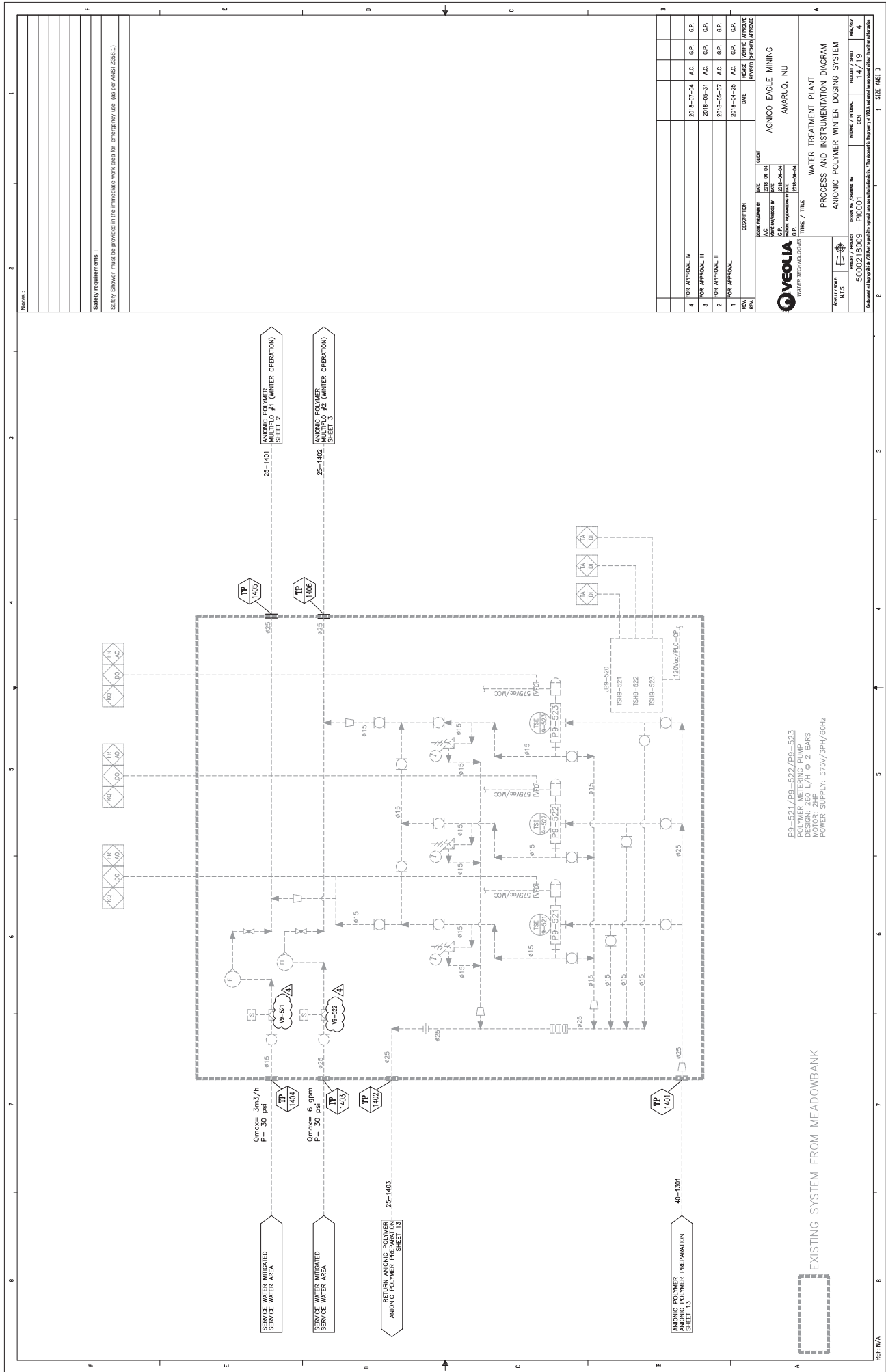
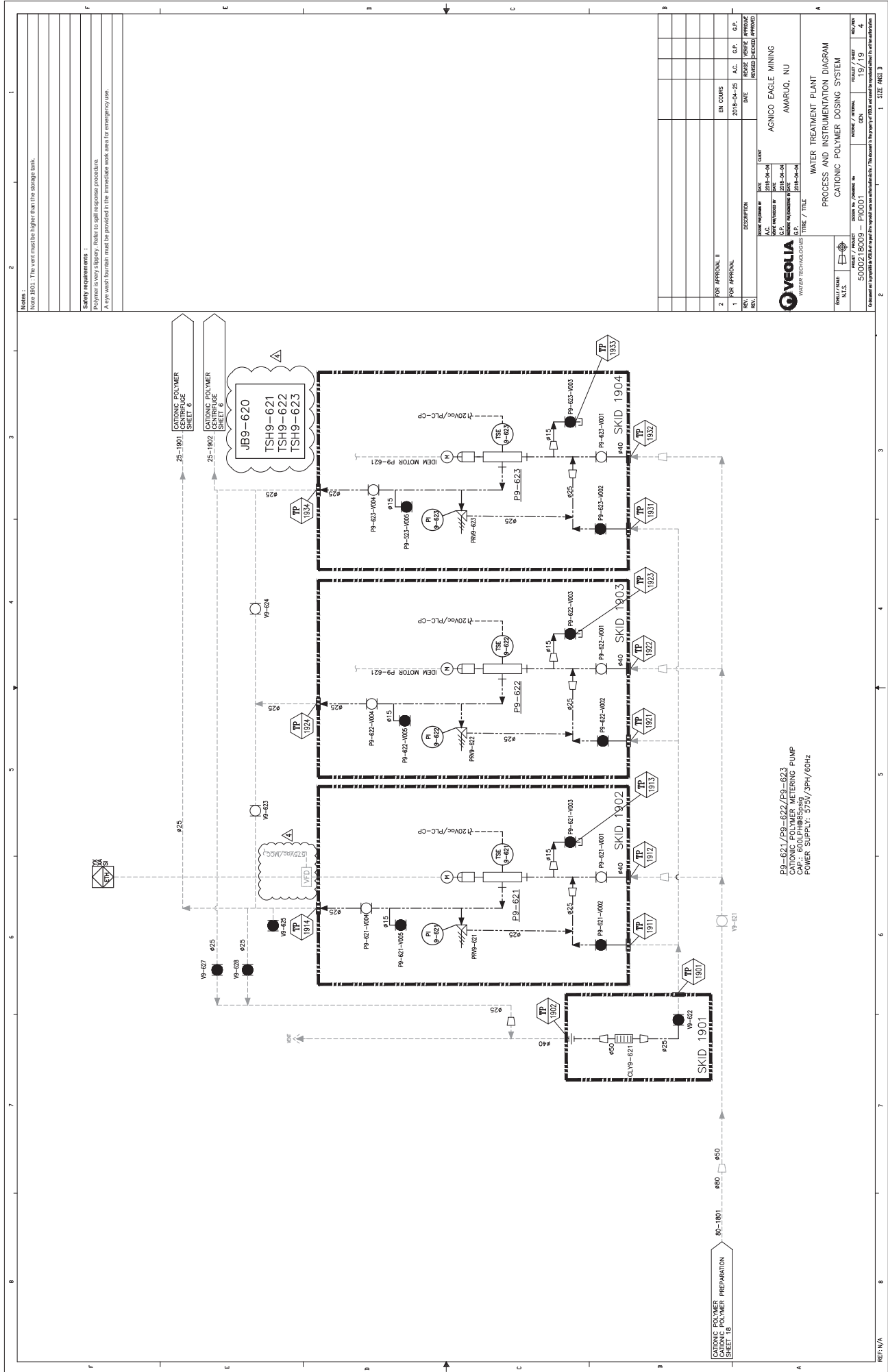








OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

3 – DRAWINGS

3.3 – HYDRAULIC PROFILE DRAWING

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

3 – DRAWINGS

3.4 – GENERAL ARRANGEMENT DRAWING

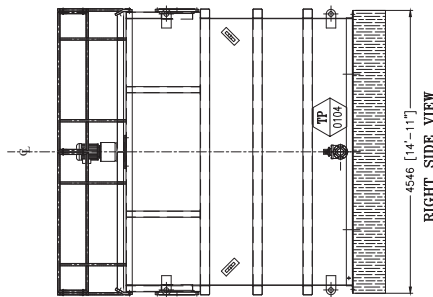
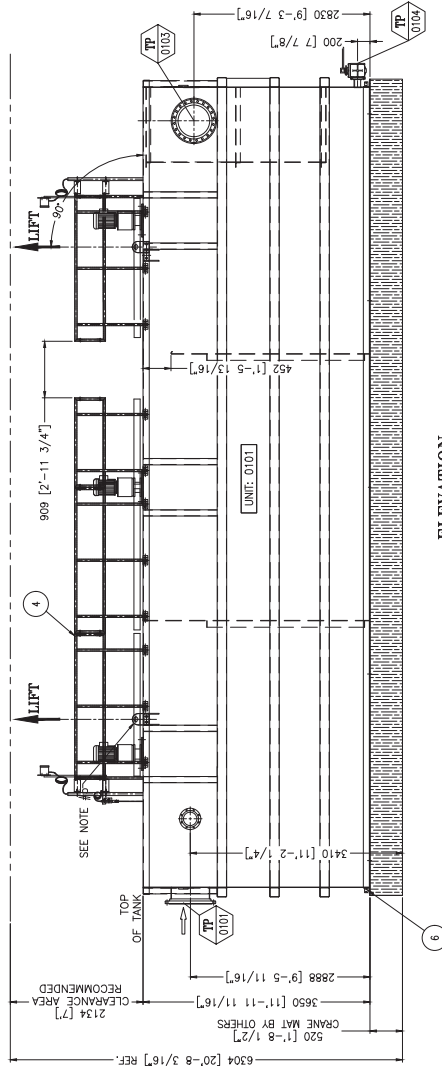
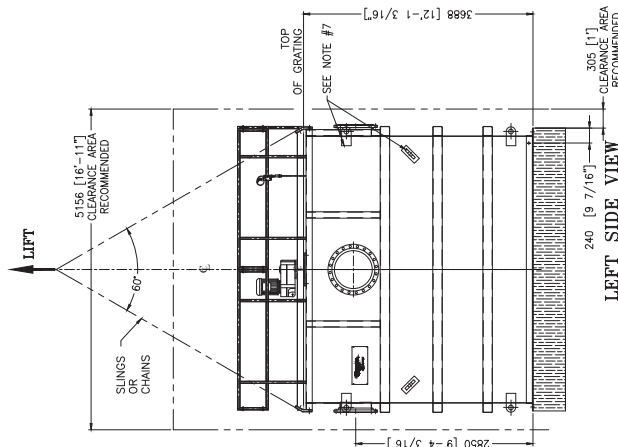
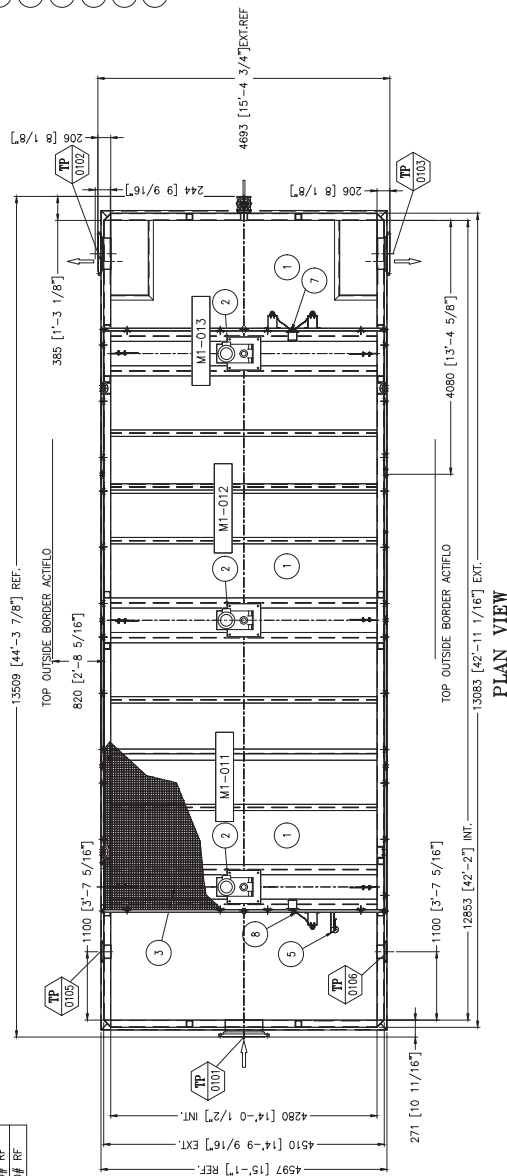
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TIE-POINT #	DESCRIPTION	DIMENSION / TYPE
TP-0101	RAW WATER INLET	450mm [624] - RAISED FACE FLANGE 150# RF
TP-0102	PRETREATED WATER OUTLET	450mm [620] - RAISED FACE FLANGE 150# RF
TP-0103	PRETREATED WATER OUTLET	450mm [620] - RAISED FACE FLANGE 150# RF
TP-0104	DRAIN	ø100mm [641] - FLAT FACE FLANGE 125# FF
TP-0105	SUPERMANT	ø200mm [681] - RAISED FACE FLANGE 150# RF
TP-0106	SUPERMANT	ø200mm [681] - RAISED FACE FLANGE 150# RF

REFERENCES DRAWING: 5000218009-PI0001 (SHEET 1)

NOTES:

1. FOR LIST OF SUPPLY OF THIS EQUIPMENT, PLEASE REFER TO THE FIELD INSTALLATION DRAWINGS AND THE TECHNICAL SPECIFICATIONS.
2. TANK SHALL NOT BE USED AS A SUPPORT FOR ANY OTHER EQUIPMENT. EQUIPMENT THAT NEEDS TO BE CONNECTED TO TANK SHALL BE SELF-SUPPORTED.
3. HATCHED AREA SHOW IN THE FOOTPRINT NEEDS TO BE SUPPORTED.
4. REMOVE LIFTING LUGS ONCE THE TANK IS IN THE PLACE.
5. FOR UNLOADING, STORAGE AND INSTALLATION, REFER TO HANDLING, STORAGE AND INSTALLATION MANUAL.
6. TANKS FOR TRANSPORTATION USE ONLY. DO NOT USE FOR TANK LIFTING.
7. TANK WEIGHT (1) 17,350 KG (48,738 LBS) (WITHOUT WATER, for transport)
8. TANK WEIGHT (2) 350 KG (771 LBS) (WITH WATER)
9. TANK WEIGHT IN SERVICE: 232,200 KG (510,840 LBS) (WITH WATER).
PAINTING REQUIREMENTS AS PER VEOLIA PANT PROCEDURE (STANDARD PAINT PROCEDURE—ALL APPLICATIONS). COLOR: BLUE SATYR.
10. MATERIAL:
 - STRUCTURAL PLATES: C AND L PROFILES
 - STRUCTURAL COLUMNS: C-30
 - HSS AND W. PROFILES: AS PER CSA 440.21 GRADE 350W



