 6	CL 150 STD. 3/8 L.R. 90 DEG ELBOW
3	80	A 200 60 6	CL 150 STD. 3/8, 90° FLANGE
4	80	ASME 316 20	CL 150, GARDLOCK 5500, RING TYPE GASKET 1/8" THK
5	20	A 150 3/4 154 2H	CL 150, 4 - 15.075 X 90 STD BOLTS C/W TWO NUTS
6	1	BA-31	CL 150, 90° BALL VALVE
7	1	GA-10	CL 150, 90° GATE VALVE
8	2		PIPE SUPPORT AS PER DETAIL 3, BNG
9	3		PIPE SUPPORT BY CONTRACTOR

AGNICO EAGLE

OWN	ISSUED FOR CONSTRUCTION	REVISION	APP.
0	2017/06/30		

CLIENT:

NO. DATE

NO. DATE

SCAU PROFESSIONNEL

CONC. N°/	DATE: 2017/02/29	DESIGNER: P. N. V.	DATE: 2017/02/29	WSP: P. N. V.	DATE: 2017/02/29	APP: 3	DATE: 2017/02/29	EXCELLENCE: P. N. V.	DATE: 2017/02/29
65-403-270-200		PIPE SUPPORT DETAILS		65-403-205-200		P. N. V.		DESIGN OF REFERENCE	

PROJET	AGNICO EAGLE - MELTADINE DIVISION	403P - COMBUSTIBLE
TITRE	PORTAIL #1	
FUEL FROM 403P-80-PDI-CC10-029 TO 65NMK41610		
NO. PROJET	6515	403P-80-PDI-CC10-014
REV.	2/2	0

Machine\581700 (Full Distribution)\03. Decans\02. Regulus\02. Jambhikar\02. Foral\1\658-80-70-CC-10-029-7290

par: 15

03 JUL. 2017

Rép: -----

AGNICO EAGLE

591700

ENGINE DIVISION
TESTS

[illegible]ERIC
5T8K41609/10/11

INVEST.	DATE	REV.
10-029	7/10	0

[illegible]

CONSTRUCTION DRAWINGS BASED ON
ENGINEERING

**PROMEC
AS-BUILT**

Signature: _____

90-21-7106

Flüchtling Drenel

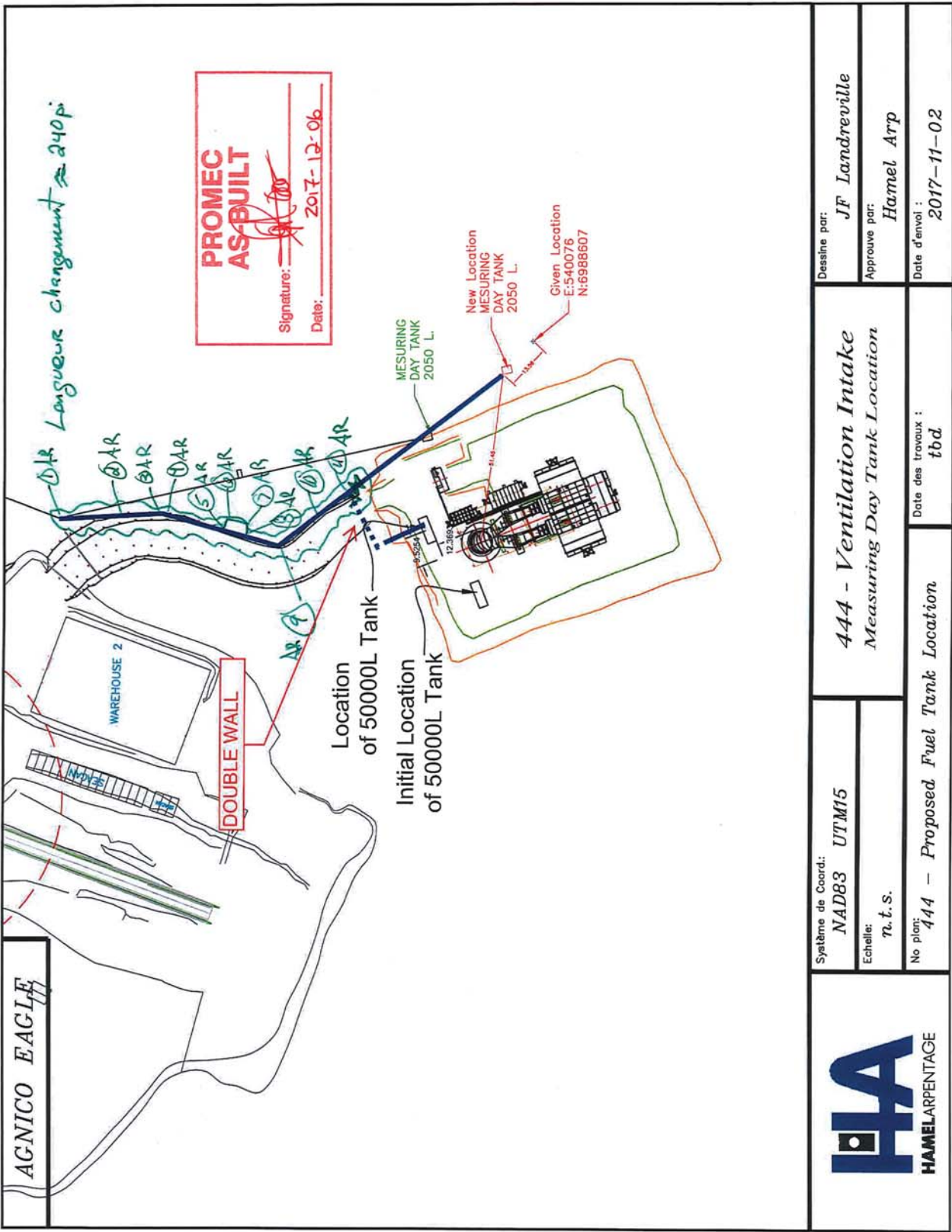
RECEIVED



**PROMEC
AS-BUILT**

Signature: _____
Date: 2017-12-06

Submitted to:	Ms M	2017	8:00am
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HA HAMELARPENTAGE		Système de Coord.: NAD83 UTM15		Dessiné par: JF Landreville	
Echelle: n.t.s.		444 - Ventilation Intake Measuring Day Tank Location		Approuvé par: Hamel Arp	
No plan: 444 - Proposed Fuel Tank Location		Date des travaux : tbd		Date d'envoi : 2017-11-02	

SECTION

WELD MAP



92
91

94-56

AR

CONT. ON
403P-100-P21-CC1D-002-6
E 540150206
H 6367093214
CL +70341

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J02216-6
 PROGRAMME NO.
 PL. a. PI

41

$$A = 44 \quad B = 97 \quad C = 36$$


403P-MN-01, 403P-MN-02

PT. G. Maw AC-000
PI a PI 2.6



ENATELIERLE
04 JUL. 2017
par: BB

CONTRAT UF

2106x20

REÇU le
03 JUL. 2017
Rép:-----

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

AGNICO EAGLE

403P-MN-01, 403P-MN-02

[illegible][illegible]

4	MA	PSG	1236.3
Fluoride Dosed End 5% Rx			



The image shows a piece of paper with handwritten symbols and text. On the left, there are several rows of symbols that look like stylized letters or numbers, possibly in a different script. To the right of these symbols, the text "JG2216-6" is written. Below this, there is a line of text that reads "PT-GMW-1001" and "PLA PI" below that.

11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044

00116

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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AGNICO EAGLE

REÇU 10
03 JUL. 2017
Rép: -----

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04 JUL. 2017
par: PS

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PT GMAW AC-001K60

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REÇU le
03 JUL. 2017
Rép: -----

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04 JUL. 2017
par: 157

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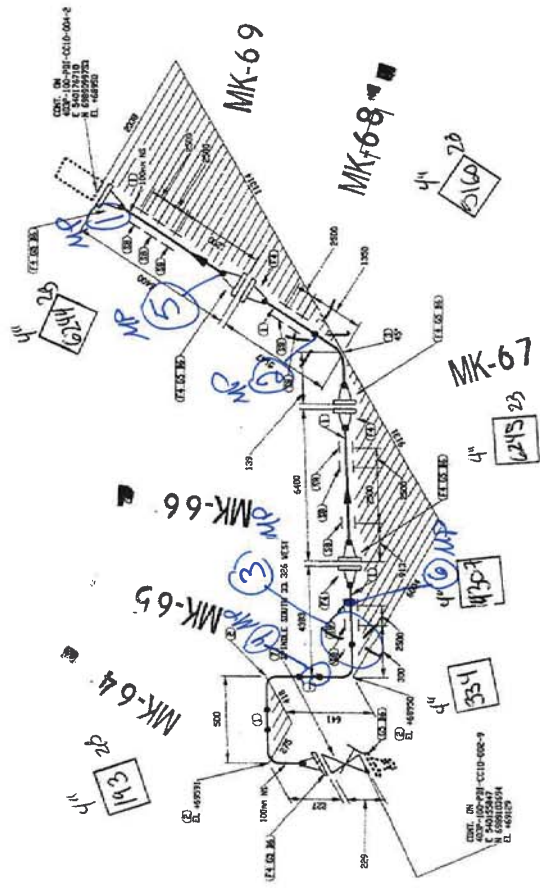
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ON DRAWINGS BASED ON
ENGINEERING

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Fluorene Diesel	End: 5% AX
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40


JOE2266
Plc PI
dt-GMAW-at-901



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LOCAL AFFILIATION	WAGE TO SCALE	POSITION INFORMATION
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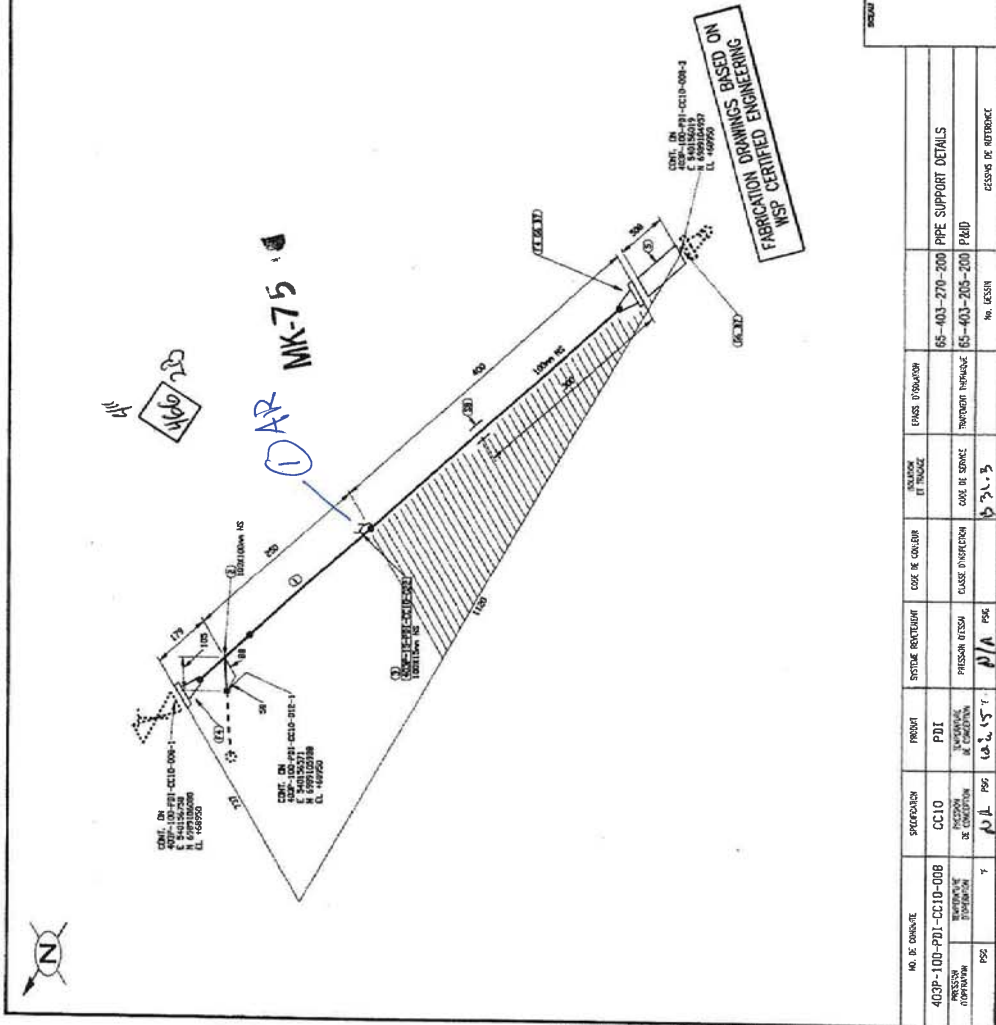
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 Pl'a Pl

[illegible]

ENATELIERLE
04 JUL. 2017
par: *BZ*

LISTE DE MATERIEL		DESCRIPTION	
1	429 MM	100	100 STD. SWS PIPE
2	1	100	100 STD. 90° ELBOW
3	1	100	100 STD. 45° ELBOW
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96	1	100	100 STD. 90° ELBOW
97	1	100	100 STD. 45° ELBOW
98	1	100	100 STD. 90° ELBOW
99	1	100	100 STD. 45° ELBOW
100	1	100	100 STD. 90° ELBOW



REÇU
03 JUL. 2017
Rép: -----

CONTRAT UF
2106 X20

AGNICO EAGLE
ISSUED FOR CONSTRUCTION
0 2017/06/30
DATE
REASON
CARTON

AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

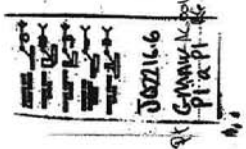
AGNICO EAGLE
403P - COMBUSTIBLE
AGNICO EAGLE - MELIABINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FILE FROM 651M41607 UNLOADING NOZZLE TO 651M41603
DATE
APPROVED
DATE
REASON

U - F

Flux 0.562

Flux 0.562

Flux 0.562



41

Flu. de Diesel Cnd = 5% R X

2017. 11. 29.

ENATELIER LE
04 JUL. 2017
par: BD

REQU 10
03 JUL. 2017
Rép: -----

CONTRAT UT- 2106X20

ENATELIER LE
04 JUL. 2017
par: *BS*

CONTRAT UF
21.06x20

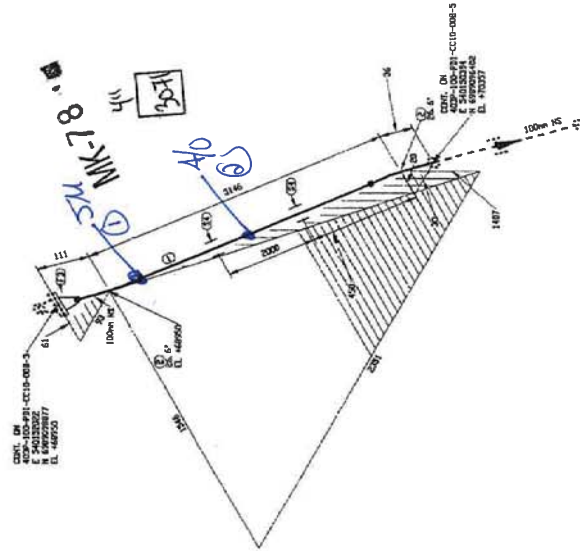
REÇU le 03 JUL. 2017

INUQSANA PROMEC MINING
P.O. BOX 10000
NORFOLK, VIRGINIA 23508-0000
TEL: 757/622-1111 FAX: 757/622-1112
WWW.INUQSANA.COM

AGNICO EAGLE

[illegible]

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING



LISTE DE MATERIEL				DESCRIPTION
REA	CHIFF	DA	NATUREL / ARTIFICIEL	

QTY	UNIT	DESCRIPTION
1	3074 MM	A 333 Gr. 6 SCH STD, 80 LB 45 DEG ELONG TRIM TO 26.57
2	2	A 450 Gr. WPL6 SCH STD, 80 LB 45 DEG ELONG TRIM TO 26.57
3	1	A 350 Gr. L72 CL 150, SCH STD, 85, 90 FLANGE
4	2	PIPE SUPPORT AS PER DETAIL 3, DWG 65-403-270-900

0	2017/06/30	ISSUED FOR CONSTRUCTION	QAN
NH	DATE	REASON	FIN APP



CLUST

NUSSANA PROMEC MINING
PT. LTD.
JALORUT, MALAYSIA

AGNICO EAGLE

CONSULTANT PROJECT NO.	591700
PRODUCT	AGNICO EAGLE - MELLADINE DIVISION 403P - COMBUSTIBLE
CONC: RM	
DATE: mm/dd/yy	
DRAWN: PMS KVE	

DATE: 11/17/78	TYPE: PORTAL #1	NO. DESIGN	PAGES	NO.
WDR NAME:	FABRICATION ISOMETRIC			
DATE:	FUEL FROM 65WKA1607 UNLOADING NOZZLE TO 65PDM1603B			
APP:				

DATE	6515	403P-100-PDI-CC10-008	4/10	0
GIBBELL'S ALCOHOL				

[illegible][illegible]

DATE: 11 Nov 2017 13:08ms

1753

Received: 2017-11-08

PT 6216-6
GMAW AC-001
PL a PI RC

par: 62

21.06x20

Rép:

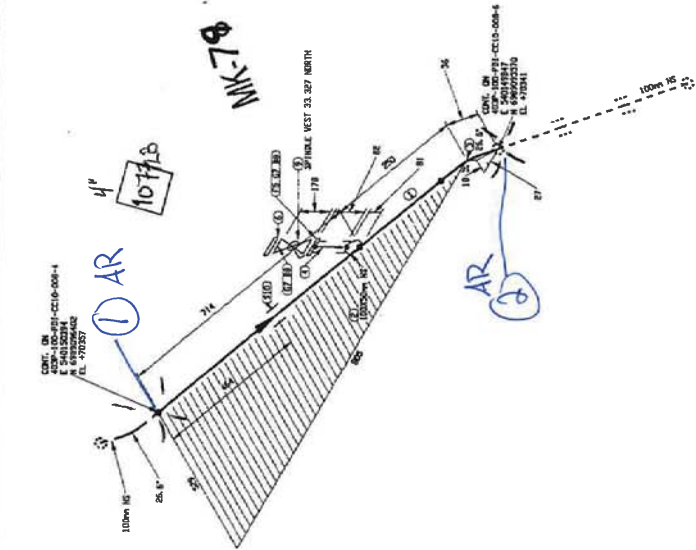


JUSTICE

PLACERS	5 110
PLACERS	5 110

14

CONCLUSIONS BASED ON

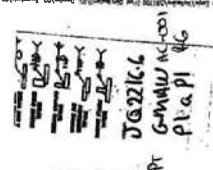


Fluids Board	End	50% LX
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Grand AG-001
PFA PI LC

14

4.





Fluid Piezel $C_{nd} = 50\% R_x$

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21.06x20

REÇU le 03 JUL. 2017

ENATELIER LE
04 JUL. 2017

403P-N-N-01

41


 JG2216-6
 AT GMDW-AC
 PL 9 PL 2

ENATELIER LE
04 JUL. 2017
par: *BS*

CONTRAT
2106x20

REÇU
03 JUL. 2017
Rép:

LISTE DE MATERIEL

QTE	DESIGNATION	UNITE	REMARQUES
1	11161	100	320 STD. S&S PIPE
2	2	100	CL 300 STD. S&S, 100 FLANGE
3	2	100	CL 300 STD. S&S, 100 FLANGE
4	16	16	CL 150, 8 - 15 STD. S&S, 100 FLANGE
5	5	100	CL 150, 8 - 15 STD. S&S, 100 FLANGE

AGNICO EAGLE

AGNICO EAGLE - METALINE DIVISION
403P - COMBUSTIBLE

ISSUED FOR CONSTRUCTION

0 2017/06/30

AGNICO EAGLE

AGNICO EAGLE - METALINE DIVISION

403P - COMBUSTIBLE

REÇU

03 JUL. 2017

AGNICO EAGLE

AGNICO EAGLE - METALINE DIVISION

403P - COMBUSTIBLE

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

Fluor Diesel 403P AX

U-F

2022/6/6
G-MW
P/a pi

JA 2216.6
Pt GMAWAG-001
P.C. Pl. 16

Plumber Diesel	End 5% lx



FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

[illegible]

LD

ENATELIER LE
04 JUL. 2017
par: B5

2106x20

REÇU I ©
03 JUL. 2017
Rép: _____

par: *bs*

45



Fluide Diesel

JG 2216.6
GMAW KC
Pl'a Pl'

1234

21:06X20

ép: -----

AGNICO EAGLE

အသံမြေအောက်

591700

LINE DIVISION

TABLE

ETRIC
B TO 6STNK41610

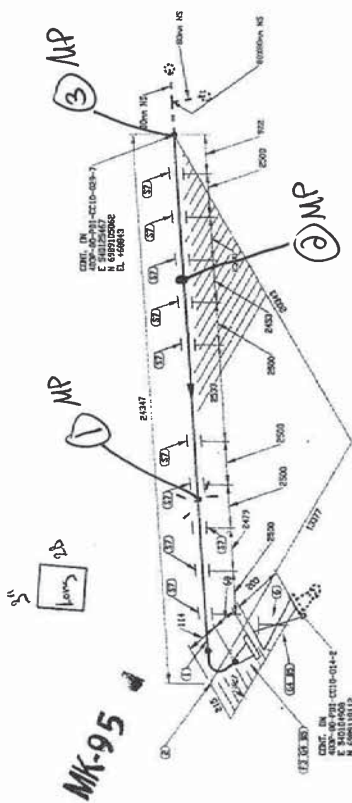
PAGES	REV.
1/2	0

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65

Fluide Diesel

0522166
of Gmina Koni
Pl. a. Pl. 14

[illegible]

202216
 16.01.16
 16.01.16

LISTE DE MATERIEL

QTE	DES	REMARKS
1	17750 MM	100 STD. SALS PIPE
2	17750 MM	100 STD. SALS PIPE
3	17750 MM	100 STD. SALS PIPE
4	17750 MM	100 STD. SALS PIPE
5	17750 MM	100 STD. SALS PIPE
6	17750 MM	100 STD. SALS PIPE
7	17750 MM	100 STD. SALS PIPE
8	17750 MM	100 STD. SALS PIPE
9	17750 MM	100 STD. SALS PIPE
10	17750 MM	100 STD. SALS PIPE
11	17750 MM	100 STD. SALS PIPE
12	17750 MM	100 STD. SALS PIPE
13	17750 MM	100 STD. SALS PIPE
14	17750 MM	100 STD. SALS PIPE
15	17750 MM	100 STD. SALS PIPE
16	17750 MM	100 STD. SALS PIPE
17	17750 MM	100 STD. SALS PIPE
18	17750 MM	100 STD. SALS PIPE
19	17750 MM	100 STD. SALS PIPE
20	17750 MM	100 STD. SALS PIPE

CONTRAT UF
 21.06x20

REQU
 03 JUL. 2017
 Rep:

AGNICO EAGLE

AGNICO EAGLE - MELLANDINE DIVISION
 403P - COMBUSTIBLE

AGNICO EAGLE

AGNICO EAGLE - MELLANDINE DIVISION
 403P - COMBUSTIBLE

AGNICO EAGLE

AGNICO EAGLE - MELLANDINE DIVISION
 403P - COMBUSTIBLE

AGNICO EAGLE

AGNICO EAGLE - MELLANDINE DIVISION
 403P - COMBUSTIBLE

U.F.