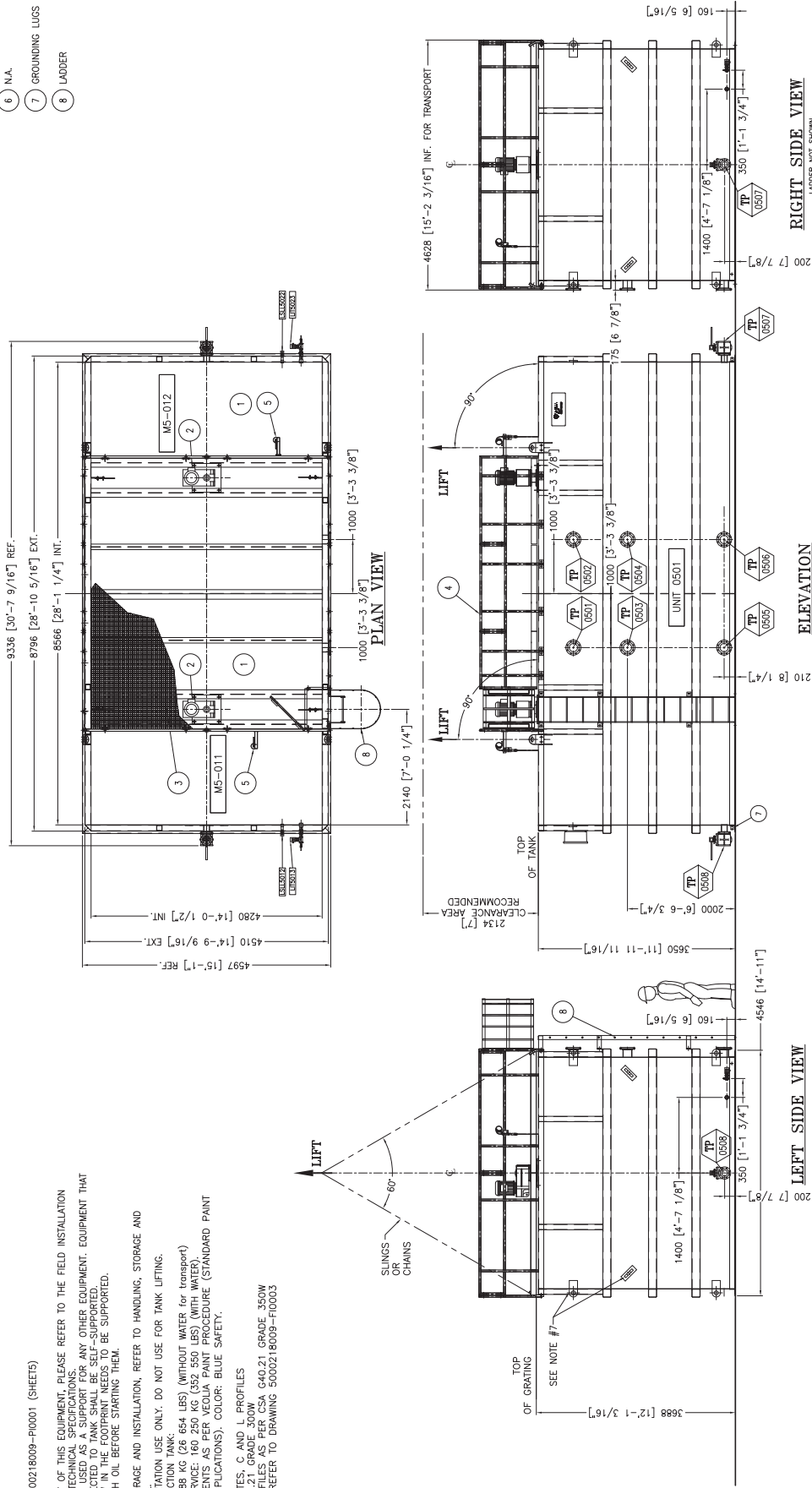
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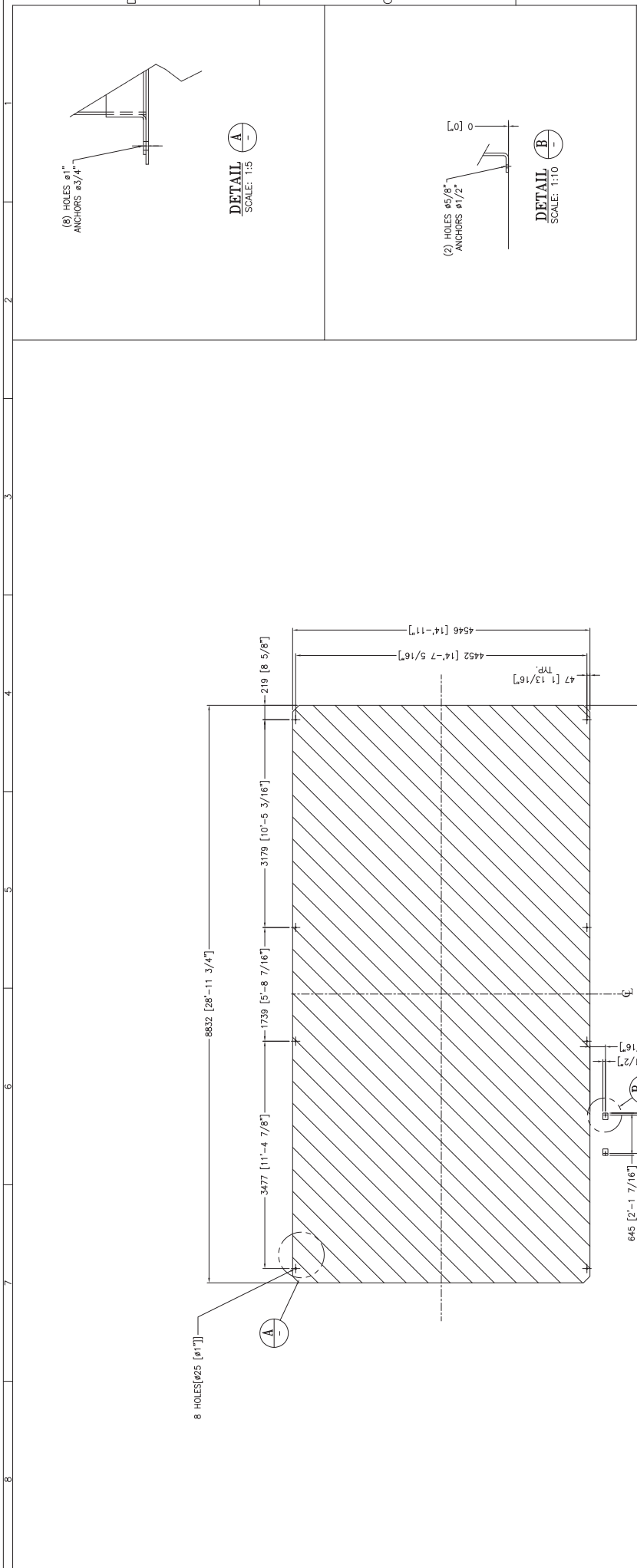
[illegible]

TIE-POINT #	DESCRIPTION	DIMENSION / TYPE
TP-0501	SLUDGE INLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0502	SLUDGE INLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0503	DECANTER OUTLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0504	DECANTER OUTLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0505	DECANTER OUTLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0506	DECANTER OUTLET	ø150mm [ø6"] - RAISED FACE FLANGE 150# RF
TP-0507	DRAIN	ø100mm [ø4"] - FLAT FACE FLANGE 125# FF
TP-0508	DRAIN	ø100mm [ø4"] - FLAT FACE FLANGE 125# FF

REFERENCES DRAWING: 5000218009-PI0001 (SHEET5)

1. FOR LIST OF SUPPLY OF THIS EQUIPMENT, PLEASE REFER TO THE FIELD INSTALLATION DRAWINGS AND THE TECHNICAL SPECIFICATIONS.
2. MIXERS SHALL BE USED AS SUPPORT FOR ANY EQUIPMENT. EQUIPMENT THAT NEEDS TO BE CONSIDERED FOR SUPPORT SHALL BE FIELD-SUPPORTED.
3. HATCHED AREA SHOW IN THE FOOTPRINT NEEDS TO BE SUPPORTED.
4. FILL THE MIXERS WITH OIL BEFORE STARTING THEM.
5. N/A.
6. FOR UNLOADING, STORAGE AND INSTALLATION, REFER TO HANDLING, STORAGE AND UNLOADING INSTRUCTIONS.
7. LUGS FOR TRANSPORTATION USE ONLY. DO NOT USE FOR TANK LIFTING.
8. WEIGHT FOR (1) REACTION TANK:
TOTAL WEIGHT: 12,088 KG (26,654 LBS) (without water for transport)
TOTAL WEIGHT IN SERVICE: 160,250 KG (352,500 LBS) (with water).
9. PAINTING REQUIREMENTS AS PER VULCA PAINT PROCEDURE (STANDARD PAINT PROCEDURE—ALL APPLICATIONS), COLOR: BLUE SATURATE.
10. MATERIAL:
 - STRUCTURAL PLATES, C AND L PROFILES
 - 100% POLYURETHANE COATING
 - HSS AND W PROFILES AS PER CSA G40.21 GRADE 350W
11. FOR INSTALLATION REFER TO DRAWING 5000218009—F10003

[illegible]



FOOT PRINT

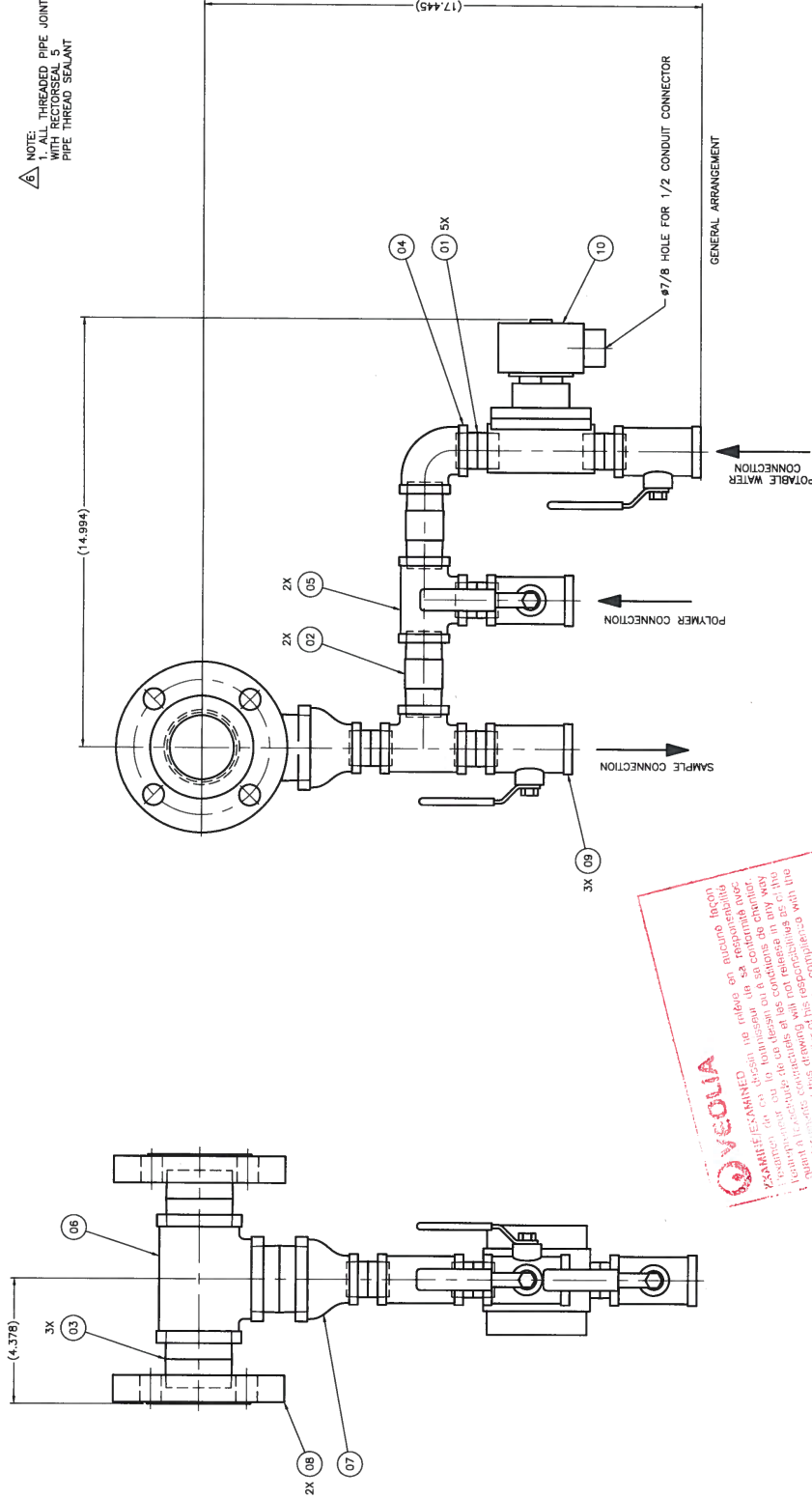
REV	DESCRIPTION	DATE	REV'D	CHK'D	APP'D	EDN	DESIGNER	DATE	TITLE
2	FOR APPROVAL	2018-04-27					A.C.	2018-03-08	SLUDGE TANK (UNIT 0401)
1	PRELIMINARY FOR THE APPROVAL OF LADDOI GEN. DRAWING	2018-03-16					CHECKER	2018-03-08	GENERAL ARRANGEMENT
							G.P.	2018-03-08	AGNICO EAGLE MINING
							ENGINEER	2018-03-08	AMARUQ, NU
							L.I.	2018-03-08	
							SCALE:	1:40	
							PROJECT	5000218009 - GA0002	
							DRAWING		
							INTERNAL	R00752	
							SHEET	2	OF 2
							REV	2	

VEOLIA

4125 Avenue de la Science
Montréal, Québec H3T 1S6
Tel: (514) 359-7200 / Fax: (514) 354-0570

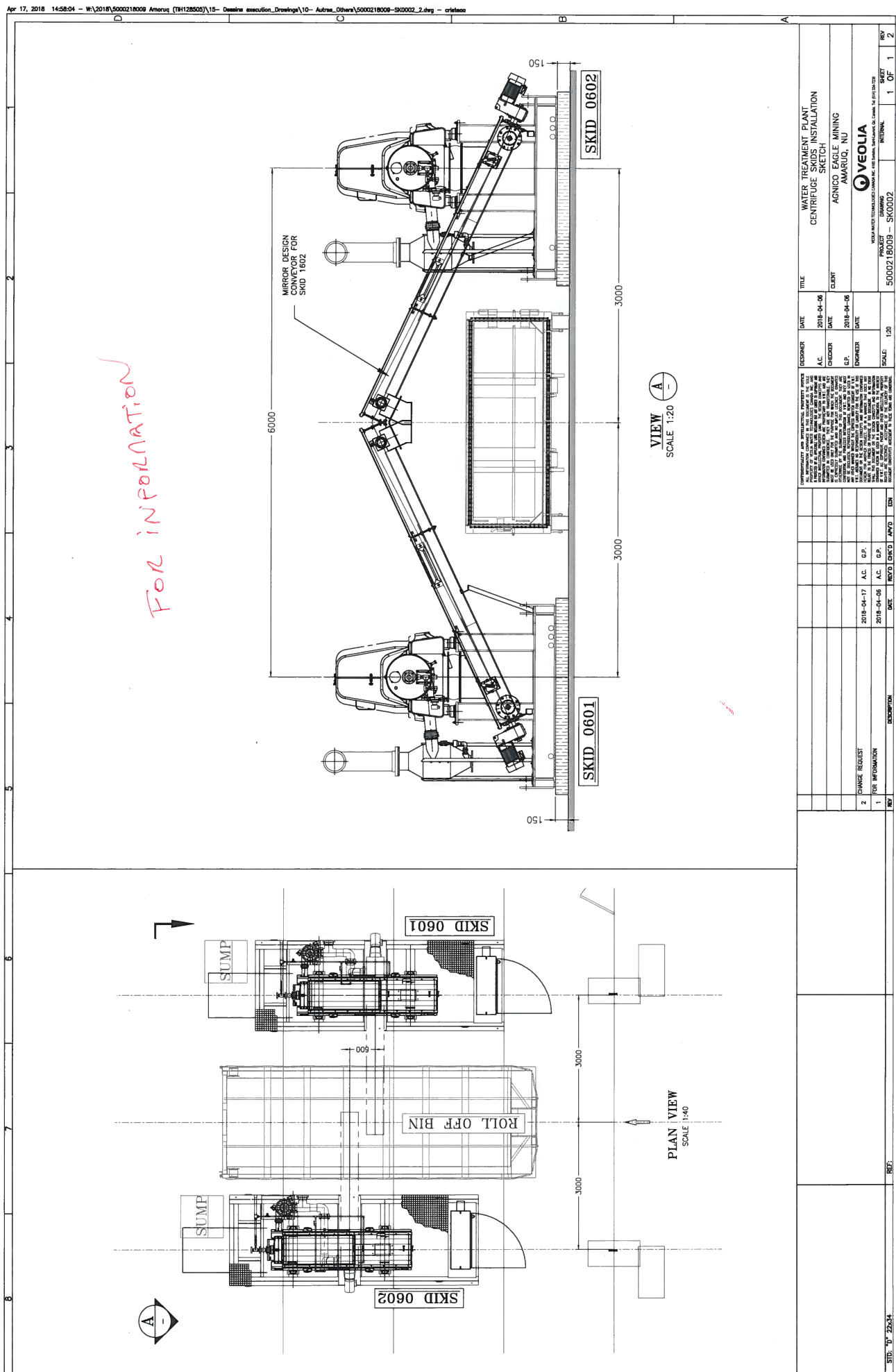
No	PART No	QTY	DESCRIPTION	MATERIAL
01	PINX1.0CMN	5	CLOSE NIPPLE, 1"	316L
02	PINX1.0CMN3	2	NIPPLE, 1" X 3 LG	316L
03	PINX2.0CMN	3	CLOSE NIPPLE, 2"	316L
04	PI90X1.0CFN	1	90° ELBOW, 1"	316L
05	PTEX1.0CFN	2	TEE, 1" FNPT	316L
06	PTEX2.0CFN	1	TEE, 2" FNPT	316L
07	PIREX2X1CFN	1	REDUCER, CONC., 2 X 1 SCH 40 FNPT	316L
08	PIELX2.0CFN	2	FLANGE, 2 (150 LB) THREADED	316L
09	VBX1.0CFN	3	BALL VALVE, 1" FNPT	316L
10	131417950	1	ASCO EF8210G4, 1" SOLENOID VALVE	BRASS

NOTE:
ALL THREADED PIPE JOINTS TO BE SEALED
WITH RECTICORP
PIPE THREAD SEALANT



VEOLIA
 EXAMINÉ / EXAMINED
 Les documents ont été examinés et les données ont été vérifiées. Les documents ont été examinés et les données ont été vérifiées. Les documents ont été examinés et les données ont été vérifiées.
 per by: *[Signature]*
 Date: *2018-04-18*

ANDRITZ ANDRITZ-BUTNER, INC. 1010 COMMERCIAL BLD. SOUTH ARLINGTON, TEXAS 76010 PHONE: (817) 469-5811		TITLE MANIFOLD ASSEMBLY CONTINUOUS	
DRAWN BY: 115	DATE: 4/10/18	CHECKED BY: 278	DATE: 4/11/18
ESTIMATED WEIGHT IN LBS: 100.0000 ESTIMATED WEIGHT IN KG: 45.3592	APPROVED BY: 278	DATE: 4/11/18	THIRD ANGLE PROJECTION
1010 COMMERCIAL BLD. SOUTH ARLINGTON, TEXAS 76010 PHONE: (817) 469-5811 CERTIFIED CORRECT FOR INSTALLATION BY: J. BARTOSH DATE: 4/10/18 PROJECT No. 831476		THESE DIMS. REFLECT CUSTOMER'S CHANGES AND APPROVE ON PRELIM. OR REVISIONS	
SIZE D M831476-3		SHEET 1 OF 1	

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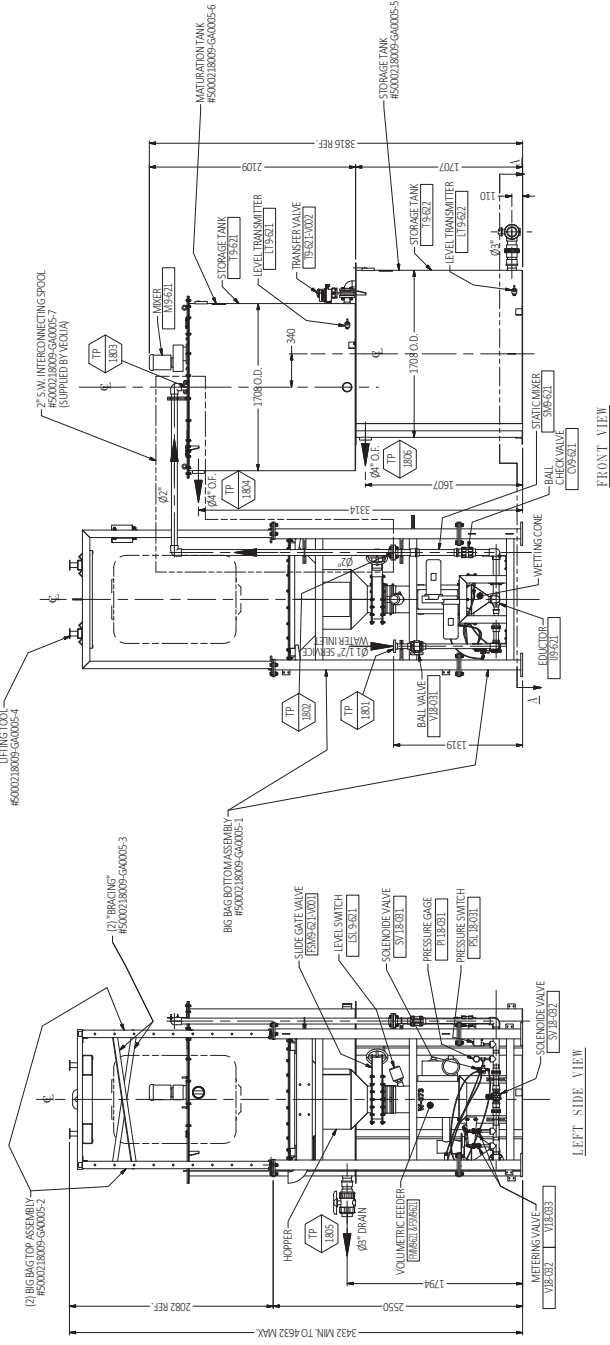
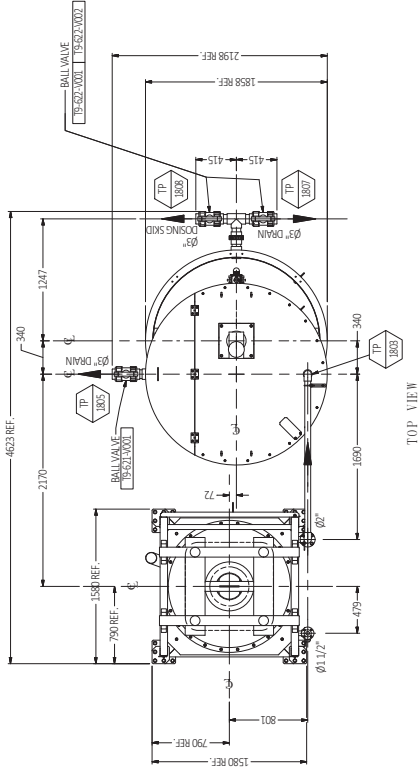
TIE-IN POINTS		TIE-IN POINTS	
TIE-POINT #	DESCRIPTION	DIMENSION / TYPE	
TP1801	SERVICE WATER INLET	60.12" - #150 FLANGE PVC	
TP1802	OUTLET TO HYDRAPOOL TANKS	60" - #150 FLANGE PVC	
TP1803	INLET HYDRAPOOL TANKS	60" - #150 FLANGE PVC	
TP1804	OVERFLOW MATURATION TANK	64" - FNPT THREADED 304L	
TP1805	MATURATION TANK TO DRAIN	65" - SOCKET PVC	
TP1806	OVERFLOW STORAGE TANK	64" - FNPT THREADED 304L	
TP1807	STORAGE TANK DRAIN	65" - SOCKET PVC	
TP1808	OUTLET TO DOSING SADD	65" - SOCKET PVC	

ITEM: 5000218009-SKID #1801 & #1802

-TOTAL QUANTITY: 1
-WEIGHT EMPTY: 2833 KG (6245 lbs)
-APPROXIMATIVE WEIGHT FULL: 10833 KG (23888 lbs)

NOTES:

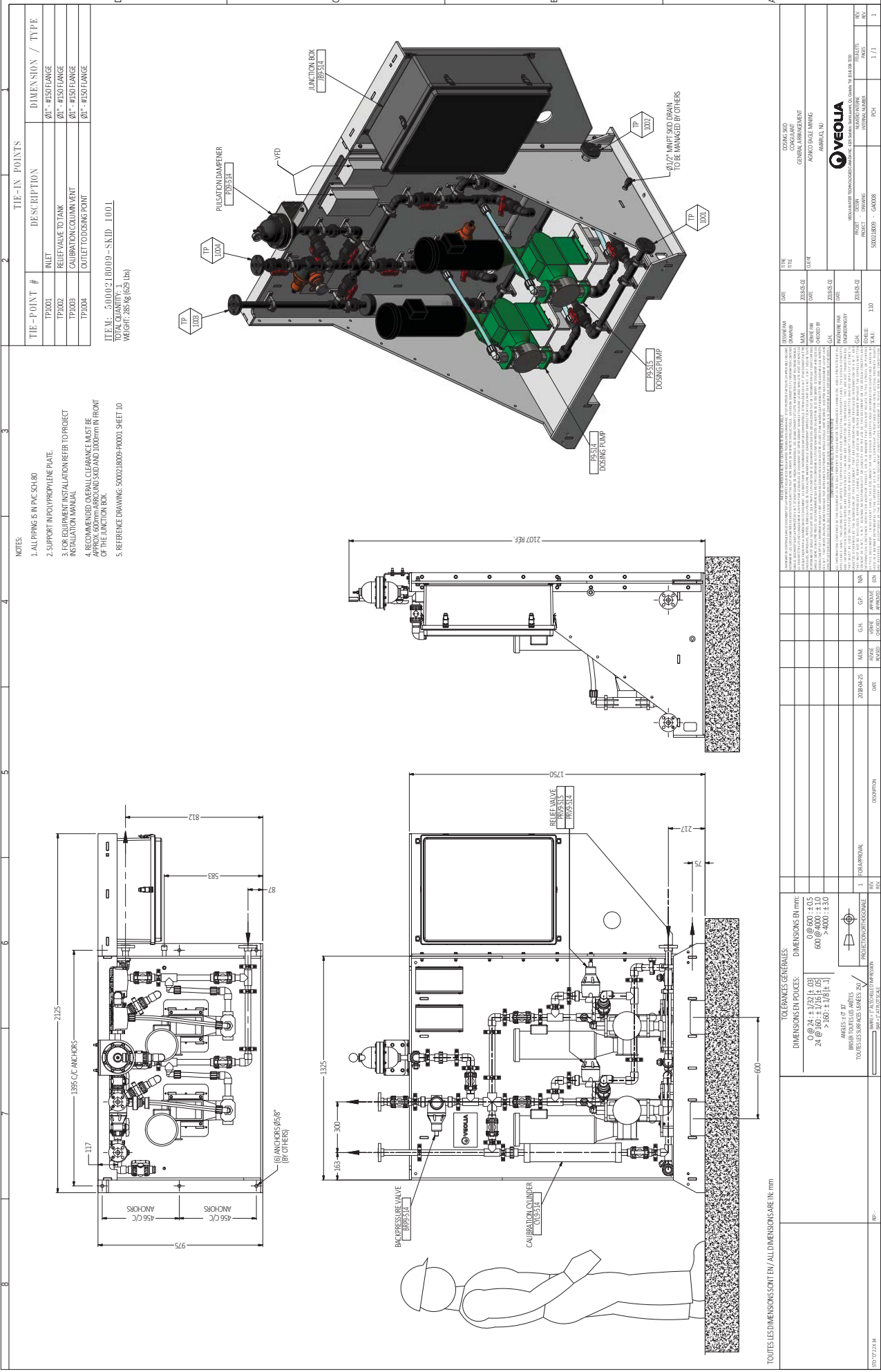
1. TANK AND STRUCTURE ARE IN SS304.
2. ALL PIPING IS IN PVC SCH.80.
3. RECOMMENDED OVER ALL CLEARANCE AROUND SKID MUST BE APPROX. 600mm.
4. REFERENCE DRAWING: 5000218009-PI0001 SHEET 18.
5. FOR EMBEDDING, STORAGE AND INSTALLATION OF EQUIPMENT. REFER TO PROJECT INSTALLATION MANUAL.
6. TO BE WIRED TO SCADA OR CUSTOMER PLC/MCC (BY OTHERS).
7. DO NOT EXPOSE TO RAIN.