LISTE DE MATERIEL		DESCRIPTION	
QTY	UNIT	QTY	UNIT
1	59086	00	00
2	26	00	00
		SCH STD. SMLS PIPE PIPE SUPPORT AS PER DETAIL 3, TNG 65-403-270-200	

CONTRAT UF
21.06 X 20

ENATELIER LE
04 JUL. 2017
 par: *[Signature]*

REQU 10
03 JUL. 2017
 Rép:

**FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING**

AGNICO EAGLE		ISSUED FOR CONSTRUCTION		SUSPENSE	
DATE	BY	DATE	BY	DATE	BY
0	2017/06/30	0	2017/06/30		

AGNICO EAGLE - NELLADINE DIVISION		403P - COMBUSTIBLE	
PROJECT	ITEM	NO. DESIGN	NO. REV.
AGNICO EAGLE - NELLADINE DIVISION	403P - COMBUSTIBLE	6515	8/19
PORTAIL #1		FABRICATION ISOMETRIC	
FUEL FROM 403P-80-PDI-CC10-014 TO 6515K1611			

SACRAL PROFESSIONAL		SACRAL PROFESSIONAL	
DATE	BY	DATE	BY
0	2017/06/30	0	2017/06/30

NO. DE COMPTES		PROJET		SYSTEME DE COMPTES		CODE DE COMPTES		CLASSIFICATION		CLASSIFICATION		CLASSIFICATION	
PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM
403P-80-PDI-CC10-015	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10
PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM	PROJET	ITEM
403P-80-PDI-CC10-015	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10	PDI	CC10

U-F

Final Design

2022/06/26
 G. M. W.
 P. L. A. P. I.

ENATELIER LE
04 JUL. 2017
par : BS

LISTE DE MATERIEL		EXAMINATION	
No	QTE	QTE	QTE
1	49986	NO	NO
2	120	NO	NO
3031 STD. SMLS PIPE PIPE SUPPORT AS PER DETAIL 3, TMS 65-403-270-200			

CONTRAT UF
21.06X20

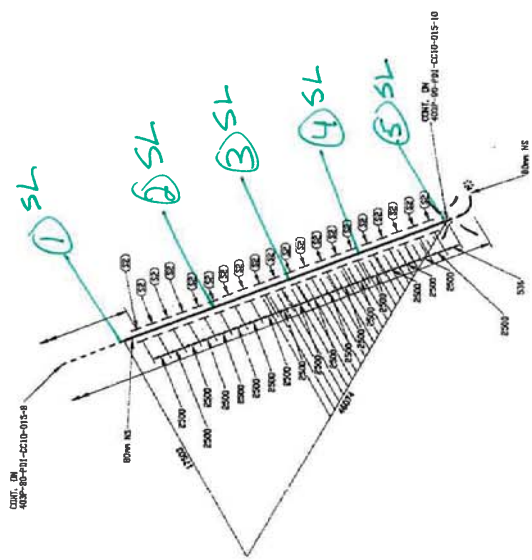
REQUIS
03 JUL. 2017
Rég: -----

0 2017/06/30 ISSUED FOR CONSTRUCTION		REGION	
No	QTE	QTE	QTE
AGNICO EAGLE			

AGNICO EAGLE - MELADINE DIVISION		403P - COMBUSTIBLE	
DATE	REVISION	DATE	REVISION
03 JUL. 2017	1	03 JUL. 2017	1

PORTAIL #1		FABRICATION ISOMETRIC	
DATE	REVISION	DATE	REVISION
03 JUL. 2017	1	03 JUL. 2017	1

FUEL FROM 403P-80-PJ1-CC10-014 TO 65TMSK1611		FUEL FROM 403P-80-PJ1-CC10-015	
DATE	REVISION	DATE	REVISION
03 JUL. 2017	1	03 JUL. 2017	1



FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

U-F

202216.6
GAMW/KCOI
plapl KC

REÇU 10
03 JUL. 2017
Rép: -----

CONTRAT UF
21.06 x 20

AGNICO EAGLE
AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FUEL FROM 403P-80-P01-CC10-014 TO 65THK41611

LISTE DE MATERIEL

QTE	DES	QTE	DES	QTE	DES
1	5316 IN	1	5316 IN	1	5316 IN
2	4 IN	2	4 IN	2	4 IN
3	2 IN	3	2 IN	3	2 IN

SON STL DLS PIPE
SON STL IN LA 90 DRE ELLEN
PIPE SUPPORT AS PER DETAIL 3, WSP
403P-80-P01-CC10-015

ISSUED FOR CONSTRUCTION

0 2017/06/30

DATE

REVISION

CLIENT

AGNICO EAGLE

AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FUEL FROM 403P-80-P01-CC10-014 TO 65THK41611

REÇU 10

03 JUL. 2017

Rép: -----

AGNICO EAGLE

AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FUEL FROM 403P-80-P01-CC10-014 TO 65THK41611

REÇU 10

03 JUL. 2017

Rép: -----

2022166
GAMWUC
P. a. p. 16

U.F.

Revised Diesel

ENATELIERLE
04 JUL. 2017
par: *AS*

LISTE DE MATERIEL		REMARQUES	
NO	QTE	DES	REMARQUES
1	15	3/4" x 1/2" x 6	EN STD. DES PRC
2	15	1/2" x 1/2" x 6	WPC SUPPORT AS PER DETAIL 3, WPC
3	15	1/2" x 1/2" x 6	65-403-200-200

CONTRAT UF

21.06x20

REÇU 10

03 JUL. 2017

Rép: -----

ISSUED FOR CONSTRUCTION		REVISION	
NO	DATE	NO	DATE
0	2017/06/30		

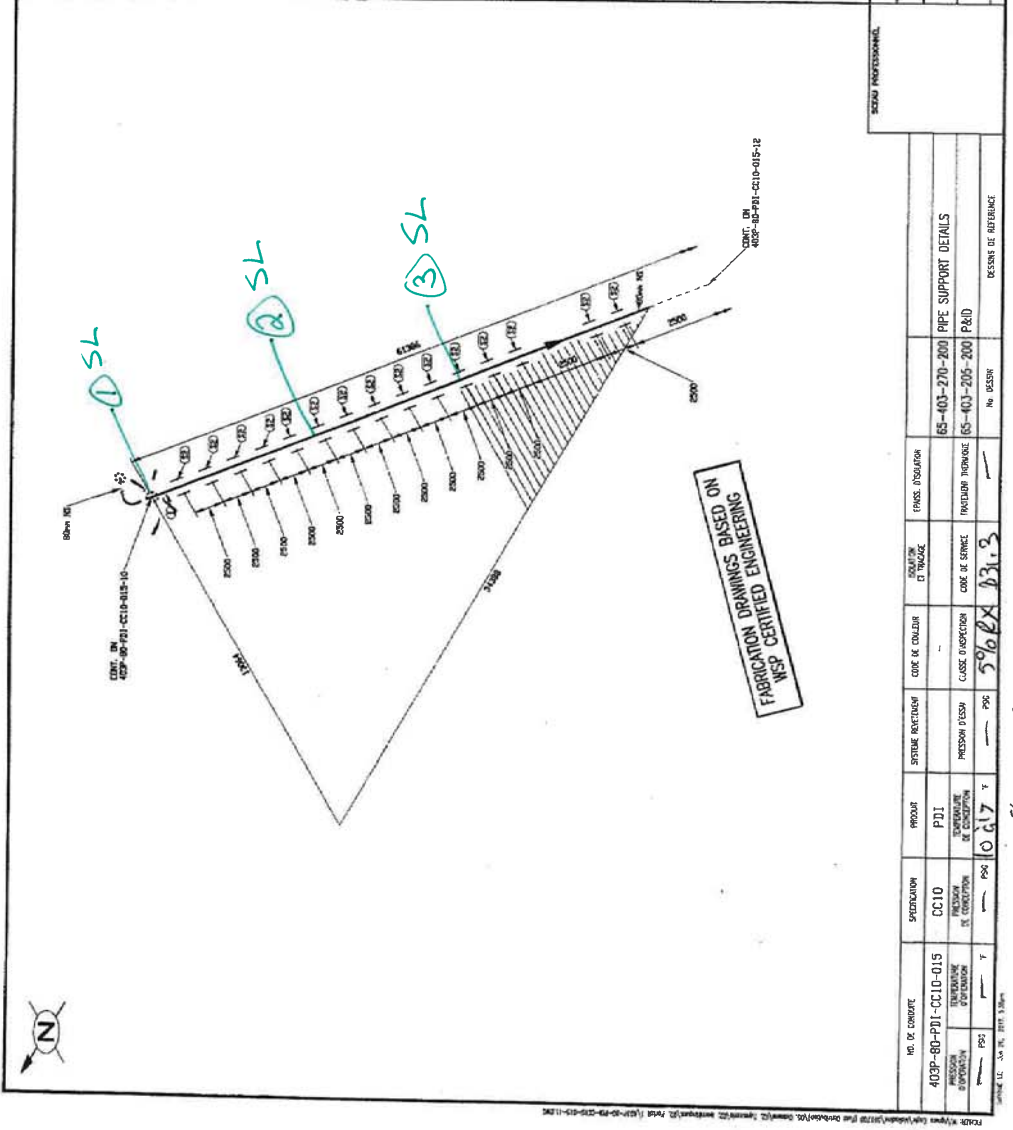
AGNICO EAGLE

CLIENT		PROJETS	
NO	DATE	NO	DATE
0	2017/06/30		

AGNICO EAGLE - MELTADINE DIVISION		403P - COMBUSTIBLE	
NO	DATE	NO	DATE
0	2017/06/30		

FABRICATION ISOMETRIC		FUEL FROM 403P-80-PRI-CC10-014 TO 65TM41611	
NO	DATE	NO	DATE
0	2017/06/30		

FUEL FROM 403P-80-PRI-CC10-014 TO 65TM41611		FUEL FROM 403P-80-PRI-CC10-015	
NO	DATE	NO	DATE
0	2017/06/30		



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A GANDWAK
P.L. 1. 46

U-F

Fluide: Diesel

403P-MV-01

ENATELIER LE
04 JUL. 2017
par: *Handwritten signature*

LISTE DE MATERIEL		DESCRIPTION	
N°	QTE	UN	QTE
1	2430	M	60
2	1	BO	60
3	10	BO	60

MATERIEL/ALUMINE	
1	BOI STD. SALS PIPE
2	BOI STD. 30 1/4 45 RES ELON TERN TO 30.00
3	PIPE SUPPORT AS FOR DETAIL 3, FIG
4	403P-80-PRI-CC10-015

CONTRAT UF
21.06 X 20

REQU 10
03 JUL. 2017
Rep:

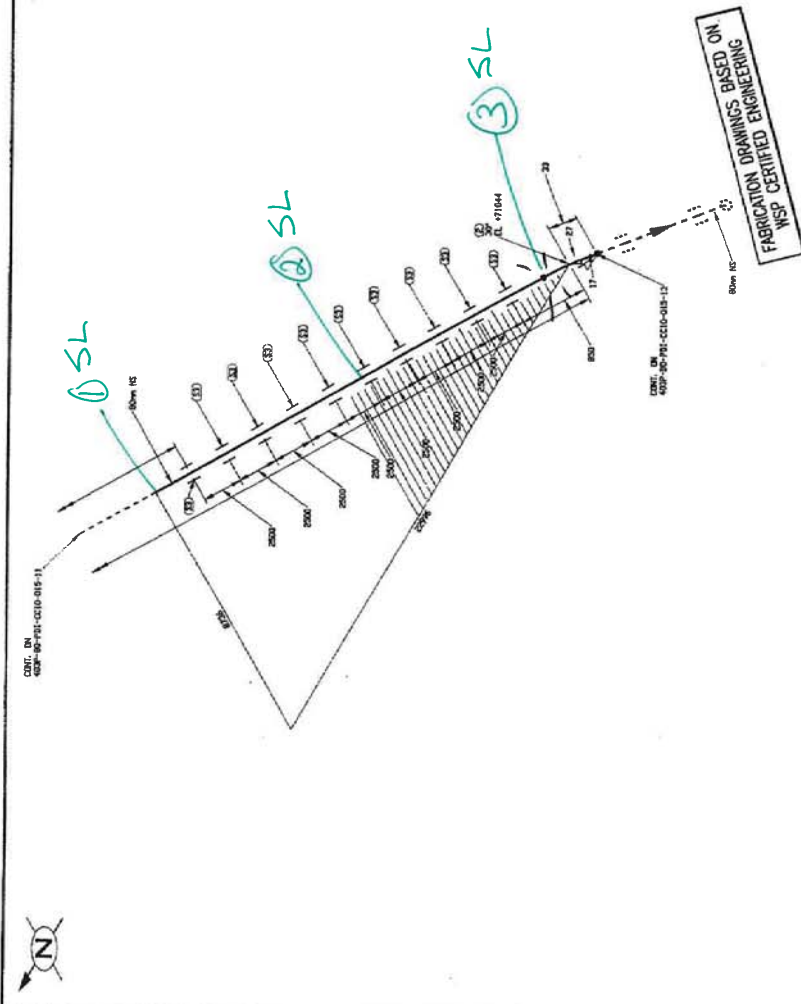
ISSUED FOR CONSTRUCTION		REVISION	
N°	DATE	N°	DATE
0	2017/06/30		

AGNICO EAGLE

CORRECTION		PROJET	
DATE	REV/PROJ	PROJET	AGNICO EAGLE - HELLADINE DIVISION
2017/06/30	01	403P - COMBUSTIBLE	

AGNICO EAGLE	
591700	PORTAIL #1
FABRICATION ISOMETRIC	FUEL FROM 403P-80-PRI-CC10-014 TO 651MA1611
6515	403P-80-PRI-CC10-015

REVISION	
DATE	REVISION
2017/06/30	0



04 202164 K-001
G-MW
P.L.A.P.I

U-F.

002164
 6-11-16
 16

LISTE DE MATERIEL		DESCRIPTION	
QTE	REF	QTE	REF
1	403P-80	1	403P-80
2	403P-80	2	403P-80
3	403P-80	3	403P-80

AGNICO EAGLE

AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE

PORTAIL #1
FABRICATION ISOMETRIC
FUEL FROM 403P-80-PJI-CC10-014 TO 657N64611

NO DE DOWTE		PRODUCTION		PROJET		ETUDE PRELIMINAIRE		COTE DE COULEUR		SITUATION ET TAILLAGE		COTE DE DOWTE		COTE DE DOWTE		COTE DE DOWTE		COTE DE DOWTE	
PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET
403P-80-PJI-CC10-015	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI	CC10	PJI
PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET	PRODUCTION	PROJET

SECTEUR / PRODUCTION		DATE		DATE		DATE		DATE		DATE		DATE		DATE		DATE		DATE	
SECTEUR	PRODUCTION	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
403P-80-PJI-CC10-015	CC10	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017

AGNICO EAGLE		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION		AGNICO EAGLE - MELTADINE DIVISION	
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403P-80-PJI-CC10-015	CC10	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017	03 JUL. 2017

ENATELIER LE
 04 JUL. 2017
 par : PS

U-F



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Flügel Diemel

2022166
GNDW/KC001
Pl. a. Pl. 16

REÇU
03 JUIL. 2017
Rép:

CONTRAT UF
21.06 X20

AGNICO EAGLE
AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FIEL FROM 403P-80-PJT-CC10-014 TO 65THK1611

LISTE DE MATERIEL

Qté	DA	DESCRIPTION
1	20453 M 80	80% STD. 3/8" PIPE
2	10	PIPE SUPPORT AS PER DETAIL 3, 200.

DATE	REVISION	ISSUED FOR CONSTRUCTION
0	2017/06/20	ISSUED FOR CONSTRUCTION

AGNICO EAGLE

AGNICO EAGLE - MELTADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FABRICATION ISOMETRIC
FIEL FROM 403P-80-PJT-CC10-014 TO 65THK1611

REÇU
03 JUIL. 2017
Rép:

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

Désuet

ENATELIER LE
04 JUIL. 2017
par: *BD*

U-F

Fluoré Diesel

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01-671111-1600
01-671111-1600

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2.1.0.6 X 20

Rèp:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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DATE:

10.1380/0000000000000000

CATO

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Product No. J71700

ADINE DIVISION

3761151

MECHANISMS

114 TO 657W41611

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C10-015	16/19
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ALL DRAWINGS BASED ON
CONFERING

Désert

Fluide Diesel

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C. 1.

near

04 JUL 2017

near

11

Pr
GMAW No
PLG PI 14



Fluide Piasel

AGNICO EAGLE

WAREHOUSE 2

DOUBLE WALL

Location of 50000L Tank

Initial Location of 50000L Tank

MESURING DAY TANK 2050 L.

New Location MESURING DAY TANK 2050 L.

Given Location E:540076 N:6988607

Longueur changement $\approx 240p$

AR

Date d'envoi : 2017-11-02

444 - Ventilation Intake Measuring Day Tank Location

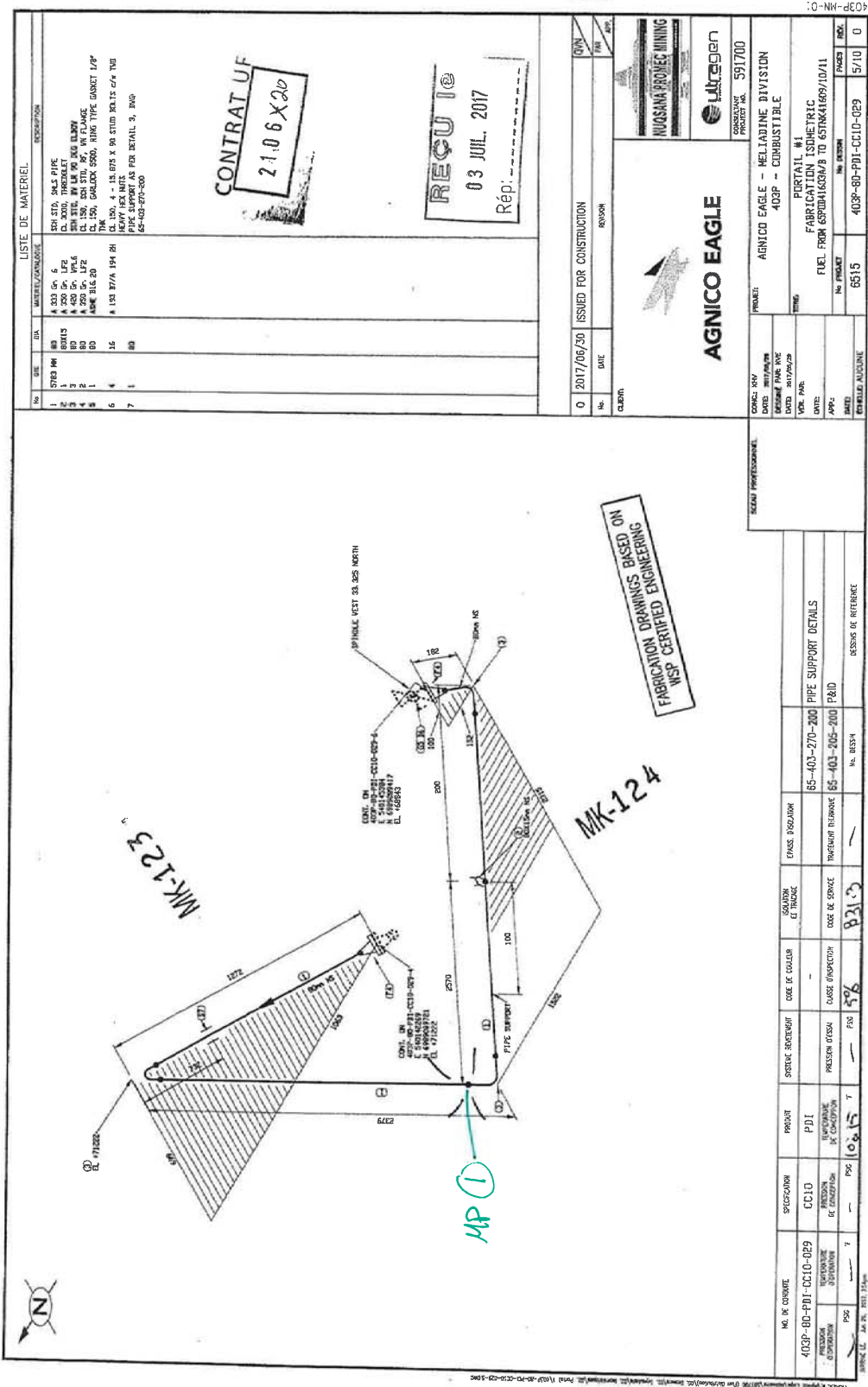
par : 35.