TOITTES IES DIMENSIONS SONT EN / ALL DIMENSIONS ARE IN: mm

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TIE-IN POINTS	
TIE-POINT #	DESCRIPTION
TP001	INLET
TP002	RELIEF VALVE TO TANK
TP003	CALIBRATION COLUMN VENT
TP004	OUTLET TO DOSING POINT

TIE-IN POINTS	
TIE-POINT #	DESCRIPTION
TP001	INLET
TP002	RELIEF VALVE TO TANK
TP003	CALIBRATION COLUMN VENT
TP004	OUTLET TO DOSING POINT

ITEM: 500021 JB009-SKID-1001
TOTAL QUANTITY: 1
WEIGHT: 285 kg (629 lbs)

NOTES:
1. ALL PIPING IS IN POLYPROPYLENE PLATE.
2. SUPPORT IN POLYPROPYLENE PLATE.
3. FOR EQUIPMENT INSTALLATION REFER TO PROJECT INSTALLATION MANUAL.
4. RECOMMENDED OVERALL CLEARANCE MUST BE APPROX. 600mm AROUND SKID AND 1000mm IN FRONT OF THE JUNCTION BOX.
5. REFERENCE DRAWING: 500021JB009-P0001-SHEET 10

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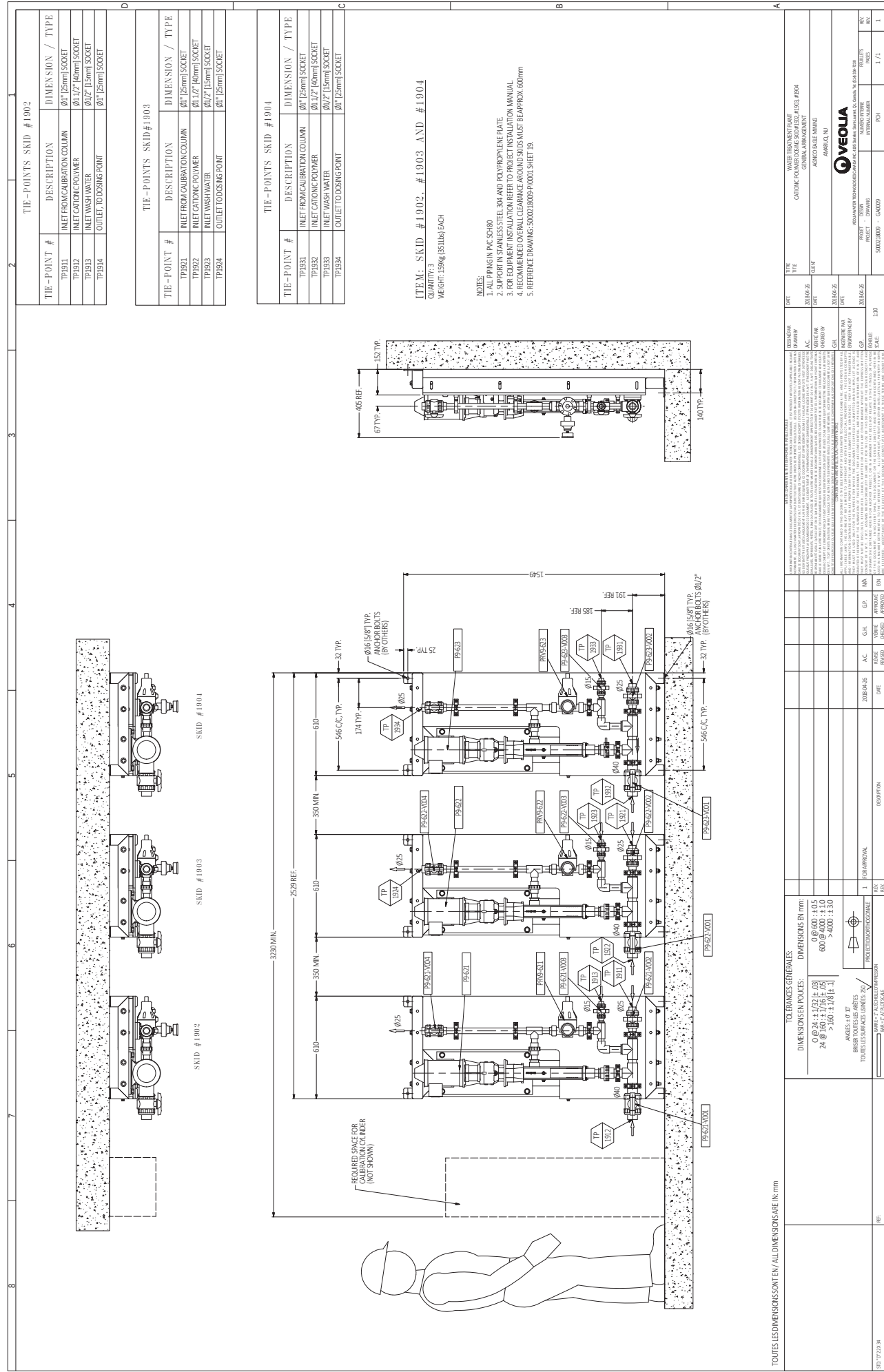
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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

3 – DRAWINGS

3.5 – FIELD INSTALLATION DRAWING

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NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.	DESCRIPTION	DATE	Rev	Ver/dhk	Appr.	Affaire / Contract	AGNICO EAGLE MINING,AMARUQ, NU	
METAL PRECIPITATION REACTOR (SKID 0101) RX75-3, FIELD INSTALLATION		1	FOR INSTALLATION	5/15/2018	F.C.	L.J.	L.J.			
		2								
		3							5000218009	Rev.
										1
DESSIN /DWG #		F10001							Date:	5/7/2018
REV.	ITEM	QTE/ QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG		Commentaires / Comments		
		Unit.	Total							
	5000218009-F10001-1	1	1	1 METAL PRECIPITATION REACTOR RX75-3, ASSEMBLY	SA100	UNIT-0101				
	5000218009-F10001-2	1	1	1 INJECTION QUILL VALVE KIT	SA200					
	5000218009-F10001-3	1	1	1 N/A						
	5000218009-F10001-4	4	4	4 HANDRAIL	FA104					
	5000218009-F10001-5	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-6	2	2	2 HANDRAIL	FA104					
	5000218009-F10001-7	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-8	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-9	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-10	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-11	1	1	1 HANDRAIL	FA104					
	5000218009-F10001-12	1	1	1 LEVEL SWITCH ENM-10	SA109	LSHH-1011				
	5000218009-F10001-13	5	5	5 U SUPPORT	FA111					
	5000218009-F10001-14	2	2	2 HEX HEAD SCREW Ø3/8"-16UNC x 1 1/4" (ASTM-F593C-304)	FXSCYS200375					
	5000218009-F10001-15	20	20	20 FLAT WASHER Ø3/8", SAE TYPE N (304)	FXWAYS200666					
	5000218009-F10001-16	10	10	10 HEX NUT Ø3/8"-16UNC (ASTM-F594C-304)	FXNUYS200206					
	5000218009-F10001-17	20	20	20 HEX HEAD SCREW Ø3/8"-16UNC x 4" ASTM A307 GR.B (GALV)	FXSCYS311688					
	5000218009-F10001-18	40	40	40 FLAT WASHER Ø3/8" ASTM F436, SAE TYPE N (GALV)	FXWAYS311690					
	5000218009-F10001-19	20	20	20 HEX NUT Ø3/8"-16UNC ASTM A536 GRA (GALV)	FXNUYS311689					
	5000218009-F10001-20	48	48	48 HEX HEAD SCREW Ø1/2"-13UNC x 1 3/4" ASTM A307 GR.B (GALV)	FXSCV311692					
	5000218009-F10001-21	96	96	96 FLAT WASHER Ø1/2" ASTM F436, SAE TYPE N (GALV)	FXWAYV311696					
	5000218009-F10001-22	48	48	48 HEX NUT Ø1/2"-13UNC ASTM A536 GRA (GALV)	FXNUYV311695					
	5000218009-F10001-23	1	1	METAL PRECIPITATION MIXER #1, MODEL: MIX-TECH EVGX-6-5.0 TYPE: VERTICAL MOUNTED c/w OIL EXPANSION CHAMBER c/w STAINLESS STEEL 304L SHAFT AND IMPELLER c/w NUTS AND BOLTS SHAFT: DIA.: 76,2 mm (3 in), LENGTH: 2430,8 mm (95,70 in.) IMPELLER: Q'TY : 1, DIAMETER "A": 2438,4 mm (96 in.) BOTTOM CLEARANCE "X": 1219,2 mm (48 in.) ROTATION DIRECTION: CCW - UP c/w MOTOR 5 HP, 575 Vac/3 ph/60 Hz, 1765 RPM, Isolation Class F WEIGHT: 1415 lb (642 kg)	ST-652-RX75UN1	MH-011				



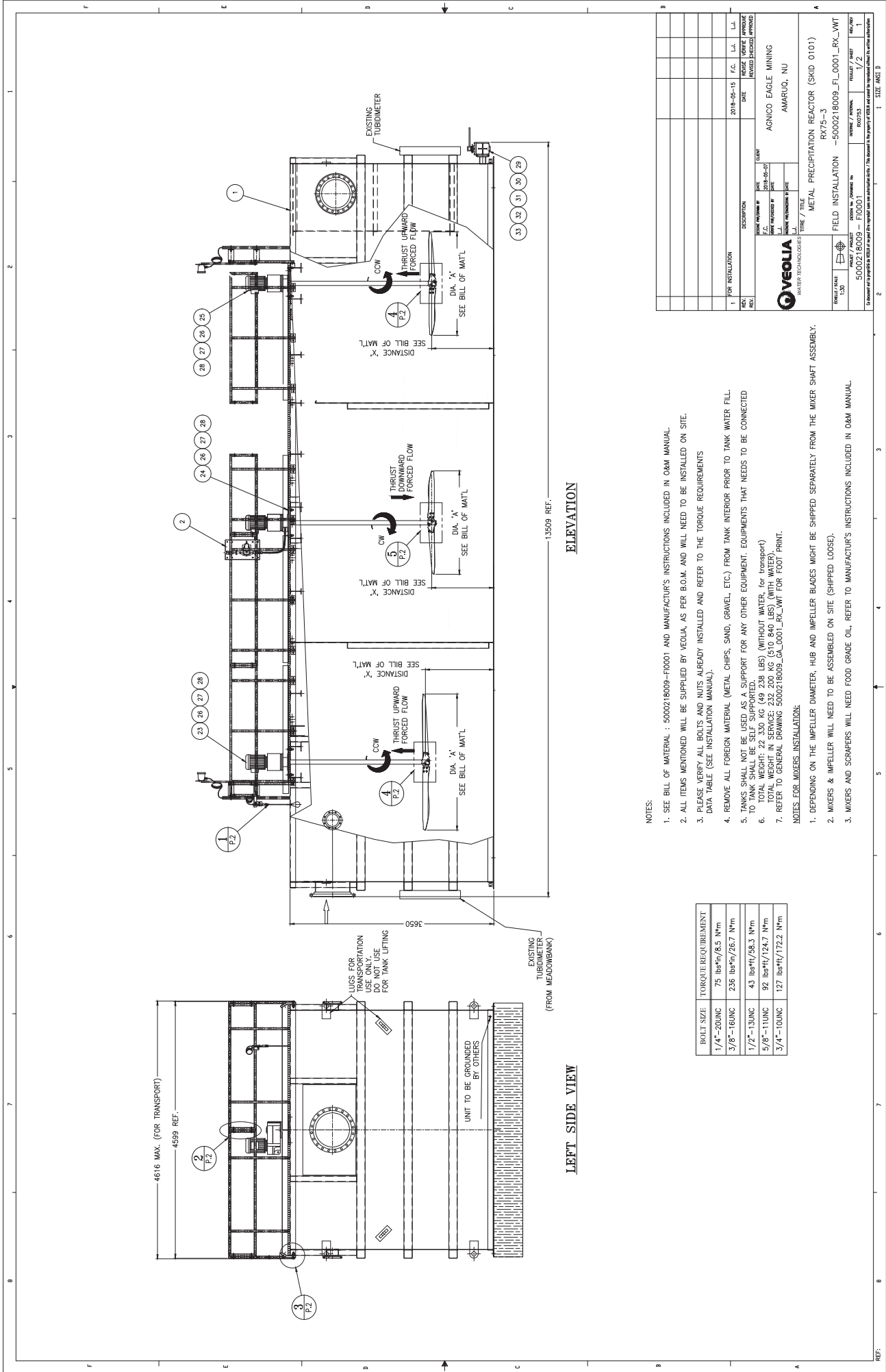
NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.	DESCRIPTION		DATE	Rev	Ver/dhk	Appr.	Affaire / Contract	AGNICO EAGLE MINING, AMARUQ, NU	
METAL PRECIPITATION REACTOR (SKID 0101) RX75-3, FIELD INSTALLATION		1	FOR INSTALLATION		5/15/2018	F.C.	L.J.	L.J.			
		2									
		3								REF. No.	5000218009 Rev.
											1
DESSIN /DWG #		F10001								Date:	5/7/2018
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG	Commentaires / Comments				
	5000218009-F10001-24	1		METAL PRECIPITATION MIXER #2, MODEL: MIX-TECH EVGX-6-5.0 TYPE: VERTICAL MOUNTED c/w OIL EXPANSION CHAMBER c/w STAINLESS STEEL 304L SHAFT AND IMPELLER c/w NUTS AND BOLTS SHAFT: DIA.: 76,2 mm (3 in), LENGTH: 2430,8 mm (95,70 in.) IMPELLER: Q'TY : 1, DIAMETER "A": 2438,4 mm (96 in.) BOTTOM CLEARANCE "X": 1219,2 mm (48 in.) ROTATION DIRECTION: CW - DOWN c/w MOTOR 5 HP, 575 Vac/3 ph/60 Hz, 1765 RPM, Isolation Class F, WEIGHT: 1415 lb (642 kg)	ST-652-RX75DN1	MI-012					
	5000218009-F10001-25	1		METAL PRECIPITATION MIXER #3, MODEL: MIX-TECH EVGX-6-5.0 TYPE: VERTICAL MOUNTED c/w OIL EXPANSION CHAMBER c/w STAINLESS STEEL 304L SHAFT AND IMPELLER c/w NUTS AND BOLTS SHAFT: DIA.: 76,2 mm (3 in), LENGTH: 2430,8 mm (95,70 in.) IMPELLER: Q'TY : 1, DIAMETER "A": 2430,8 mm (95,7 in.) BOTTOM CLEARANCE "X": 1219,2 mm (48 in.) ROTATION DIRECTION: CCW - UP c/w MOTOR 5 HP, 575 Vac/3 ph/60 Hz, 1765 RPM, Isolation Class F, WEIGHT: 1415 lb (642 kg)	ST-652-RX75UN1	MI-013					
	5000218009-F10001-26	12		HEX. HEAD SCREW Ø7/8"-9UNC x 3 1/2" (ASTM-F593D-304)	FXSCY1200319						
	5000218009-F10001-27	24		FLAT WASHER Ø7/8", SAE TYPE N (304)	FXWAY1200658						
	5000218009-F10001-28	12		NYLON INSERT LOCK NUT Ø7/8"-9UNC (ASTM-F594D-304)	FXNUY1200194						
	5000218009-F10001-29	1		PLUG VALVE	ST-312-112	TI-011-V001					
	5000218009-F10001-30	1		GASKET FLANGE Ø4" FF, 1/8" TH (EPDM)	SEGAFP201223						
	5000218009-F10001-31	8		HEX. HEAD SCREW Ø5/8"-11UNC x 3" (ASTM-F593C-304)	FXSCYY200497						
	5000218009-F10001-32	16		FLAT WASHER Ø5/8", SAE TYPE N (304)	FXWAYY200674						
	5000218009-F10001-33	8		HEX NUT Ø5/8"-11UNC (ASTM-F594C-304)	FXNUYY200221						
	5000218009-F10001-34	8		HEX. HEAD SCREW Ø3/8"-16UNC x 1 3/4" (ASTM-F593C-304)	FXSCYS200377						
	5000218009-F10001-35	1		CLAMP WITH TWO MOUNTING HOLES FOR 3/4" DIA. PIPE, McMaster #8874T13	FPCLSS319089						
	5000218009-F10001-36	2		HEX. HEAD SCREW Ø1/4"-20UNC x 1 1/4" (ASTM-F593C-304)	FXSCYP200332						



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Veolia Water Technologies Canada Inc.

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NOTES:

1. SEE BILL OF MATERIAL : 5000218009-F0001 AND MANUFACTURER'S INSTRUCTIONS INCLUDED IN O&M MANUAL.
2. ALL ITEMS MENTIONED WILL BE SUPPLIED BY VEDUA, AS PER B.O.M. AND WILL NEED TO BE INSTALLED ON SITE.
3. PLEASE VERIFY ALL BOLTS AND NUTS ALREADY INSTALLED AND REFER TO THE TORQUE REQUIREMENTS DATA TABLE (SEE INSTALLATION MANUAL).
4. REMOVE ALL FOREIGN MATERIAL (METAL CHIPS, SAND, GRAVEL, ETC.) FROM TANK INTERIOR PRIOR TO TANK WATER FILL.
5. TANKS SHALL NOT BE USED AS A SUPPORT FOR ANY OTHER EQUIPMENT. EQUIPMENTS THAT NEEDS TO BE CONNECTED TO TANK SHALL BE SUPPLIED BY THE MANUFACTURER.
6. TO TANK SHALL BE SUPPLIED WITH 4000 LBS (1818.25 KG) (WITHOUT WATER, FOR TANKS).
7. TOTAL WEIGHT IN SERVICE: 232 200 KG (510 840 LBS) (WITH WATER).
8. REFER TO GENERAL DRAWING 5000218009_GA_0001_RX_WMT FOR FOOT PRINT.