65

Fluide Diesel

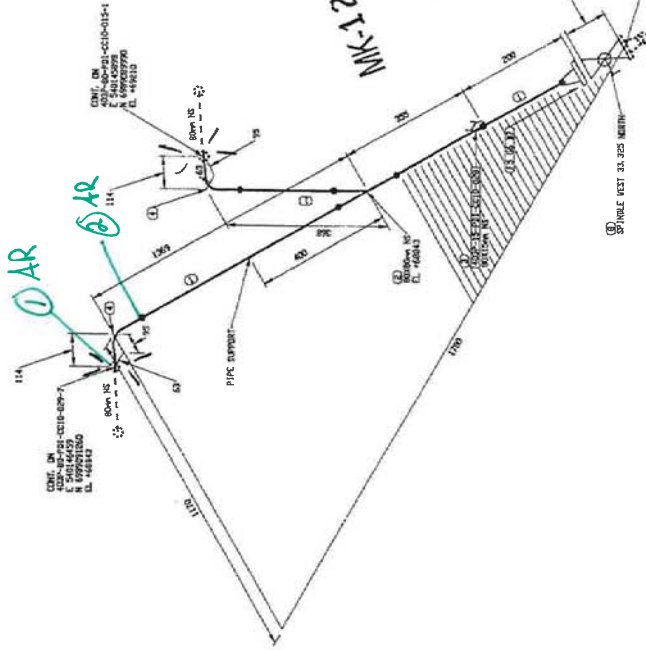
Handwritten notes at bottom left:

JG 2216
GMW NC
Pl. a. Pl. 001



ENATELIER LE
04 JUL. 2017
par: *BD*

LISTE DE MATERIEL		MATERIEL / QUANTITE		DESCRIPTION	
QTE	UN	QTE	UN	QTE	UN
1	1739 MM	1	6	1739 MM	6
2	1739 MM	2	6	1739 MM	6
3	1739 MM	3	6	1739 MM	6
4	1739 MM	4	6	1739 MM	6
5	1739 MM	5	6	1739 MM	6
6	1739 MM	6	6	1739 MM	6
7	1739 MM	7	6	1739 MM	6
8	1739 MM	8	6	1739 MM	6
9	1739 MM	9	6	1739 MM	6
10	1739 MM	10	6	1739 MM	6
11	1739 MM	11	6	1739 MM	6
12	1739 MM	12	6	1739 MM	6
13	1739 MM	13	6	1739 MM	6
14	1739 MM	14	6	1739 MM	6
15	1739 MM	15	6	1739 MM	6
16	1739 MM	16	6	1739 MM	6
17	1739 MM	17	6	1739 MM	6
18	1739 MM	18	6	1739 MM	6
19	1739 MM	19	6	1739 MM	6
20	1739 MM	20	6	1739 MM	6
21	1739 MM	21	6	1739 MM	6
22	1739 MM	22	6	1739 MM	6
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99	1739 MM	99	6	1739 MM	6
100	1739 MM	100	6	1739 MM	6



CONTRAT UF
21.06X26

REQU
03 JUL. 2017
Rép: *BD*

FABRICATION DRAWINGS BASED ON
WSP CERTIFIED ENGINEERING

AGNICO EAGLE

AGNICO EAGLE - HELLADINE DIVISION
403P - COMBUSTIBLE
PORTAIL #1
FUEL FROM 6504160000 TO 6510416000/10/11

CONC. IN 1739 MM
DATE: 03/07/2017
VOLUME: 1739 MM
DATE: 03/07/2017
APPLI: 1739 MM
DATE: 03/07/2017
SÉRIALISÉ: 1739 MM

CONC. IN 114 MM
DATE: 03/07/2017
VOLUME: 114 MM
DATE: 03/07/2017
APPLI: 114 MM
DATE: 03/07/2017
SÉRIALISÉ: 114 MM

CONC. IN 125 MM
DATE: 03/07/2017
VOLUME: 125 MM
DATE: 03/07/2017
APPLI: 125 MM
DATE: 03/07/2017
SÉRIALISÉ: 125 MM

CONC. IN 1739 MM
DATE: 03/07/2017
VOLUME: 1739 MM
DATE: 03/07/2017
APPLI: 1739 MM
DATE: 03/07/2017
SÉRIALISÉ: 1739 MM

CONC. IN 114 MM
DATE: 03/07/2017
VOLUME: 114 MM
DATE: 03/07/2017
APPLI: 114 MM
DATE: 03/07/2017
SÉRIALISÉ: 114 MM

CONC. IN 125 MM
DATE: 03/07/2017
VOLUME: 125 MM
DATE: 03/07/2017
APPLI: 125 MM
DATE: 03/07/2017
SÉRIALISÉ: 125 MM

CONC. IN 1739 MM
DATE: 03/07/2017
VOLUME: 1739 MM
DATE: 03/07/2017
APPLI: 1739 MM
DATE: 03/07/2017
SÉRIALISÉ: 1739 MM

CONC. IN 114 MM
DATE: 03/07/2017
VOLUME: 114 MM
DATE: 03/07/2017
APPLI: 114 MM
DATE: 03/07/2017
SÉRIALISÉ: 114 MM

CONC. IN 125 MM
DATE: 03/07/2017
VOLUME: 125 MM
DATE: 03/07/2017
APPLI: 125 MM
DATE: 03/07/2017
SÉRIALISÉ: 125 MM

CONC. IN 1739 MM
DATE: 03/07/2017
VOLUME: 1739 MM
DATE: 03/07/2017
APPLI: 1739 MM
DATE: 03/07/2017
SÉRIALISÉ: 1739 MM

CONC. IN 114 MM
DATE: 03/07/2017
VOLUME: 114 MM
DATE: 03/07/2017
APPLI: 114 MM
DATE: 03/07/2017
SÉRIALISÉ: 114 MM

CONC. IN 125 MM
DATE: 03/07/2017
VOLUME: 125 MM
DATE: 03/07/2017
APPLI: 125 MM
DATE: 03/07/2017
SÉRIALISÉ: 125 MM

U-E

Fluide Diesel

2022/6/6
pt 6000000
pt 6000000

APPENDIX F

Inspection Report – Portal #1 Fuel Modules Quality Control Documents



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:

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Agnico Eagle
No.

6515-C-270-007-141-QCR-0004 R: Sub001

DOCUMENT FOR INFORMATION



22466T / 22498E

FUEL MODULES



AGNICO EAGLE

MÉLIADINE

6515-C-270-007

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- 4** ☒ Complete, no further submission required.

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2017-07-10

By:

Date:

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Agnico Eagle

No.

6515-C-270-007-141-TES-0007 R: Sub002

DOCUMENT FOR INFORMATION



Contract title:
Contract number:
Promec Ref.:

Meliadine Fuel Tanks Piping Supply and Installation
6515-C-270-007
C22498E

Approved on :
Approved by:



Inspection and Testing Plan

ITP #
Area
System
Discipline

AEM-ITP-003
rankin inlet
ALL
Electrical
Instrumentation

Approval Signature

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)



Contract title:
Contract number:
Promec Ref.:

Meliadine Fuel Tanks Piping Supply and Installation
6515-C-270-007
C22498E

Approved on :
Approved by :

AGNICO EAGLE

Approval Signature

ITP #
Area
System

AEM-ITP-003
rankin inlet
ALL

Discipline

Electrical
Instrumentation

Updated on:
2017-04-26

Legend
H - Hold
W - Witness
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R - Review

Inspection and Testing Plan

Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria	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)



Contract title:
Contract number:
Promec Ref.:

Meliadine Fuel Tanks Piping Supply and Installation
6515-C-270-007
C22498E

Approved on :
Approved by:

AGNICO EAGLE

Inspection and Testing Plan

ITP #
Area
System
Discipline

AEM-ITP-003
rankin inlet
ALL
Electrical
Instrumentation

Approval Signature

Updated on:
2017-04-26

Legend
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Activity No. and CDRL Code	Activity Description (Per Scope of Work)	Responsibility Contractor and/or Sub	Acceptance Criteria	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)





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- 1 ☐ Proceed to next submission and status.
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LUC SÉNÉCAL

2017-07-10

By:

Date:

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Agnico Eagle
No.

6515-C-270-007-141-TES-0001 R: Sub002

DOCUMENT FOR INFORMATION



Agnico-Eagle Mines Ltd.
Contract no. 6515-C-270-007

Cable Installation and Testing Procedure
AEM-EL-PRO-001

Area No.: All

System No.: All

PROMEC Approvals

Prepared by: Stéphane Doré

Signature: 

Date: 2017-04-25

Verified by: Jonathan Roy

Signature: 

Date: 2017-04-25

Approved by: Éric Poulin

Signature: 

Date: 2017-04-25

CLIENT Approvals

Verified by: _____

Signature: _____

Date: _____

Approved by: _____

Signature: _____

Date: _____

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APPENDIX A – ALL APPLICABLE ITRs & LOG



Agnico-Eagle Mines Ltd.
Cable Installation and Testing Procedure

PRO Number : AEM-EL-PRO-001
Contract no. : C22498E



1. SCOPE

The procedure is to establish the cable installation and testing procedure.

1.1 Covered Sections

- Medium Voltage and 1 000 V Power Cables.
- 600 V Control Cables.
- 300 V Instrumentation Cables.

2. EXECUTION

2.1 Inspection and Preparation

- Installation of raceways and supports shall be completed before installing cables.
- Conduits shall be tested for obstructions by pulling a mandrel or other approved object through the conduit. Obstructions shall be cleared with a cutting mandrel or other approved means.

2.2 Installation Requirements

- Cables shall be handled carefully when unreeling to avoid damage due to kinking or otherwise bending to radius less than the Manufacturer's or Electrical Code minimum recommended bending radius.
- Cables shall not be laid on rough ground or dragged over sharp objects.
- Cable Installation in Raceways:
 - Cable reels to be set as close as practical to the raceway entrance, and train the cable as directly as possible to the entrance with minimal bending.
 - A protector is to be used at the raceway entrance to protect the cable jacket.
 - For installation of multiple cables in a conduit, all cables are to be pulled simultaneously.
 - Cable installation to be performed so that no undue stress is placed upon the insulation and coverings when they are drawn through conduits or otherwise handled.
 - Cables to be neatly installed avoiding crosses as much as practical.
 - Cables to be supported clear of the tray lip where they exit the tray.
 - Cables to be anchored in place vertically at 1.0 m maximum intervals, and at each bend within 0.3 m of the change in direction at both sides of the bend with appropriate fasteners.
 - A barrier shall be provided to separate power and control cables for installations where they share a common cable tray. Fireproof sheeting shall be provided to separate power and control cables at tee or cross junctions.
- Installation Cables in Boxes and Cabinets:
 - Open wiring to be arranged in a neat and orderly manner.