NOTES FOR MIXERS INSTALLATION:

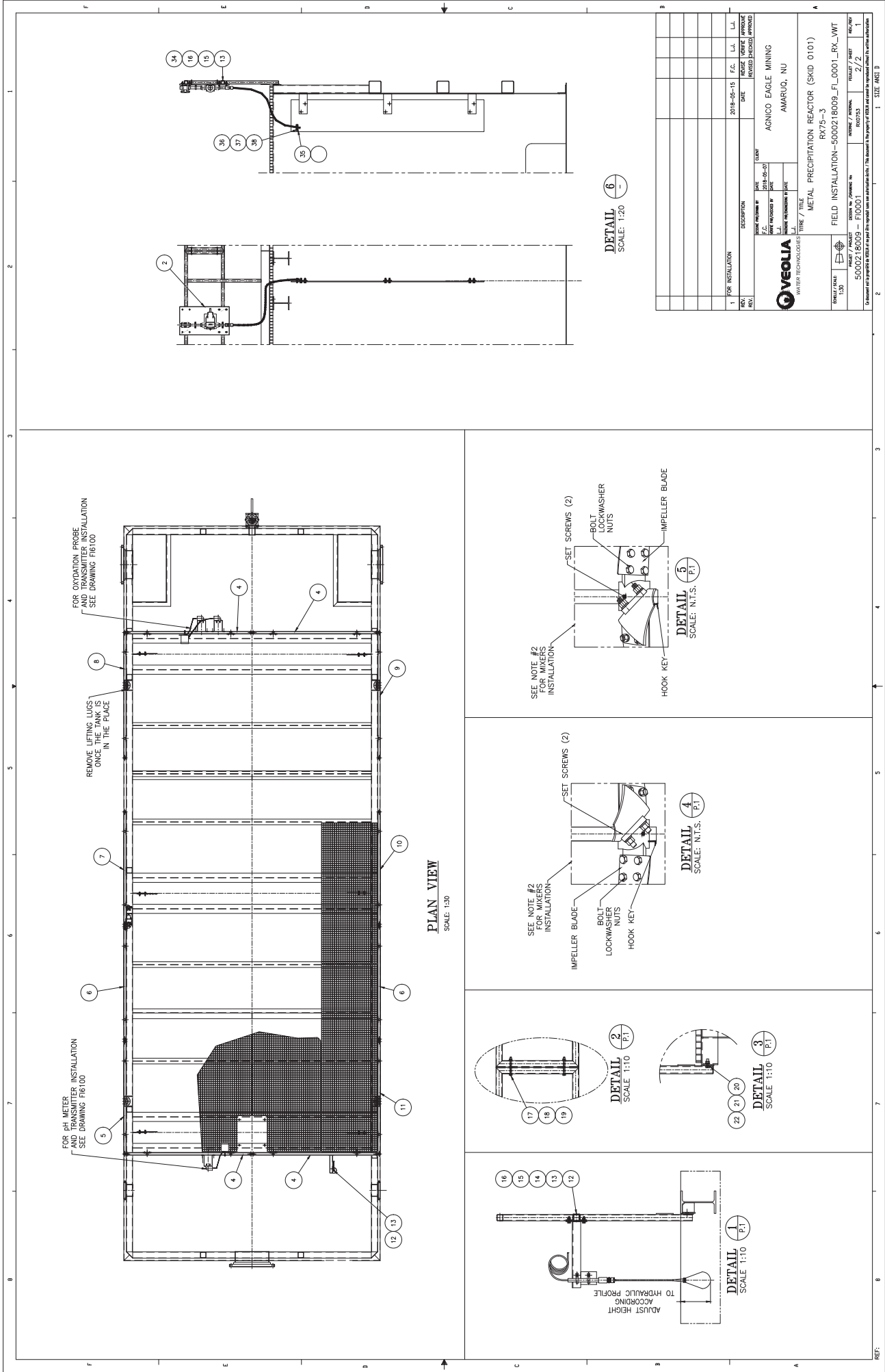
1. DEPENDING ON THE IMPELLER DIAMETER, HUB AND IMPELLER BLADES MIGHT BE SHIPPED SEPARATELY FROM THE MIXER SHAFT ASSEMBLY.
2. MIXERS & IMPELLER WILL NEED TO BE ASSEMBLED ON SITE (SHIPPED LOOSE).
3. MIXERS AND SCRAPERS WILL NEED FOOD GRADE OIL, REFER TO MANUFACTURER'S INSTRUCTIONS INCLUDED IN O&M MANUAL.

BOLT SIZE	TORQUE REQUIREMENT
1/4"-20UNC	75 lbs*in/6.5 N*m
3/8"-16UNC	235 lbs*in/26.7 N*m
1/2"-13UNC	43 lbs*in/58.3 N*m
5/8"-11UNC	92 lbs*in/124.7 N*m
3/4"-10UNC	127 lbs*in/172.2 N*m

LEFT SIDE VIEW

ELEVATION

1	FOR INSTALLATION	DATE	2018-05-15	F.C.	L.L.
REV.	DESCRIPTION	DATE	2018-05-21	F.C.	L.L.
1	REVISION	DATE	2018-05-21	F.C.	L.L.
2	REVISION	DATE	2018-05-21	F.C.	L.L.
3	REVISION	DATE	2018-05-21	F.C.	L.L.
4	REVISION	DATE	2018-05-21	F.C.	L.L.
5	REVISION	DATE	2018-05-21	F.C.	L.L.
6	REVISION	DATE	2018-05-21	F.C.	L.L.
7	REVISION	DATE	2018-05-21	F.C.	L.L.
8	REVISION	DATE	2018-05-21	F.C.	L.L.
9	REVISION	DATE	2018-05-21	F.C.	L.L.
10	REVISION	DATE	2018-05-21	F.C.	L.L.
11	REVISION	DATE	2018-05-21	F.C.	L.L.
12	REVISION	DATE	2018-05-21	F.C.	L.L.
13	REVISION	DATE	2018-05-21	F.C.	L.L.
14	REVISION	DATE	2018-05-21	F.C.	L.L.
15	REVISION	DATE	2018-05-21	F.C.	L.L.
16	REVISION	DATE	2018-05-21	F.C.	L.L.
17	REVISION	DATE	2018-05-21	F.C.	L.L.
18	REVISION	DATE	2018-05-21	F.C.	L.L.
19	REVISION	DATE	2018-05-21	F.C.	L.L.
20	REVISION	DATE	2018-05-21	F.C.	L.L.
21	REVISION	DATE	2018-05-21	F.C.	L.L.
22	REVISION	DATE	2018-05-21	F.C.	L.L.
23	REVISION	DATE	2018-05-21	F.C.	L.L.
24	REVISION	DATE	2018-05-21	F.C.	L.L.
25	REVISION	DATE	2018-05-21	F.C.	L.L.
26	REVISION	DATE	2018-05-21	F.C.	L.L.
27	REVISION	DATE	2018-05-21	F.C.	L.L.
28	REVISION	DATE	2018-05-21	F.C.	L.L.
29	REVISION	DATE	2018-05-21	F.C.	L.L.
30	REVISION	DATE	2018-05-21	F.C.	L.L.
31	REVISION	DATE	2018-05-21	F.C.	L.L.
32	REVISION	DATE	2018-05-21	F.C.	L.L.
33	REVISION	DATE	2018-05-21	F.C.	L.L.
34	REVISION	DATE	2018-05-21	F.C.	L.L.
35	REVISION	DATE	2018-05-21	F.C.	L.L.
36	REVISION	DATE	2018-05-21	F.C.	L.L.
37	REVISION	DATE	2018-05-21	F.C.	L.L.
38	REVISION	DATE	2018-05-21	F.C.	L.L.
39	REVISION	DATE	2018-05-21	F.C.	L.L.
40	REVISION	DATE	2018-05-21	F.C.	L.L.
41	REVISION	DATE	2018-05-21	F.C.	L.L.
42	REVISION	DATE	2018-05-21	F.C.	L.L.
43	REVISION	DATE	2018-05-21	F.C.	L.L.
44	REVISION	DATE	2018-05-21	F.C.	L.L.
45	REVISION	DATE	2018-05-21	F.C.	L.L.
46	REVISION	DATE	2018-05-21	F.C.	L.L.
47	REVISION	DATE	2018-05-21	F.C.	L.L.
48	REVISION	DATE	2018-05-21	F.C.	L.L.
49	REVISION	DATE	2018-05-21	F.C.	L.L.
50	REVISION	DATE	2018-05-21	F.C.	L.L.
51	REVISION	DATE	2018-05-21	F.C.	L.L.
52	REVISION	DATE	2018-05-21	F.C.	L.L.
53	REVISION	DATE	2018-05-21	F.C.	L.L.
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55	REVISION	DATE	2018-05-21	F.C.	L.L.
56	REVISION	DATE	2018-05-21	F.C.	L.L.
57	REVISION	DATE	2018-05-21	F.C.	L.L.
58	REVISION	DATE	2018-05-21	F.C.	L.L.
59	REVISION	DATE	2018-05-21	F.C.	L.L.
60	REVISION	DATE	2018-05-21	F.C.	L.L.
61	REVISION	DATE	2018-05-21	F.C.	L.L.
62	REVISION	DATE	2018-05-21	F.C.	L.L.
63	REVISION	DATE	2018-05-21	F.C.	L.L.
64	REVISION	DATE	2018-05-21	F.C.	L.L.
65	REVISION	DATE	2018-05-21	F.C.	L.L.
66	REVISION	DATE	2018-05-21	F.C.	L.L.
67	REVISION	DATE	2018-05-21	F.C.	L.L.
68	REVISION	DATE	2018-05-21	F.C.	L.L.
69	REVISION	DATE	2018-05-21	F.C.	L.L.
70	REVISION	DATE	2018-05-21	F.C.	L.L.
71	REVISION	DATE	2018-05-21	F.C.	L.L.
72	REVISION	DATE	2018-05-21	F.C.	L.L.
73	REVISION	DATE	2018-05-21	F.C.	L.L.
74	REVISION	DATE	2018-05-21	F.C.	L.L.
75	REVISION	DATE	2018-05-21	F.C.	L.L.
76	REVISION	DATE	2018-05-21	F.C.	L.L.
77	REVISION	DATE	2018-05-21	F.C.	L.L.
78	REVISION	DATE	2018-05-21	F.C.	L.L.
79	REVISION	DATE	2018-05-21	F.C.	L.L.
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81	REVISION	DATE	2018-05-21	F.C.	L.L.
82	REVISION	DATE	2018-05-21	F.C.	L.L.
83	REVISION	DATE	2018-05-21	F.C.	L.L.
84	REVISION	DATE	2018-05-21	F.C.	L.L.
85	REVISION	DATE	2018-05-21	F.C.	L.L.
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96	REVISION	DATE	2018-05-21	F.C.	L.L.
97	REVISION	DATE	2018-05-21	F.C.	L.L.
98	REVISION	DATE	2018-05-21	F.C.	L.L.
99	REVISION	DATE	2018-05-21	F.C.	L.L.
100	REVISION	DATE	2018-05-21	F.C.	L.L.





NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.		DESCRIPTION		DATE	Rev	Ver/chk	Appr.	Affaire / Contract	AGNICO EAGLE MINING, AMARUQ NU			
ACTIFLO RECIRCULATION LINES MODIFICATION		1		FOR INSTALLATION		5/14/2018	F.C.	L.J.						
		2		ADD LENGHT FLEXIBLE TUBE		5/29/2018	F.C.	L.J.						
		3		ADDED ITEMS FROM #46 to #63		8/15/2018	A.C.	L.J.			REF. No.	5000218009	Rev.	3
		4												
DESSIN /DWG #		F10002									Date:	4/23/2018		
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG		Commentaires / Comments						
		Unit.	Total											
	5000218009-F10002-1	8	16	RECIRCULATION PIPE ø6" (2565mm LG) VICTAULIC END 75kg each	FA120									
	5000218009-F10002-2	1	1	RECIRCULATION PIPE ø6" (2058 LG) VICTAULIC END AND ELBOW 71 kg	FA121									
	5000218009-F10002-3	1	1	RECIRCULATION PIPE ø6" (2708 LG) VICTAULIC END AND ELBOW 89 kg	FA122									
	5000218009-F10002-4	1	1	RECIRCULATION PIPE ø6" (1567 LG) VICTAULIC END AND ELBOW 57kg	FA123									
	5000218009-F10002-5	1	1	RECIRCULATION PIPE ø6" (2217 LG) VICTAULIC END AND ELBOW 76kg	FA124									
	5000218009-F10002-6	1	2	RECIRCULATION PIPE ø6" (552 LG) VICTAULIC END AND HOSE ADAPTOR 20kg each	FA125									
	5000218009-F10002-7	1	2	RECIRCULATION PIPE ø6" (922 LG) VICTAULIC END AND HOSE ADAPTOR 30kg each	FA126									
	5000218009-F10002-8	1	2	RECIRCULATION PIPE, ø6" DISCHARGE PUMP (830mm LG) 36kg each	FA127									
	5000218009-F10002-9	1	2	RECIRCULATION PIPE, ø6" DISCHARGE PUMP (1170 LG) 45kg each	FA128									
	5000218009-F10002-10	1	4	RECIRCULATION PIPE, ø3" SUCCION PUMP 12kg each	FA129									
3	5000218009-F10002-11	4	2	ADAPTOR FLANGEø4" X GROOVE GALV (897 LG)13kg each	FA130						NOT USED			
	5000218009-F10002-12	1	2	RECIRCULATION PIPE ø2" DISCHARGE ø1-1/2"PUMP 665mm LG 6.5 kg each	FA131									
	5000218009-F10002-13	1	2	RECIRCULATION PIPE, ø2" DISCHARGE ø1-1/2"PUMP3kg	FA132									
	5000218009-F10002-14	1	2	RECIRCULATION PIPE, elbows ø4", 366mm lg, 19 kg each	FA133									
3	5000218009-F10002-15	4	2	RECIRCULATION PIPE, ø4" 1607mm lg, 31 kg each—	FA134						NOT USED			
	5000218009-F10002-16	1	2	RECIRCULATION PIPE, ø4"(END VIC-FLANGE)25kg each	FA135									
	5000218009-F10002-17	1	2	RECIRCULATION PIPE, ø4"ø2"(END VIC-FLANGE) 431mm long, 11kg each	FA136									
	5000218009-F10002-18	1	2	RECIRCULATION PIPE, elbows ø6"1137mm , 71kg each	FA137									
	5000218009-F10002-19	1	2	RECIRCULATION PIPE, ø2" 400mm lg , 6.5 kg each	FA138									
	5000218009-F10002-20	2	4	NIPPLE ø6" GR x HOSE	FPNISS334548									
	5000218009-F10002-21	2	4	ADAPTOR 4 FLANGE X GROOVE GALV STYLE 45	FPADSS334665									
	5000218009-F10002-22	1	2	ADAPTOR 2 FLANGE X GROOVE GALV	FPADSS314236									
	5000218009-F10002-23	2	4	ADAPTOR 4 GROOVE X GROOVE GALV STYLE43	FPADSS334664									
	5000218009-F10002-24	1	2	ADAPTOR 2 GROOVE X GROOVE GALV STYLE43	FPADSS334666									
	5000218009-F10002-25	3	6	PLUG VALVE ø4"	ST-312-112									
	5000218009-F10002-26	7	14	COUPLING "VICTAULIC" RIGIDE Ø4", SEAL EPDM (GALV.) STYLE-07	FPADSS200463									
	5000218009-F10002-27	2	4	COUPLING "VICTAULIC" FLEXIBLE Ø2", SEAL EPDM, STYLE-75 (GALV.)	FPADSS200462									
	5000218009-F10002-28	12	24	COUPLING GROOVE END "VICTAULIC" 6,GALV FLEXIBLE,EPDM	FPADSS314692									
	5000218009-F10002-29	LOT	LOT	FLEXIBLE TUBE Ø4" ID, Ø118mm OD, BLEU FDA, 240PSI ALFAGOMMA 51907-4 (8 M LG)	FTTUCS305970									