Agnico-Eagle Mines Ltd.
Cable Installation and Testing Procedure

PRO Number : AEM-EL-PRO-001
Contract no. : C22498E



- Groups of cables to be spaced and supported.
- Slack wire will be left in all junction boxes, pull boxes, and other places so that wires are not drawn tight against conduit and bushings or short radius corners and the insulation eventually damaged by being squeezed between conductor and other objects.
- The cable shall not be bended either temporarily during installation or permanently to a radius less than the Manufacturer's recommended minimum bending radius.
- Cable Termination Instructions:
 - ◆ Leave each conductor of a cable long enough to reach the most distant terminal point in the equipment being installed. Loop and tie the conductors in a bundle.
 - ◆ Strip cable jackets only as far back as needed to accommodate the termination of the conductors.
 - ◆ Slack wire to be left at all terminal connections so that stress is not placed on terminal studs and other connections.
 - ◆ Control and Instrumentation Cables:
 - ▲ All shields on the shielded cables to be kept floating at the transducer and final control element ends (thermocouples, transmitters, analyzers, etc.) and to be terminated and grounded in DCS cabinets.
 - ▲ Motor terminal wiring to be bolted together with the ring tongue type terminals and tin plated bolts of the approximate size.
- Cable Penetration Sealing: Fire stopping seal penetrations shall be in accordance with Client specifications.
- Tagging of Cables Installations:
 - ◆ Identify all cables in accordance with attached cable tagging procedure.
 - ◆ Affix cable identification tags at each termination as close to the termination as possible, and at pull boxes, manholes or other points of access.
 - ◆ Individual conductor identification products may be slip-on, or heat shrink. Identification information to be typed or printed with indelible ink.
 - ◆ Single conductor cables shall be color coded and comply with the Canadian Electrical Code CSA C22.1-06, Article 4-036.

2.3 Inspection and Test Requirements

Installed power cables shall be inspected and tested, including continuity and insulation (Megger) of all cables, in accordance with applicable codes and standards.

Installed control shall be inspected and tested, including continuity, in accordance with applicable codes and standards.



Agnico-Eagle Mines Ltd.
Cable Installation and Testing Procedure

PRO Number : AEM-EL-PRO-001
Contract no. : C22498E



AGNICO EAGLE

Appendix A

ALL APPLICABLE ITRs & LOGs



Vendor Document Status

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2017-07-10

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Agnico Eagle
No.

6515-C-270-007-141-TES-0003 R: Sub002

DOCUMENT FOR INFORMATION






Agnico-Eagle Mines Ltd.
Contract no. 6515-C-270-007

Grounding Installation and Testing Procedure
AEM-EL-PRO-002

Area No.: All
System No.: All

PROMEC Approvals

Prepared by:	<u>Stéphane Doré</u>	Signature:		Date:	<u>2017-04-25</u>
Verified by:	<u>Jonathan Roy</u>	Signature:		Date:	<u>2017-04-25</u>
Approved by:	<u>Éric Poulin</u>	Signature:		Date:	<u>2017-04-25</u>

CLIENT Approvals

Verified by:	<u> </u>	Signature:	<u> </u>	Date:	<u> </u>
Approved by:	<u> </u>	Signature:	<u> </u>	Date:	<u> </u>

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1. GENERAL

1.1 Introduction

- The purpose of electrical ground testing is to determine the effectiveness of the grounding medium with respect to true ground (earth). Most electrical systems do not rely on the earth to carry load current (this is done by the system conductors) but earth may provide the return path for fault currents, and for safety, all electrical equipment frames are connected to ground.
- During resistance testing, precautions shall be taken to ensure personnel safety. For example the test cable area shall be barricaded and testing personnel shall wear adequate PPE when handling test probes.
- All tests shall be documented and submitted to Owner's representative.
- Weather conditions (e.g. temperature and humidity) can have a considerable effect on resistance readings. Hence, it is important that weather conditions be documented for every resistance test.
- In general, the lower the ground resistance, the safer the system is considered to be. Where the resistance is unsatisfactory, those components of the circuit causing unsatisfactory readings shall be repaired or replaced until the resistance meets the minimum requirements.

1.2 References

- Canadian and National electrical code requirements.
- IEEE Standard IEEE-80 and 81
- IEEE 142, Recommended Practice for grounding of Industrial and Commercial Power Systems.
- International Electrical Testing Association Inc. (NETA).

1.3 Design requirements

- Ground electrical equipment in accordance with ANSI/ IEEE Standard 142, IEEE Standard 80 and the requirements of this Section.
- Design shall be such that acceptable levels of step and touch potential are not exceeded either for exposure to plant personnel or for external exposure via transfer potentials.
- The grounding system consists of a number of above ground interconnected conductors to provide a network to which all equipment and metallic structures are connected, either directly or by interconnecting cables. Bond the ground system to the main plant ground grid system at places designated on the Drawings.

2. PRODUCTS

2.1 Materials

- Bare Cable: Uninsulated, stranded, tinned copper cable of adequate size for station and substation ground grids, for connection of electrical and other equipment to the grounding grid and for running along the top of underground ductbanks.
- Insulated Cable: Soft drawn copper, Class B stranding with green colored insulation (if required).
- All ground connection will be bolted or compress type.
- Furnish all connectors, clamps, anchors, fittings, etc., made of copper or copper-alloy.

3. EXECUTION

3.1 Installation

- Install products in accordance with manufacturer's instructions.
- Equipment Safety Grounding
 - a. Clamp the ground conductor running on building steel to the flanges of the steel and provide access for connecting equipment ground taps.
 - b. If ground conductor is installed along the cable trays as a continuous conductor, clamp the ground cable to the outside of the trays side rail with

appropriate cable tray clamps. Run the cable on the top power tray wherever possible. The cable may be run along control trays in runs that do not have power trays. Do not run ground cables on any instrument trays.

- c. For motors remote from the ground grid, run a bare ground cable with the duct bank or tray connecting the motor frame to the station ground grid.
 - d. Provide all enclosures of electrical distribution or control equipment with a visible grounding cable connection between the enclosure and the station grounding system.
 - e. Provide grounding cable taps to electrical equipment not shown on the Drawings sized to meet the requirements of the CSA C.22.1-02.
 - f. Regardless of any regulatory body, no conductor smaller than 6 is permitted for an exposed ground circuit except for grounding instrument cases and secondary circuits of instrument transformers where 16 will be permitted.
 - g. For equipment requiring grounding, provide a means for attachment of a ground cable to the enclosure. The grounding means may be a tapped hole in the enclosure with a matching bolt and a appropriate lug for copper cable. Hold-down bolts are not to be used for attaching grounding cables.
 - h. Provide "packaged" or "skid-mounted" equipment with single-point connection to ground grid.
 - i. Ground all metallic conduits above ground and underground in accordance with the requirements of the CSA C.22.1-02.
 - j. Install the cable trays electrically continuous to meet the requirements of Article CSA C.22.1-02.. Install a bonding jumper in the gaps in the tray runs to provide continuity.
- **Circuit Grounding**
 - a. Power circuits to include a circuit ground conductor terminated appropriately at source end ground bus connection and at the load.
 - b. Size the circuit ground conductor in accordance with the CSA C.22.1-02.
 - **Terminal Connections:**
 - a. Provide connections of ground conductors to cable trays and conduit with copper clamps or straps or by grounding bushings. Remove non-conductive protective coatings such as paint, mill scales, oil, grease, oxides, or enamel



Agnico-Eagle Mines Ltd.
Grounding Installation and Testing Procedure

PRO Number : AEM-EL-PRO-002
Contract no. : C22498E



on the conduit fittings from the threads or contact surfaces before attaching grounding connection. After ground connection is attached, cover any remaining exposed bare metal with a coating matching the original coating.

- b. Above grade connections to equipment to be made using compression type connectors and bolted terminals.
 - c. Below grade connections, cable-to-cable or cable-to-ground rods and cable-to-structural steel to be made using compression lug.
 - d. Ground connections to piping to be generally "U clamp".
 - e. Connections of ground conductors to columns and similar structures to be welded.
 - f. Ground all cable shielding in accordance with the manufacturer's recommendations, or as directed by Owner.
 - g. Provide connections of ground conductors to equipment by means of a lug which shall be compressed on the cable end. Bolt the lug to the equipment frame using holes or terminals provided by the equipment manufacturer for this purpose. Where no such provisions are made, drill suitable holes in locations designated by Owner. Hold-down bolts are not to be used for ground connections. Ground connections to motors to be bolted directly to motor frame, and not to sole plates or supporting structures. At all bolted connections, scrape the joining surfaces clean and coat with NO-OX-ID, or equal compound.
- Control Cabinets Safety Ground
 - a. Connect all metal control cabinets to the ground buses. Insulate wires for connections between individual devices and the ground bus. Provide individual ground connections for each device; no looping permitted.
 - b. Do not make ground bus splice points coincident with the bolts which support the copper ground bus. Provide connections to the copper ground bus such that it is not necessary to open neither the ground bus nor any other connection to the bus to remove any ground connection. Separate bolted connections to the ground bus from the support and joint bolts.

- Control Cabinet Instrument Ground System:
 - a. Install an instrument ground system, conform to Client standard and engineering drawings
 - b. Install the instrument ground system in the following manner
 - I. Connect the main and branch insulated ground conductors to instrument ground bus.
 - II. Clearly label the instrument ground bus.
 - III. Ensure that no loops are in the instrument ground system.
 - c. "Reference" Distributed Control System (DCS) dc power "common" terminations and analog I/O field wiring shields to the instrument ground bus provided in each DCS enclosure. Provide all instruments and instrument cables with shields attached to only this instrument ground. Tape or insulate shielded cable with sleeves to prevent accidental grounding or touching of shields. Do not ground field ends.

3.2 Inspection and tests

- Visual and mechanical inspection: Check and inspect the installation to ensure that the grounding system has been built as per the engineering design. Ensure all connections to electrodes and ground cable are tight and secure.
- Ground resistance testing is needed after installation of the grounding system, typically five ohms for commercial and small industrial sites and one ohm for utility & transmission substation grounds and large industrial plant substation grounds.
- Follow the recommended manufacturer or designer grounding resistance levels specified. In general – all efforts shall be targeted toward achievement of minimum grounding resistance.



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By: **LUC SÉNÉCAL**

Date: **2017-07-10**

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Agnico Eagle
No. 6515-C-270-007-141-TES-0005 R: Sub002

DOCUMENT FOR INFORMATION



Agnico-Eagle Mines Ltd.

Contract no. 6515-C-270-007

Electrical Apparatus, Equipment & Supports Installation Procedure

AEM-EL-PRO-004

Area No.: All

System No.: All

PROMEC Approvals

Prepared by: Stéphane Doré

Signature: 

Date: 2017-04-25

Verified by: Jonathan Roy

Signature: 

Date: 2017-04-25

Approved by: Éric Poulin

Signature: 

Date: 2017-04-25

CLIENT Approvals

Verified by: _____

Signature: _____

Date: _____

Approved by: _____

Signature: _____

Date: _____

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APPENDIX A – ALL APPLICABLE ITRs & LOG



Agnico-Eagle Mines Ltd.
Electrical Apparatus, Equipment
& Supports Installation Procedure

PRO Number : AEM-EL-PRO-004
Contract no. : C22498E



1. PURPOSE

The procedure is to establish the electrical apparatus, equipment and supports installation procedure.

1.1 Submittals

The following drawings, information and data will be submitted:

- As-built drawings showing final setting dimensions where different from the design drawings.
- As-built drawings of all relative installation drawings.