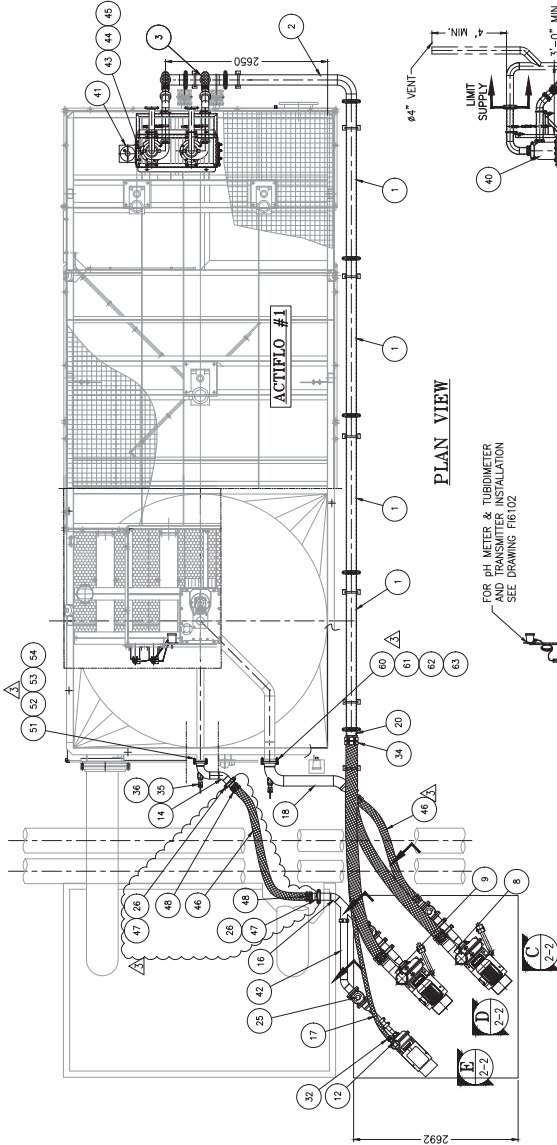


NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.	DESCRIPTION		DATE	Rev	Ver/chk	Appr.	Affaire / Contract	AGNICO EAGLE MINING, AMARUQ NU							
ACTIFLO RECIRCULATION LINES MODIFICATION											1	FOR INSTALLATION		5/14/2018	F.C.	L.J.	
											2	ADD LENGHT FLEXIBLE TUBE		5/29/2018	F.C.	L.J.	
											3	ADDED ITEMS FROM #46 to #63		8/15/2018	A.C.	L.J.	
											4						
DESSIN /DWG #		FI0002								Date:	4/23/2018						
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG		Commentaires / Comments									
		Unit.	Total														
	5000218009-FI0002-30	LOT	LOT	FLEXIBLE TUBE Ø6" ID, GREEN FDA, 240PSI ALFAGOMMA 720LG-3 (16 M LG)	FTTUCS305972												
	5000218009-FI0002-31	LOT	LOT	FLEXIBLE TUBE Ø2" ID, Ø63mm OD, BLUE FDA, 240PSI ALFAGOMMA 519OE-3 (50 M LG)	FTTUCS305968												
	5000218009-FI0002-32	4		8 HOSE CLAMP W4, Ø63mm x Ø68mm (304)	FXCLZH300020												
	5000218009-FI0002-33	8		16 HOSE CLAMP W4, Ø112mm x Ø121mm (304)	FXCLZL301866												
	5000218009-FI0002-34	8		16 HOSE CLAMP W4, Ø162mm x Ø174mm (304)	FXCLZL306213												
	5000218009-FI0002-35	2		4 BALL VALVE ø 2"	VABLSS204735												
	5000218009-FI0002-36	2		4 NIPPLE ø2" NPT x 2" LG. (316, ASTM A312)	FPNISS328862												
	5000218009-FI0002-37	48		96 HEX. HEAD SCREW Ø5/8"-11 x 3" (ASTM A307 GR.B GALV)	FXSCYY311699												
	5000218009-FI0002-38	96		192 FLAT WASHER Ø5/8" (ASTM F436 SAE TYPE E, GALV)	FXWAYY311702												
	5000218009-FI0002-39	48		96 HEX.NUT Ø5/8"-11UNC (GALV.)	FXNUYY305327												
	5000218009-FI0002-40	1		2 HYDROCYCLONE ASSEMBLY	SA050												
	5000218009-FI0002-41	1		2 SAMPLING TANK	SA1456												
	5000218009-FI0002-42	1		2 RECIRCULATION PIPE, ø4" 1027mm , 25 kg each	FA139												
	5000218009-FI0002-43	2		4 SUPPORT TANK	FABKAI332362												
	5000218009-FI0002-44	4		8 HEX. HEAD SCREW Ø5/16"-18UNC x 5/8" (ASTM-F593C-304)	FXSCYD200271												
	5000218009-FI0002-45	4		8 FLAT WASHER Ø5/16", SAE TYPE N (304)	FXWAYD200651												
3	5000218009-FI0002-46	LOT	LOT	FLEXIBLE TUBE Ø4" ID, Ø118mm OD, BLEU FDA, 240PSI ALFAGOMMA 519O7-4 (20 M LG)	FTTUCS305970												
3	5000218009-FI0002-47	2		4 NIPPLE COMBINATION 4" GROOVE X HOSE (GALV)	FPNISS332922												
3	5000218009-FI0002-48	8		16 HOSE CLAMP W4, Ø112mm x Ø121mm (304)	FXCLZL301866												
3	5000218009-FI0002-49	2		4 NIPPLE COMBINATION 4" HOSE X MNPT, SS316	FPNISS314049												
3	5000218009-FI0002-50	2		4 FLANGE THREADED Ø4" FNPT, #150, A182, FLAT FACE, F304, B16.5	FPFGSS336305												
3	5000218009-FI0002-51	16		32 HEX. HEAD SCREW Ø5/8"-11 x 3" (ASTM A307 GR.B GALV)	FXSCYY311699												
3	5000218009-FI0002-52	32		64 FLAT WASHER Ø5/8" (ASTM F436 SAE TYPE E, GALV)	FXWAYY311702												
3	5000218009-FI0002-53	16		32 HEX.NUT Ø5/8"-11UNC (GALV.)	FXNUYY305327												
3	5000218009-FI0002-54	8		16 GASKET FLANGE Ø4" FF, 1/8" TH (RED RUBBER)	SEGAFP200123												
3	5000218009-FI0002-55	1		2 ADAPTOR 4 FLANGE X GROOVE GALV STYLE 45	FPADSS334665												
3	5000218009-FI0002-56	8		16 HEX. NUT Ø1/2"-13 (GALV)	FXNUYV308869												
3	5000218009-FI0002-57	16		32 FLAT WASHER Ø1/2" ASTM F436 SAE TYPE N (GALV.)	FXWAYY311696												
3	5000218009-FI0002-58	16		32 HEX.NUT Ø5/8"-11UNC (GALV.)	FXNUYY305327												
3	5000218009-FI0002-59	32		64 FLAT WASHER Ø1/2" ASTM F436 SAE TYPE N (GALV.)	FXWAYY311702												
3	5000218009-FI0002-60	1		2 GASKET FLANGE Ø6" FF, 1/8" TH (RED RUBBER)	SEGAFP200126												
3	5000218009-FI0002-61	8		16 HEX. HEAD SCREW Ø3/4"-10UNC x 3 1/2" ASTM-A307 GR B GALV	FXSCZC318768												
3	5000218009-FI0002-62	16		32 FLAT WASHER Ø3/4", F436 SAE TYPE N, GALV	FXWAZC318490												
3	5000218009-FI0002-63	8		16 HEX.NUT Ø3/4"-10UNC A563 GR A GALV	FXNUZC318489												
											Fin de la liste / End of list						

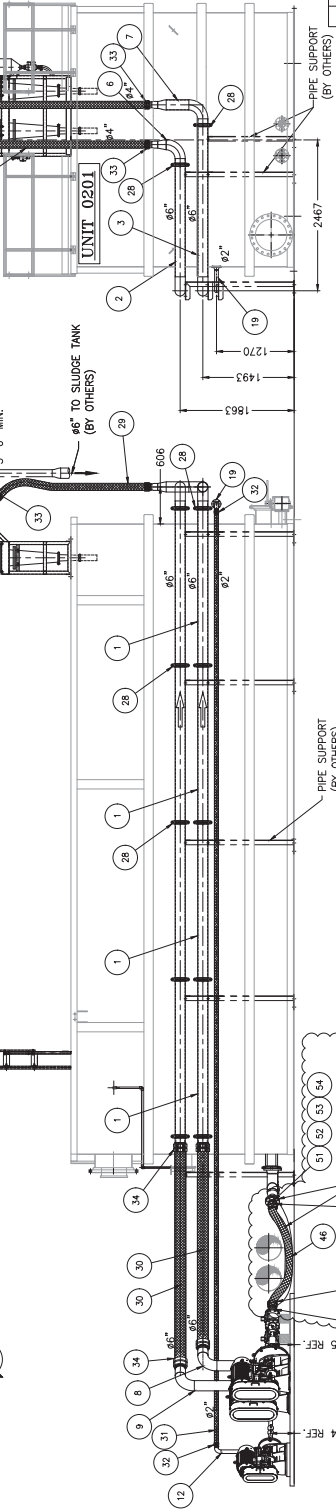
NOTES:

1. SEE BILL OF MATERIAL : 5000218009-FI002 AND MANUFACTURER'S INSTRUCTIONS INCLUDED IN O&M MANUAL.
2. ALL ITEMS MENTIONED WILL BE SUPPLIED BY VEOLIA, AS PER B.O.M. AND WILL NEED TO BE INSTALLED ON SITE.
3. PLEASE VERIFY ALL BOLTS AND NUTS ALREADY INSTALLED AND REFER TO THE TORQUE REQUIREMENTS DATA TABLE (SEE INSTALLATION MANUAL).
4. INSERT DRIP PAN UNDER EACH PUMP DRY GLAND TO PREVENT LEAKAGE.
5. REMOVE ALL FOREIGN MATERIAL (METAL CHIPS, SAND, GRAVEL, ETC.) FROM TANK INTERIOR PRIOR TO TANK WATER FILL.
6. TANKS SHALL NOT BE USED AS A SUPPORT FOR ANY OTHER EQUIPMENT. EQUIPMENTS THAT NEEDS TO BE CONNECTED TO TANK SHALL BE SELF SUPPORTED.
7. BEFORE INSTALLING ITEM 40, HYDROCYCLONE ASSEMBLY, VERIFY THAT THE EXISTING WELDS UNDER THE SUPPORTS ANGLE ARE UP TO THE STANDARDS AND THAT THEY SHOW NON SIGNS OF DETEIORATION.



PLAN VIEW

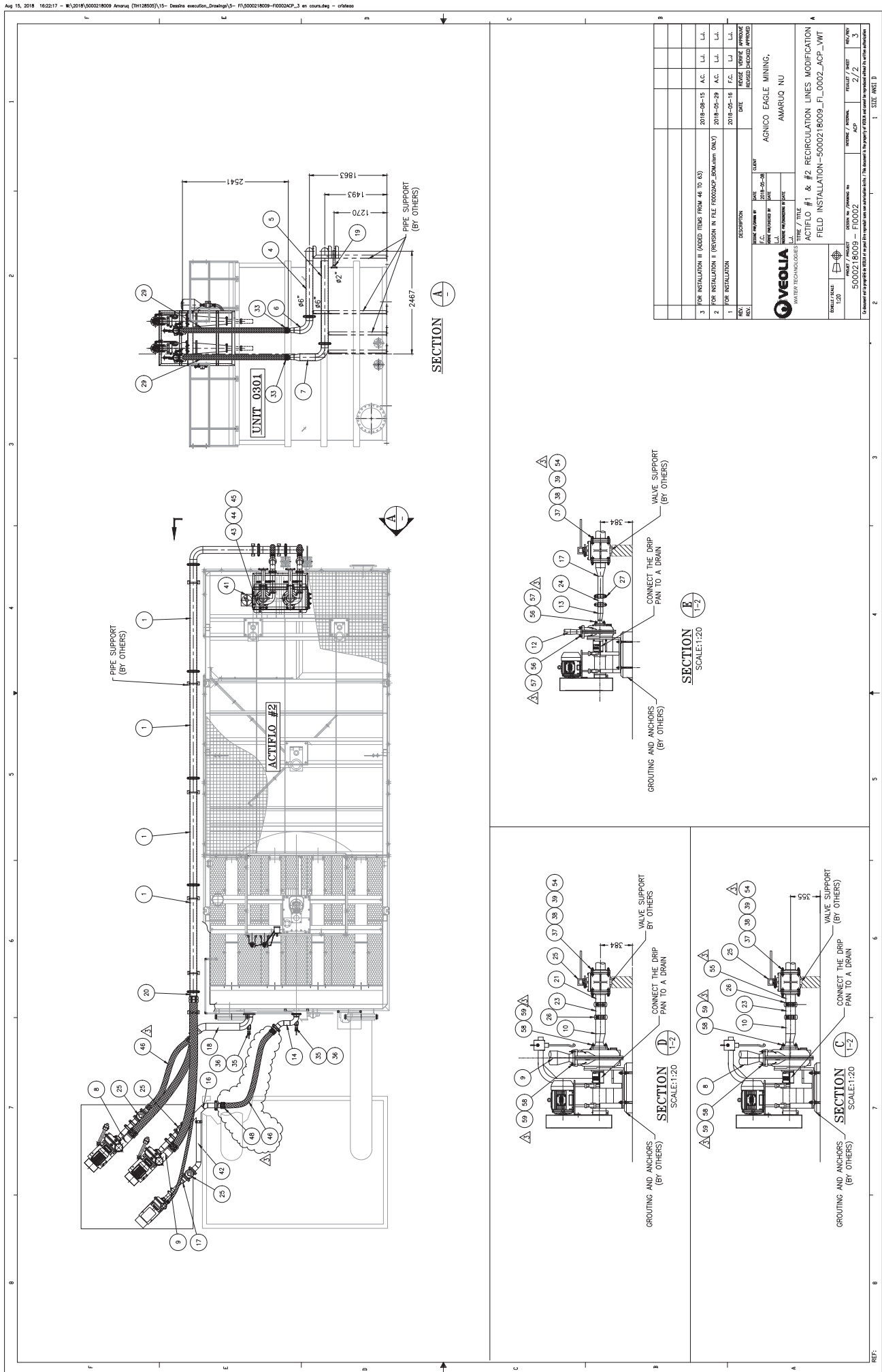
FOR pH METER & TURBIDIMETER AND TRANSMITTER INSTALLATION SEE DRAWING FI6102



ELEVATION
HANDRAIL NOT SHOW

SIDE VIEW

REV.	DESCRIPTION	DATE	BY	CHKD.	DATE	BY	CHKD.
1	FOR INSTALLATION	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
2	FOR INSTALLATION II (ADDED ITEMS FROM 46 TO 63)	2018-05-15	A.C.	L.J.	2018-05-15	A.C.	L.J.
3	FOR INSTALLATION III (REASON IN FILE FOODGAP_BOM.com ONLY)	2018-05-29	A.C.	L.J.	2018-05-29	A.C.	L.J.
4	FOR INSTALLATION IV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
5	FOR INSTALLATION V	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
6	FOR INSTALLATION VI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
7	FOR INSTALLATION VII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
8	FOR INSTALLATION VIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
9	FOR INSTALLATION IX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
10	FOR INSTALLATION X	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
11	FOR INSTALLATION XI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
12	FOR INSTALLATION XII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
13	FOR INSTALLATION XIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
14	FOR INSTALLATION XIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
15	FOR INSTALLATION XV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
16	FOR INSTALLATION XVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
17	FOR INSTALLATION XVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
18	FOR INSTALLATION XVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
19	FOR INSTALLATION XIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
20	FOR INSTALLATION XX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
21	FOR INSTALLATION XXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
22	FOR INSTALLATION XXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
23	FOR INSTALLATION XXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
24	FOR INSTALLATION XXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
25	FOR INSTALLATION XXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
26	FOR INSTALLATION XXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
27	FOR INSTALLATION XXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
28	FOR INSTALLATION XXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
29	FOR INSTALLATION XXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
30	FOR INSTALLATION XXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
31	FOR INSTALLATION XXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
32	FOR INSTALLATION XXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
33	FOR INSTALLATION XXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
34	FOR INSTALLATION XXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
35	FOR INSTALLATION XXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
36	FOR INSTALLATION XXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
37	FOR INSTALLATION XXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
38	FOR INSTALLATION XXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
39	FOR INSTALLATION XXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
40	FOR INSTALLATION XXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
41	FOR INSTALLATION XXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
42	FOR INSTALLATION XXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
43	FOR INSTALLATION XXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
44	FOR INSTALLATION XXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
45	FOR INSTALLATION XXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
46	FOR INSTALLATION XXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
47	FOR INSTALLATION XXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
48	FOR INSTALLATION XXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
49	FOR INSTALLATION XXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
50	FOR INSTALLATION XXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
51	FOR INSTALLATION XXXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
52	FOR INSTALLATION XXXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
53	FOR INSTALLATION XXXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
54	FOR INSTALLATION XXXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
55	FOR INSTALLATION XXXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
56	FOR INSTALLATION XXXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
57	FOR INSTALLATION XXXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
58	FOR INSTALLATION XXXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
59	FOR INSTALLATION XXXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
60	FOR INSTALLATION XXXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
61	FOR INSTALLATION XXXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
62	FOR INSTALLATION XXXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
63	FOR INSTALLATION XXXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
64	FOR INSTALLATION XXXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
65	FOR INSTALLATION XXXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
66	FOR INSTALLATION XXXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
67	FOR INSTALLATION XXXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
68	FOR INSTALLATION XXXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
69	FOR INSTALLATION XXXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
70	FOR INSTALLATION XXXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
71	FOR INSTALLATION XXXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
72	FOR INSTALLATION XXXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
73	FOR INSTALLATION XXXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
74	FOR INSTALLATION XXXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
75	FOR INSTALLATION XXXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
76	FOR INSTALLATION XXXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
77	FOR INSTALLATION XXXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
78	FOR INSTALLATION XXXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
79	FOR INSTALLATION XXXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
80	FOR INSTALLATION XXXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
81	FOR INSTALLATION XXXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
82	FOR INSTALLATION XXXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
83	FOR INSTALLATION XXXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
84	FOR INSTALLATION XXXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
85	FOR INSTALLATION XXXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
86	FOR INSTALLATION XXXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
87	FOR INSTALLATION XXXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
88	FOR INSTALLATION XXXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
89	FOR INSTALLATION XXXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
90	FOR INSTALLATION XXXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
91	FOR INSTALLATION XXXXXI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
92	FOR INSTALLATION XXXXXII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
93	FOR INSTALLATION XXXXXIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
94	FOR INSTALLATION XXXXXIV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
95	FOR INSTALLATION XXXXXV	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
96	FOR INSTALLATION XXXXXVI	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
97	FOR INSTALLATION XXXXXVII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
98	FOR INSTALLATION XXXXXVIII	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
99	FOR INSTALLATION XXXXXIX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.
100	FOR INSTALLATION XXXXXX	2018-05-16	F.C.	L.J.	2018-05-16	F.C.	L.J.





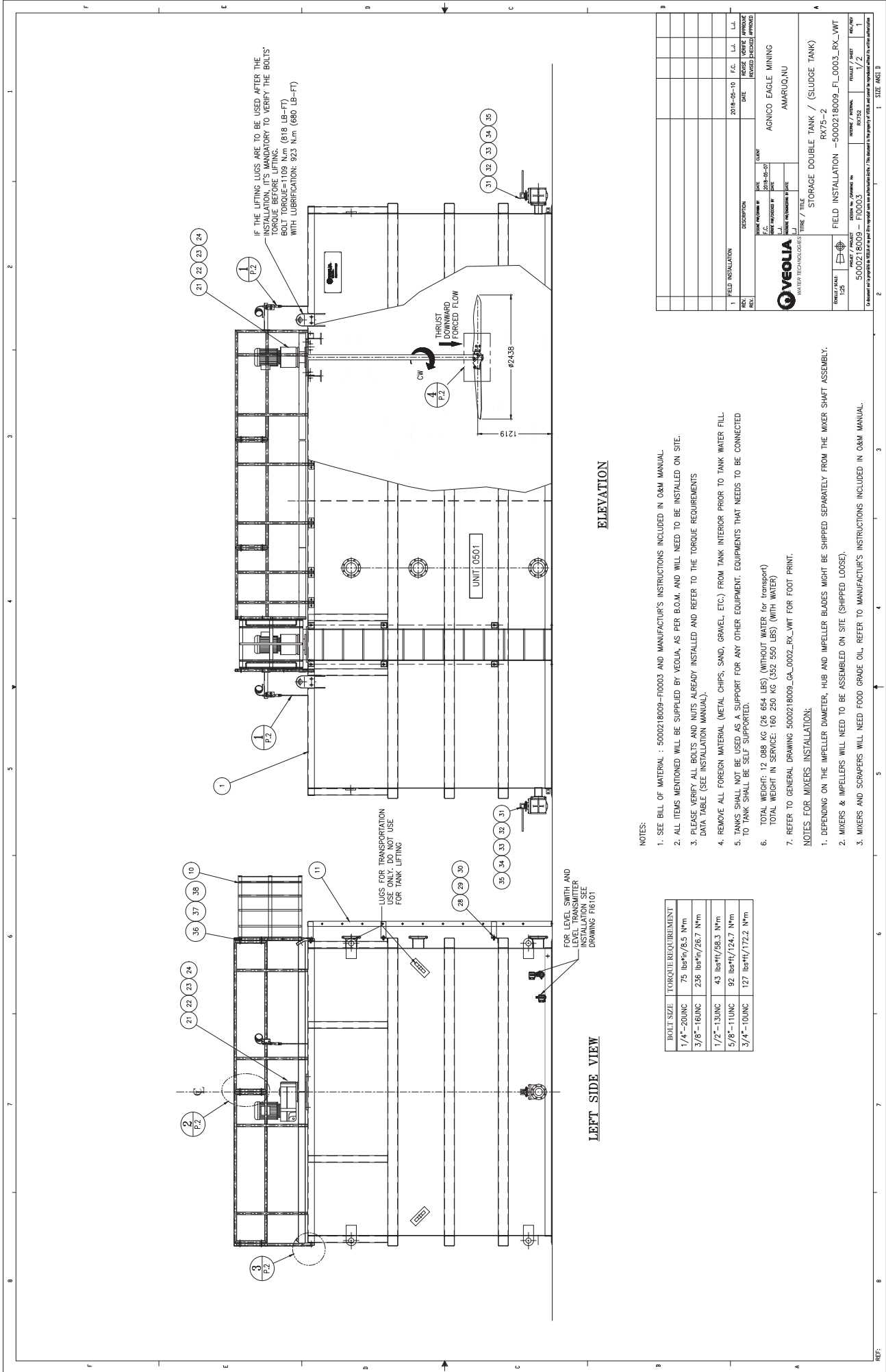
NOMENCLATURE/ BILL OF MATERIALS

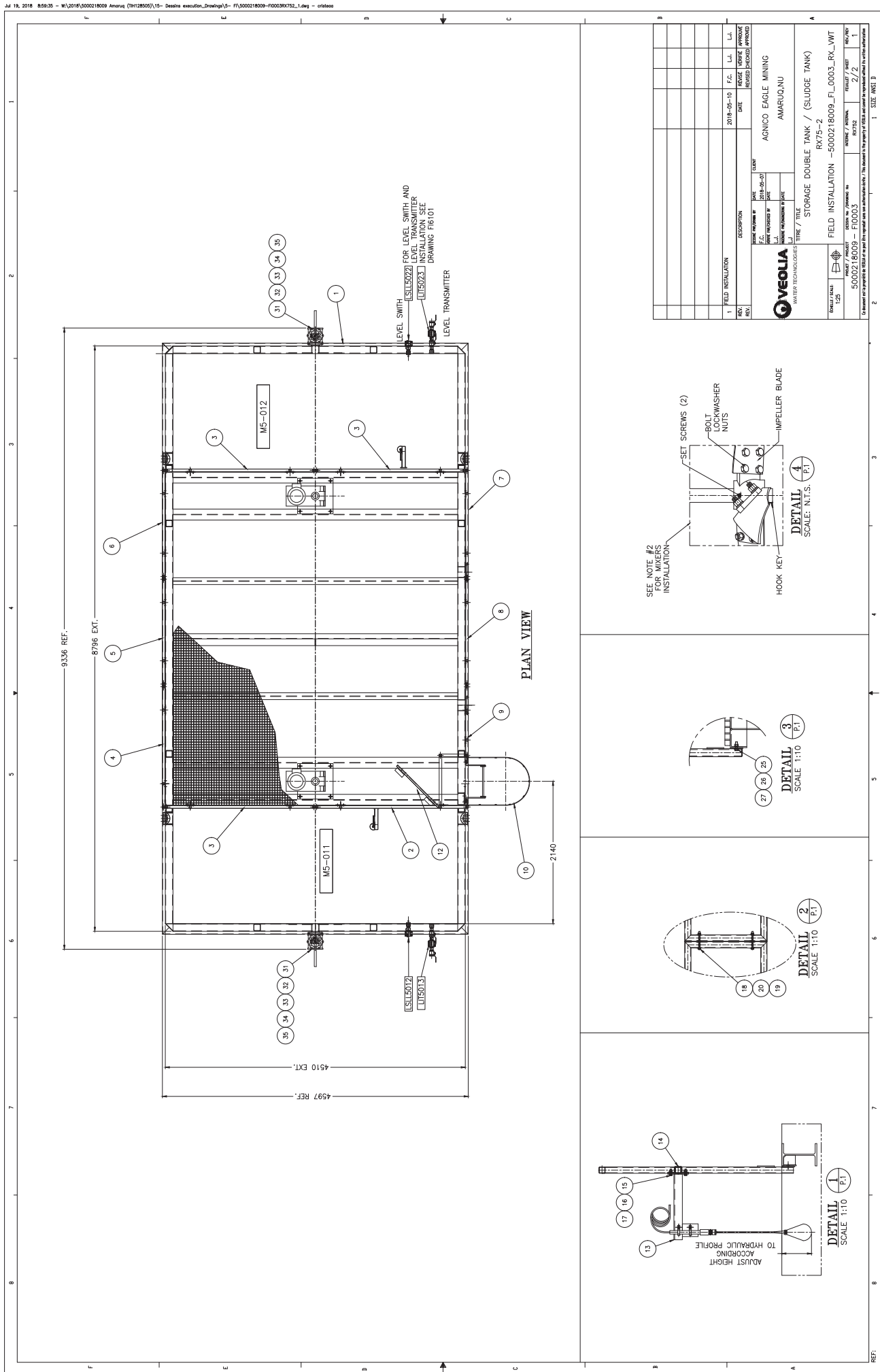
TITRE/ TITLE		Rev.	DESCRIPTION		DATE	Rev	Ver/chk	Appr.	Affaire / Contract	AGNICO EAGLE MINING AMARUQU,NU		
POLISHING REACTOR (SKID 0501) RX75-2, FIELD INSTALLATION		1	FIELD INSTALLATION		5/10/2018	F.C.	L.J.	L.J.				
		2										
		3								REF. No.	5000218009	Rev. 1
		4										
DESSIN /DWG #		F10003							Date:	5/3/2018		
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG		Commentaires / Comments				
		Unit.	Total									
									</			



NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.	DESCRIPTION	DATE	Rev	Ver/chk	Appr.	Affaire / Contract	AGNICO EAGLE MINING AMARUQ,NU			
POLISHING REACTOR (SKID 0501) RX75-2, FIELD INSTALLATION			1	FIELD INSTALLATION	5/10/2018	F.C.	L.J.	L.J.				
			2									
			3							REF. No.	5000218009	Rev. 1
			4									
DESSIN /DWG #		FI0003						Date:	5/3/2018			
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG		Commentaires / Comments				
	5000218009-FI0003-25	Unit.	Total	HEX. HEAD SCREW Ø1/2"-13UNC x 1 3/4" ASTM A307 GR.B (GALV)	FXSCVY311692							
	5000218009-FI0003-26			FLAT WASHER Ø1/2" ASTM F436, SAE TYPE N (GALV)	FXWAYV311696							
	5000218009-FI0003-27			HEX.NUT Ø1/2"-13UNC ASTM A536 GRA (GALV)	FXNUYV311695							
	5000218009-FI0003-28			6HEX. HEAD SCREW Ø1/2"-13UNC x 2" (ASTM-F593C-304)	FXSCVY200429							
	5000218009-FI0003-29			12FLAT WASHER Ø1/2", SAE TYPE N (304)	FXWAYV200670							
	5000218009-FI0003-30			6NYLON INSERT LOCK NUT Ø1/2"-13UNC (ASTM-F594C-304)	FXNUYV200214							
	5000218009-FI0003-31			2PLUG VALVE	ST-312-112	T5011V004 & T5012V004						
	5000218009-FI0003-32			2GASKET FLANGE Ø4" FF. 1/8" TH (EPDM))	SEGAFP201223							
	5000218009-FI0003-33			16HEX. HEAD SCREW Ø5/8"-11UNC x 3" (ASTM-F593C-304)	FXSCVY200497							
	5000218009-FI0003-34			32FLAT WASHER Ø5/8", SAE TYPE N (304)	FXWAYY200674							
	5000218009-FI0003-35			16HEX.NUT Ø5/8"-11UNC (ASTM-F594C-304)	FXNUYV200221							
	5000218009-FI0003-36			6HEX. HEAD SCREW Ø3/8"-16UNC x 3"ASTM A307 GR.B (GALV)	FXSCYS312592							
	5000218009-FI0003-37			12FLAT WASHER Ø3/8" ASTM F436, SAE TYPE N (GALV)	FXWAYS311690							
	5000218009-FI0003-38			6HEX.NUT Ø3/8"-16UNC ASTM A536 GRA (GALV)	FXNUYV311689							
				ITEMS NOT SHOWN ON DRAWING								
	5000218009-FI0003-100	1 GAL	1 GAL	PAINT, ENVIROLASTIC 940, JMI BLUE, 1 GAL C/W HARDENER, EPOXY TOUCH UP, EXT	TOTOGU308811			SUPPLIED BY PAINTING WORKSHOP				
	5000218009-FI0003-101	1 GAL	1 GAL	One (1) coat of DURA -PLATE UHS from SHERWIN WILLIAMS, 18 to 28 mils per coat dry, NSF white	TOTOGU309750			SUPPLIED BY PAINTING WORKSHOP				
				Fin de la liste / End of list								