2. EXECUTION

2.1 Installation

2.1.1 GENERAL

- Install all equipment in a neat manner using qualified trade persons in complete accordance with the Drawings and the equipment manufacturers instructions and recommendations.
- Fabricate and install any necessary temporary steel supports, brackets and anchors required for equipment erection or installation. Design of such supports, brackets, and anchors are subject to engineers' approval. Upon completion, remove all temporary supports, sand smooth, prime and paint welds on permanent plant structures, grout temporary anchor holes left in concrete and return the area to the originally installed condition.
- Prior to setting equipment:
 - Inspect equipment foundations for correctness in location, level, location of center lines, anchor bolt omissions, and height.
 - Uniformly roughen foundation surfaces.
 - Inspect all anchor bolts for straightness and damaged threads.
 - Straighten bent anchor bolts using acceptable methods.
 - Rerun bolts with damaged threads using suitable dies.
 - Clean and oil anchor bolts.
- Install all items shipped loose with equipment.
- Mount items with appropriate hardware.
- Provide additions and modifications to structural steel, grating, or floor steel required to completely install the equipment.
- Fabricate racks and supports for miscellaneous enclosures, boxes, cabinets and housings from rolled steel shapes, bars, rods, etc. of standard section and/or from strut material with accessory members and fittings.



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Electrical Apparatus, Equipment
& Supports Installation Procedure

PRO Number : AEM-EL-PRO-004
Contract no. : C22498E



- Use proper and adequate handling equipment and rigging at all times and inspect such equipment frequently. Lift electronic cabinets with the use of slings; do not use lifting eyes. Obtain exact weights and dimensions from approved manufacturers drawings or manufacturers representatives to ensure the use of adequate handling equipment.
- Welding
 - Perform in accordance with welding procedure
- Do not remove protective covers on flanges, pipe, or conduit connections until these connections are to be made.
- Fabrication and placing of shims:
 - Place shims, equipment baseplate, bedplates and soleplates as required for a minimum of 25 mm of grout such that shim pack thickness is no greater than 6 mm and no less than 3 mm for shims between the equipment and the top of the mounting plate.
 - Cut down and refinish where required, the tops of baseplate, soleplates, or rough foundations to allow for grouting.
 - Install shims of the required size, thickness and quality at the appropriate locations so there will be no deflection, deformation, or strain induced into the equipment bedplate or soleplate.
 - When the supporting structural steel frame is not level, taper the bottom shims to provide a level top bearing surface. Use a minimum number of shims at all times.
 - Wherever possible, place shims while the bedplate or equipment is in a jacked-up position using jacking or levelling nuts where provided or other means as necessary. Driving of shims to achieve a level top bearing surface is not permitted.

2.1.2 EQUIPMENT

- General
 - Set stationary equipment such as switchgear, motor control centers, and skid mounted equipment in a true vertical and horizontal plane and set anchor bolts evenly as required.
 - Tighten gasketed joints evenly around the entire gasketed area to insure uniform contact pressure.
 - Install wiring in conformance with connection diagrams, including jumpers where shown on terminal blocks. Install and terminate all wiring in accordance with Promec's procedure No. AEM-EL-PRO-001.
 - Install grounding systems and lightning protection in accordance with Promec's procedure No. AEM-EL-PRO-002.
 - Install cable tray system in accordance with Promec's procedure No. AEM-EL-PRO-003.
 - Install and terminate all cable in accordance with Promec's procedure No. AEM-EL-PRO-001.
- Panel boards and Transformers
 - Mount panel boards and transformers as specified in Client standards.



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Electrical Apparatus, Equipment
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PRO Number : AEM-EL-PRO-004
Contract no. : C22498E



- Cabinets and Free Standing Panel boards
 - Handle, assemble, and maintain cabinets and free standing panels according to manufacturer's recommended procedures and documentation requirements.
 - Place cabinets and free standing panels immediately in their final positions, as shown on the drawing's temporary storage locations shall not be considered.
 - Wire cabinets and free standing panels in accordance with electrical wiring diagrams including jumpers shown on terminal blocks.

2.2 Personnel requirements

Provide qualified manufacturer's representatives for technical assistance as required.

2.3 Inspection and test requirements

- CEM Cabinets
 - Thoroughly inspect, clean, and remove all foreign matter, dust, debris, dirt, etc. from equipment cubicles, compartments and insulators.
- Transformers
 - Megger all winding terminals (maximum 1 kV) in accordance with manufacturer's requirements and provide results to Client for review.
- Construction Checkout
 - Perform and document all inspections and test activities in accordance with manufacturer's recommendations.

2.4 Adjustment and Cleaning

Remove any protective, non-permanent coatings applied by the equipment manufacturer.

Clean external surfaces of all equipment and materials of dirt, grease, oil, loose rust.

2.5 Corrosion Protection/Coatings

Following installation, touch-up all scratched or marred areas of manufacturer's primed or finished paint. Use the same paint as manufacturer's original finish or prime paint with surface preparation and paint application in accordance with the manufacturer's requirements.



Agnico-Eagle Mines Ltd.
Electrical Apparatus, Equipment
& Supports Installation Procedure

PRO Number : AEM-EL-PRO-004
Contract no. : C22498E



Appendix A

ALL APPLICABLE ITRs & LOGs



Vendor Document Status

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By:

JEAN-FRANCOIS TREMBLAY

JG

Date:

2017-05-16

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No.

6515-C-270-007-141-TES-0006 R: Sub001

DOCUMENT FOR INFORMATION



Agnico-Eagle Mines Ltd.
Contract no. 6515-C-270-007

Instrumentation Installation and Testing Procedure
AEM-IN-PRO-001

Area No.: All

System No.: All

PROMEC Approvals

Prepared by:	<u>Stéphane Doré</u>	Signature:	<u>[Signature]</u>	Date:	<u>2017-04-25</u>
Verified by:	<u>Jonathan Roy</u>	Signature:	<u>[Signature]</u>	Date:	<u>2017-04-25</u>
Approved by:	<u>Éric Poulin</u>	Signature:	<u>[Signature]</u>	Date:	<u>2017-04-25</u>

CLIENT Approvals

Verified by:	_____	Signature:	_____	Date:	_____
Approved by:	_____	Signature:	_____	Date:	_____



Agnico-Eagle Mines Ltd.
Instrumentation Installation and Testing Procedure

PRO Number : AEM-IN-PRO-001
Contract no. : C22498E



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APPENDIX A – ALL APPLICABLE ITRs & LOG



Agnico-Eagle Mines Ltd.
Instrumentation Installation and Testing Procedure

PRO Number : AEM-IN-PRO-001
Contract no. : C22498E



1 SCOPE

This procedure includes:

- Installation of:
 - Field instruments
 - Field instrument racks and stands
- Installation of package equipment loose instruments.
- Installation of package equipment sensing tubing up to local control panel.
- Installation of specialty instruments.

2 PRODUCTS

2.1 Materials

- Instruments: As identified in the Instrument List. The Instrument List is a listing of instruments to be installed after:
 - Promec shall furnish all materials required for complete installation of control and instrumentation devices. Provide all tools and equipment required for the installation.
 - Promec shall furnish instruments, control devices and instrument racks, stands, and enclosures.
 - Promec shall provide all calibration equipment as required in Sections 2.2 of this specification.
 - Promec shall furnish nameplates for all control and instrumentation equipment furnished or installed under these specifications, unless already provided. Nameplates shall be either of laminated phenolic (white background with black letters) or stainless steel. Engrave or stamp the nameplates with the Instrument Tag Numbers per the Instrument List. Attach phenolic type nameplates to control and instrumentation equipment by machine screws or stainless steel wire.

2.2 Inspection and Test Requirements

- Promec shall obtain the instruments from the receiving warehouse which has inspected them for obvious shipping damage and manufacturing defects. Promec will also inspect instruments for obvious shipping damage and manufacturing defects when they receive them. Each instrument will have been calibrated by the manufacturer. Vendor calibration report will be review by Promec for each instrument. The calibration of each instrument will be checked by Promec prior to installation.
- Promec shall use qualified and experienced personnel to perform adjustments and tests. Perform adjustments and tests as many times as necessary to assure proper operation of equipment and systems and quality of materials and workmanship.



Agnico-Eagle Mines Ltd.
Instrumentation Installation and Testing Procedure

PRO Number : AEM-IN-PRO-001
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2.3 Cleaning

- Promec shall clean and remove any protective non-permanent, coatings applied by manufacturers. Clean equipment and material external surfaces of all dirt, grease, oil, loose rust, and other foreign material.

2.4 Corrosion Protection/Coatings

- Following installation, Promec shall touch-up all scratched or marred areas of Manufacturer's prime or finish painting. Promec shall use paint the same as Manufacturer's original finish or prime paint with surface preparation and paint application in accordance with the Manufacturer's requirements.
- Threads shall not be painted
- Stainless steel and other corrosion-resisting surfaces: do not paint.
- Machined surfaces: do not paint.
- Omit paint at all areas: before field welding.

3 EXECUTION

3.1 Installation

3.1.1 GENERAL

- Install all controls and instrumentation in accordance with the requirements of this Section. Any installation procedures not specified herein shall be done in accordance with the manufacturer's recommendations and good engineering practice.
- Promec shall utilize experienced workers for installation of all controls and instrumentation, tubing, and piping.
- Promec shall furnish all necessary craft personnel, supervision and scheduling required for the completion of instrument installation within the Owner's schedule.

3.1.2 INSTALLATION OF LOCALLY MOUNTED EQUIPMENT

- In addition to the installation requirements indicated on the drawings, the manufacturer's submittals, and the Instrument List, the requirements specified herein apply.
- Install all instruments and associated devices shall be installed in easily accessible locations for maintenance, calibration, and replacement. Take special care to assure that indicator type instruments are easily readable from the nearest accessible floor or platform elevation.
- Solenoid valves and control loop accessories not located in enclosures or mounted on valves shall be mounted in easily accessible protected locations near the components with which they are associated.
- All pressure gages (indicators) shall be installed bear the process connections, unless otherwise on the drawings and locate where easily read.
- Pressure switches not mounted in enclosures shall be installed on a wall or building column, or on pipe stands, near the piping or duct to which they are connected and mount to permit ease of adjustment.



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Instrumentation Installation and Testing Procedure

PRO Number : AEM-IN-PRO-001

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- All brackets, stands, supports, and other miscellaneous hardware shall be provided as required for mounting devices.
- Level transmitters, level controllers, and level switches of the displacer or float type shall be installed on vessel instrument piping columns as indicated on the piping detail drawings for that vessel. Top works of transmitters, controllers, and switches shall be provided as to positions which provide convenient access for operation and maintenance; perform prior to installation of tubing and wiring to the devices.
- Sight flow glasses shall be installed for maximum visibility.

3.1.3 INSTALLATION OF INSTRUMENT RACKS AND STANDS

- Freestanding racks, stands, and enclosures to the floor shall be attached to concrete equipment bases or supporting steel, at locations indicated on the drawings. Shim shall be provided for proper alignment before bolting to the floor or grouting.
- Non-freestanding racks and enclosures shall be mounted in accessible locations on columns and walls. Brackets shall be fabricated as required to install the racks and enclosures in a workmanlike manner.
- Rough edges and welds on all fabricated supports shall be grinded smooth; surfaces shall be finished with coating.
- Racks shall be located to provide the shortest reasonable instrument impulse line lengths for each of the instruments mounted thereupon.

3.1.4 CONNECTION OF EQUIPMENT AND DEVICES

- Design pressure and maximum process temperature shall be limited below manufacturer's specified data for all instruments.
- After flow instrument installation, Promec shall verify the high and low sides of the instrument with respect to the direction of flow.
- When reservoir tees are required, bent pipe shall be used between the root valve and the tee unless there is a space limitation. Fittings may be used if space is limited.
- Reservoir tees to be installed on vertical lines shall be mounted at or above the process line connection. These reservoir tees shall be mounted at the same elevation.
- Reservoir tees shall be provide for each reference leg for differential pressure transmitter used to measure level on the steam drums, deaerator storage tank, or any tank containing both liquid and vapour. Reservoir tees shall be provided on all steam flow and pressure applications to insure complete fill of the sensing line during operation. Reservoir tees must not be insulated. A filling connection shall be provided on the reservoir tees for initial filling of the sensing line.

3.1.5 FLOW METER TUBING

- Process sensing connections shall be provided between flow indicators, transmitters, controllers, or switches and shutoff valves on the main piping in accordance with the Drawings.
- Where tubing is run in open type trays, covers shall be installed wherever the trays pass through an open area where it is possible that the tubes can be damaged from falling objects.



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Instrumentation Installation and Testing Procedure

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Contract no. : C22498E



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3.2 Inspection and Test Requirements

3.2.1 GENERAL

- Pre-operational adjustments, material and equipment tests shall be made as specified and as required by governing codes, regulations, manufacturers' recommendations, and good construction methods.
- Instrument functional loop checkout shall be made to resolve any discrepancies and correct any field problems which arise in the scope of work.
- Assemble, test, and adjust, as required, for correct and reliable operation the control and instrument equipment (including gages, switches, thermostats, and other devices) which are a part of major equipment.



Agnico-Eagle Mines Ltd.
Instrumentation Installation and Testing Procedure

PRO Number : AEM-IN-PRO-001
Contract no. : C22498E



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Appendix A

ALL APPLICABLE ITRs & LOGs



Vendor Document Status

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LUC SÉNÉCAL

2017-07-10

By:

Date:

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Agnico Eagle

No.

6515-C-270-007-141-TES-0008 R: Sub002

DOCUMENT FOR INFORMATION



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Agnico-Eagle Mines Ltd.
Cable Tray Installation Procedure

PRO Number : AEM-EL-PRO-003
Contract no. : C22498E



1. GENERAL

1.1 Section Includes

- Cable Tray, Fittings, and Accessories.
- Hangers and Supports.

2. EXECUTION

2.1 Inspection and Preparation

- Before installation, inspect cable trays and fittings and clean off all dirt, cuttings, and other foreign material. Cut ends of the trays to be filed or ground to remove burrs and sharp edges, and coated to prevent rust.

2.2 Installation Requirements

- All Electrical Installations: in accordance with CSA Standard C22.1-06.
- In general, provide a recommended minimum vertical spacing between trays of 250 mm measured from the bottom of the upper tray to the top of the lower tray. Maintain minimum of 230 mm clearance between the top of the tray and beams, pipes, etc. for parallel runs, and 75 mm minimum for crossing runs. (Trays to be installed by others).
- Cut cable tray to size by use of a hack saw, or other approved tool. Do not flame cut trays or their accessories.
- Align cable trays carefully and level plumb and true. Secure the runs with at least two smooth head bolts at each support bracket.
- Supports for cable tray runs to be the cantilever or the trapeze type, fabricated of threaded rod, strut, and/or steel members and accessories. The support member is in contact with the cable tray and shall be approximately 75 mm longer than the width of the cable tray that it supports.
- Support cable trays at all bends, tees, dropouts, crossovers, risers, etc. as recommended by CSA Standard C22.2, No. 126.1-02.
- Fasten supports to building steel by means of beam clamps. Fasten supports to concrete by inserts or drilled-in anchors. Provide supports capable of supporting the ultimate tray loading capacity.



**Agnico-Eagle Mines Ltd.
Cable Tray Installation Procedure**

**PRO Number : AEM-EL-PRO-003
Contract no. : C22498E**





2.3 Inspection and Test Requirements

- Perform inspections and tests normally used either in installation, construction processes or as called for by the applicable codes and standards.
- Upon completion of cable tray installation, inspect the interior surfaces of the tray run for any burrs or rough edges that could result in cable damage during cable installation. Remove burrs and rough edges.

2.4 Corrosion Protection/Coatings

- Where the galvanizing of cable tray supports is damaged, repair by the application of appropriate galvanizing repair paints.

	Control System Description : Rankin Inlet Tank Farm	
Revision: 1	For Start-up	Page : 1

Control System Description

Rankin Inlet Tank Farm – 65PLC11601

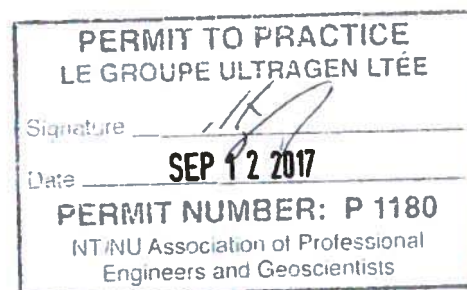
AGNICO EAGLE - MELIADINE DIVISION



Rankin Inlet, Nunavut

Project No: 591700

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Sébastien Perron		28/09/2017
Instrumentation Date:		
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Prepared by: G. Gagnon, Eng.
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 ultragen	Control System Description : Rankin Inlet Tank Farm	
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PA	G. GAGNON	E. LAROUCHE	D. CARRIER	2017/05/18		FOR REVIEW
0	G. GAGNON	E. LAROUCHE	D. CARRIER	2017/06/20		FOR CONSTRUCTION
1	D. CARRIER	E. LAROUCHE	D. CARRIER	2017/09/12		FOR START-UP




 D. CARRIER, Eng. OIQ – 40308 / NAPEQ – L3627

Sept 12/2017
 Date

 ultragen	Control System Description : Rankin Inlet Tank Farm	
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1 Overview

The control system at Rankin Inlet tank farm consists of the following components:

- PLC cabinet located in the operator room with a HMI touchscreen for operation.
- Flow Controller Smith Meter located in the operator room.
- A flow control kit including one flow valve, one flow meter and one temperature probe connected to the Flow Controller to measure the transferred quantity per transaction.
- Two Variable Frequency Drive (VFD), one per transfer pumps (2).
- Scully Module with plug to allow truck ground proving and truck overfill prevention.
- Radar level transmitters and temperature transmitters for monitoring the diesel tanks (2).
- Motorized Operated Valve (MOV) to allow the transfer between tanks and truck.
- E-stops (3) located in the truck area, inside the pumping station and inside the operator room.
- Strobe light on each diesel tank and one common horn on the pumping station to indicate high level tank.



2 PLC

- 2.1.1 One PLC for the Rankin Inlet tank farm diesel distribution.
Manufacturer: Schneider, Model: BMEP582040

3 I/O cards

- 3.1.1 PLC Input and outputs cards connected to field devices are as following:

Module	Manufacturer	Model
32 digital inputs module (120 Vac)	Schneider	BMXDDI3202K
32 digital outputs module	Schneider	BMXDDO3202K
8 analog inputs module (4 -20 mA)	Schneider	BMXAMI0810
Ethernet backplane card	Schneider	BMENOC0321

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4 Human-Machine Interface (HMI)

- 4.1.1 One Touch screen HMI mounted in front of the PLC cabinet to monitor and control the transferred quantity from diesel tanks to tanker truck.

Manufacturer: Schneider, Model: HMIDT732 / HMIG3U

5 Flow controller

- 5.1.1 One Microload Flow controller c/w one flow meter, one digital flow valve and one RTD temperature to control the transferred quantity.

Instrument	Manufacturer	Model
Flow controller	FCM	Smith Meter ML-XP-STD-1, Microload
Flow valve (Digital pre-set valve) with two 120 Vac solenoids	TCS	OCV 115-3
Flow meter (positive displacement type)	TCS	700-40SP4DX
Pulse transmitter for flowmeter	TCS	DMP-100-3
RTD temperature sensor	FMC	TP-W-3C-2.5

6 Ground proving and overfill prevention device



- 6.1.1 A Scully module located beside the truck loading arm to connect to the tanker truck using a plug assembly. The 10-pins plug assembly allows the monitoring of up to 8 high level sensors and monitors the static ground verification on the tanker truck.

Manufacturer: Scully, Model: Intellitrol IC-OG, plug model: SC-8A

7 Motorized Operated Valve (MOV)

- 7.1.1 One MOV per vertical tank to control the tanks outlets. These valves are powered at 120 Vac and are controlled through 120 Vac output PLC cards. With one output configuration for the open command, it closes automatically when off. Open position, close position and fault status are monitored by the PLC.

Actuator Manufacturer: Rotork, Model: IQT500

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Valve Manufacturer: M.A Stewart, Model: F-150-CSF-SS-FS-N

8 Communication

- 8.1.1 Ethernet TCP/IP is used for communication between the PLC, the HMI, the flow controller and the VFDs.

9 Ethernet switches

- 9.1.1 One Ethernet switch inside the PLC cabinet connected to the PLC Ethernet communication card, dedicated for the HMI and the plant Ethernet network.
Manufacturer: Schneider, Model: TCSESM083F2CSO
- 9.1.2 One Ethernet switch inside the PLC cabinet connected to the PLC CPU Ethernet port, dedicated for Microload controllers and VFDs.
Manufacturer: Schneider, Model: TCSESM083F1CSO

10 Software



10.1 PLC Programming

- 10.1.1 Schneider Unity Pro software, version 11 is the PLC programming software for the Schneider M580 PLC.

10.2 HMI Programming

- 10.2.1 Vijeo Designer software, version 6.2 is the HMI touch screen programming software.

10.3 PLC – Microload Controller exchange

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10.3.1 The communication protocol used to transfer data between the PLC and the Microload controller is Ethernet Modbus TCP/IP (Accumulated volume, Pre-set volume, Flow rate, etc). The Microload keypad is disabled, all controls are done through the PLC.

11 Functional Description

11.1 Truck Loading

1. At the truck area

- a. Connect the Scully Intellitrol plug to the tanker truck to allow ground proving and truck overfill prevention, then attach the loading arm to the truck.
- b. Green Bar indicator is ON steady on the Scully Intellitrol Module when the plug is properly connected and the ground contact is made. Red Bar indicator ON means Scully not ready or no lights ON means no power. The Intellitrol also monitors the truck compartment levels, if one or many compartments LED are ON that indicates a faulty level sensor.
- c. The Scully Intellitrol switch interlocks the 120 Vac power to the flow control valve. In case of high level in tanker truck or loss of truck grounding contact, the 120 Vac power is removed from the flow control valve and the valve closes. The fault status is wired to PLC through interposing relay to prevent any loading operation. The running sequence is then paused and equipment are stopped and valves closed.
- d. The Scully Intellitrol can be bypassed with a bypass key held against the side of the Intellitrol for 10 to 30 seconds. When in bypassed mode, the Intellitrol Bar indicator will blink green.
 - The maximum bypass time is settable from 15 to 60 minutes.
 - Bypass operation automatically ends when the vehicle is disconnected.
 - A faulty sensor can only be bypassed at initial truck hookup.
 - A sensor wet during loading can never be bypassed.

2. At the pumping station operator room – Logging to the system

- a. Two levels of user security are available at the HMI;
 - i. Operator username and PIN number 1111.
 - ii. Maintenance username and PIN number 2222.
- b. At the operator security level, the truck loading sequence is fully automatic and there is no bypassed or manual mode available.