Fin de la liste / End of list

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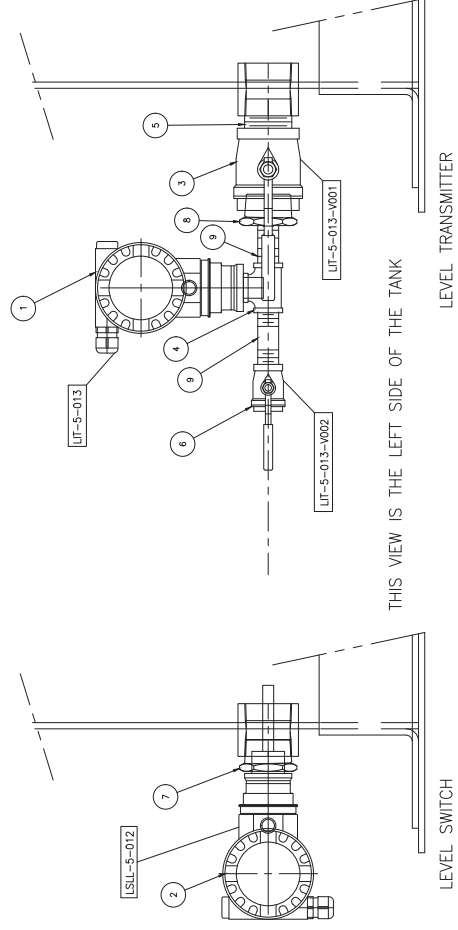
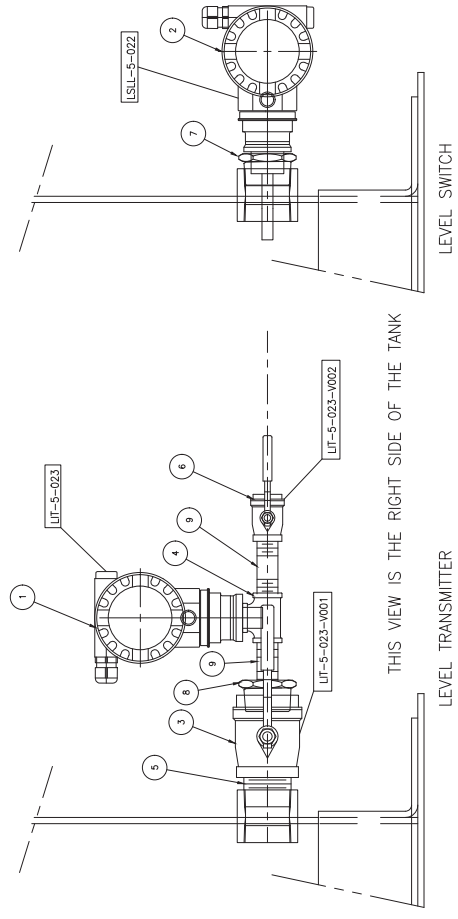
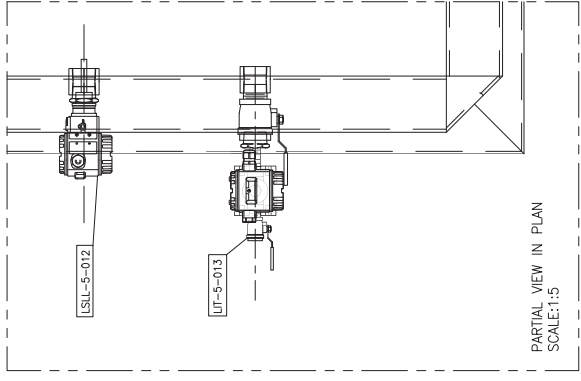
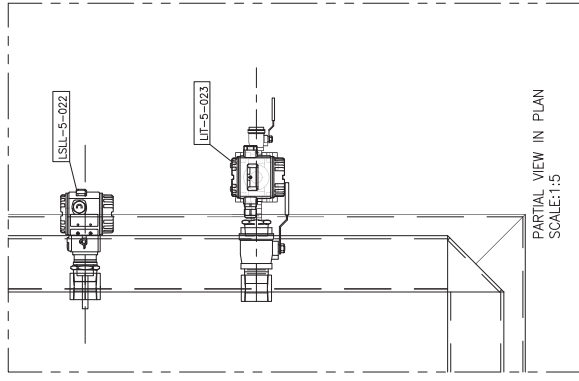
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NOMENCLATURE/ BILL OF MATERIALS

TITRE/ TITLE		Rev.	DESCRIPTION	DATE	Rev	Ver/dhk	Appr.	Affaire / Contract	AGNICO EAGLE MINING, AMARUQ, NU	
LEVEL SWITCH AND LEVEL TRANSMITTER, INSTALLATION		1	FOR INSTALLATION at the base of the sludge storage tank RX75-2	5/14/2018	F.C.		L.J.			
		2								
		3								
		4								
		5								
DESSIN /DWG #		F16101							REF. No.	5000218009 Rev. 1
REV.	ITEM	QTE/QTY.		DESCRIPTION	INV. /Plan Ref. Drawing	P&ID I.D./TAG	Commentaires / Comments			
		Unit.	Total							
	5000218009-F16101-1	1		2 LEVEL TRANSMITTER 1/2 in dia.	Site	LE-5-013/023 LIT-5-013/023				
	5000218009-F16101-2	1		2 LEVEL SWITCH 1 in dia.	Site	LSLL-5-012/022				
	5000218009-F16101-3	1		2 BALL VALVE Ø1 1/2" FNPT, "FULL PORT" (316)	VABLSS200270					
	5000218009-F16101-4	1		2 TEE Ø 1/2" FNPT, #150 (304)	FPTESS202724					
	5000218009-F16101-5	1		2 CLOSE NIPPLE Ø1 1/2" NPT (SCH,40) (304)	FPNISS202301					
	5000218009-F16101-6	1		2 BALL VALVE Ø 1/2" FNPT, "FULL PORT" (316)	VABLSS204730	LIT5-013-V002 /LIT5-023-V002				
	5000218009-F16101-7	1		REDUCING BUSHINGS Ø1 1/2" x Ø1" 304 McMASTER-CARR 4464K157)	FPRDSS206364					
	5000218009-F16101-8	1		REDUCING BUSHING 1 1/2 x 1/2 304 McMASTER-CARR 4464K155	FPRDSS312149					
	5000218009-F16101-9	2		4 NIPPLE Ø 1/2" NPT (SCH,40) x 3" (304)	FPNISS302608					
Fin de la liste / End of list										

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FOR INSTALLATION				DATE			
REV.	DESCRIPTION	DATE	BY	REV.	DESCRIPTION	DATE	BY
1	FOR INSTALLATION	2018-05-14	F.C.	1	FOR INSTALLATION	2018-05-14	F.C.
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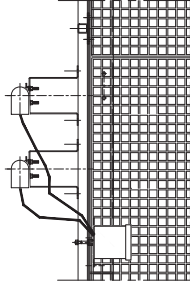


Fin de la liste / End of list

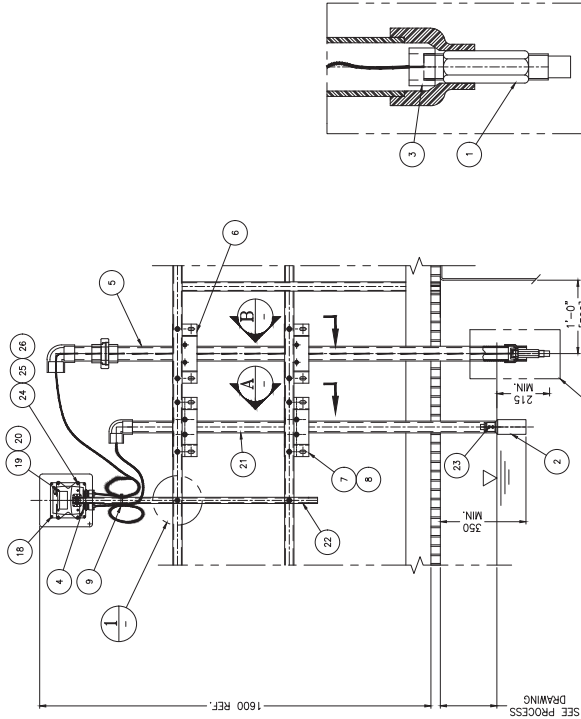
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NOTES:

- 1- FOR PARTS LIST SEE BILL OF MATERIAL- 5000218009-F16102.
- 2- FOR INSTALLATION POSITION SEE: 5000218009-F10002.
- 3- FOR INSTALLATION DETAILS SEE ALSO MANUFACTURER'S INSTRUCTIONS INCLUDED IN O&M MANUAL.

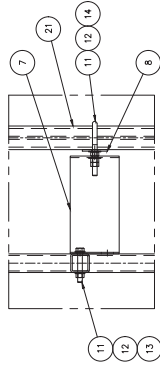


PLAN VIEW

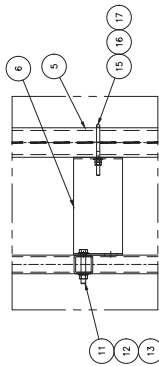


ELEVATION

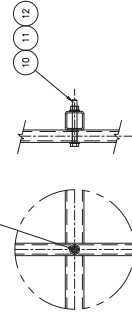
SECTION A
SCALE: 1:5



SECTION B
SCALE: 1:5



DETAIL
SCALE: 1:5



REV.	DESCRIPTION	DATE	REVISED BY	DATE	REVISED BY
1	FOR INSTALLATION	2018-05-16	F.C.	DATE	DATE
2					
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DESIGNER / DRAWER	DATE	CHECKED	DATE	APPROVED	DATE
F.C.	2018-05-16	F.C.	2018-05-16	F.C.	2018-05-16
INTEGRITY / NUMBER	DATE	INTEGRITY / NUMBER	DATE	INTEGRITY / NUMBER	DATE
1	2018-05-16	1	2018-05-16	1	2018-05-16
2		2		2	
3		3		3	
4		4		4	
5		5		5	
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26		26		26	

PROJECT / PRODUCT	CLIENT	DATE	DATE	DATE	DATE
VEOLIA	AGNICO EAGLE MINING	2018-05-16	2018-05-16	2018-05-16	2018-05-16
WATER TECHNOLOGIES	AMARUQU				
PH PROBE MODEL "DPD1R1", TURBIDIMETER					
MODEL "SOLITAX" AND TRANSMITTER SC200,					
FIELD INSTALLATION ON HANDRAILS, ACTFLO #1& #2					
DESIGN NO. / DRAWING NO.	WATER / INTERNAL	WATER / SHEET	WATER / SHEET	WATER / SHEET	WATER / SHEET
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2	2	2	2	2	2
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4	4	4	4	4	4
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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

3 – DRAWINGS

3.6 – GENERAL ARRANGEMENT LAYOUT

TO BE PROVIDED BY AGNICO EAGLE MINES

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

4 – DETAILED TECHNICAL DOCUMENTATION

4.1 – EQUIPMENT LISTS

4.1.1 – VALVE LIST

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

4 – DETAILED TECHNICAL DOCUMENTATION

4.1 – EQUIPMENT LISTS

4.1.2 – INSTRUMENTATION LIST

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

4 – DETAILED TECHNICAL DOCUMENTATION

4.1 – EQUIPMENT LISTS

4.1.3 – DETAILED LIST

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EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
AE1-011	INSTRUMENT	OXYDATION REDUCTION POTENTIAL	IEPOH200708	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	DD1JHS
AE1-012	INSTRUMENT	PH METER PROBE - ACP	ST-403-303	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	DPD1R1
AE1-014	INSTRUMENT	TURBIDIMETER PROBE	ST-403-303	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	DPD1R1
AE2-011	INSTRUMENT	PH METER PROBE - ACP	ST-403-303	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	HACH	HACH	DPD1R1
AE2-012	INSTRUMENT	TURBIDIMETER PROBE - ACP	IEPTB200853	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	HACH	HACH	LVW423.99.10100
AE2-021	INSTRUMENT	PH METER PROBE - ACP	ST-403-303	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	HACH	HACH	DPD1R1
AE2-022	INSTRUMENT	TURBIDIMETER PROBE - ACP	IEPTB200853	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	HACH	HACH	LVW423.99.10100
AE2-011	INSTRUMENT	TURBIDIMETER PROBE	ST-400-14021	SLUDGE TANK	PI001 SHEET 04	HACH	HACH	LVW424.99.00100/LZ6661/5738400/LXW404.99.00552/9328100
AIT1-011	INSTRUMENT	OXYDATION REDUCTION POTENTIAL	ST-403-306	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100 + 3 RD OUTPUT 9334600
AIT1-012	INSTRUMENT	OXYDATION REDUCTION POTENTIAL	INCLUDED WITH AIT1-011	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100 + 3 RD OUTPUT 9334600
AIT1-014	INSTRUMENT	PH TRANSMITTER	ST-403-306	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100 + 3 RD OUTPUT 9334600
AIT2-011	INSTRUMENT	PH TRANSMITTER	INCLUDED WITH AIT2-012	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100
AIT2-012	INSTRUMENT	TSS TRANSMITTER	IECNGU340502	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100
AIT2-021	INSTRUMENT	PH TRANSMITTER	INCLUDED WITH AIT2-022	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100
AIT2-022	INSTRUMENT	TSS TRANSMITTER	IECNGU340502	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100
AIT4-011	INSTRUMENT	TSS TRANSMITTER	INCLUDE WITH AE4-011	SLUDGE TANK	PI001 SHEET 04	HACH	HACH	SC200/LXW404.99.00552 + HART PROTOCOL MODULE 9328100
BPV9-511	VALVE	BACKPRESSURE VALVE	VAPSPV329498	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CHEMLINE	CHEMLINE	SB12A005EU
BPV9-514	VALVE	BACKPRESSURE VALVE	VAPFPV348512	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	SB12A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. L_U)
BPV9-524	VALVE	BACKPRESSURE VALVE	VAPFPV348513	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	SB12A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. R_U)
BPV9-525	VALVE	BACKPRESSURE VALVE	VAPFPV348513	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	SB12A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. R_U)
BPV9-526	VALVE	BACKPRESSURE VALVE	VAPFPV348513	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	SB12A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. R_U)
BPV9-532	VALVE	BACKPRESSURE VALVE	VAPSPV351047	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	SB12K005VCF+ + SGA-005-002-P-G + P025-160-BM (CONFIG. L_U)
BPV9-541	VALVE	BACKPRESSURE VALVE	VAPSPV329498	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CHEMLINE	CHEMLINE	SB12A005EU
BPV9-591	VALVE	BACKPRESSURE VALVE	VAPFPV348512	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	SB12A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. L_U)
BPV9-592	VALVE	BACKPRESSURE VALVE	VAPSPV329498	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CHEMLINE	CHEMLINE	SB12A005EU
C1	CONTAINER	CONTAINER	N/A	CONTAINER	PI001 SHEET 17	VWTC		
C1 (1)	CONTAINER	CONTAINER	N/A	CONTAINER	PI001 SHEET 16	VWTC		
C2-011	HYDROCYCLONE	HYDROCYCLONE	ST-904-001	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	FLSMIDTH	KREBS ENGINEERS	U10-GMAX-9.55QIN
C2-012	HYDROCYCLONE	HYDROCYCLONE	ST-904-001	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	FLSMIDTH	KREBS ENGINEERS	U10-GMAX-9.55QIN
C2-021	HYDROCYCLONE	HYDROCYCLONE	ST-904-001	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	FLSMIDTH	KREBS ENGINEERS	U10-GMAX-9.55QIN
C2-022	HYDROCYCLONE	HYDROCYCLONE	ST-904-001	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	FLSMIDTH	KREBS ENGINEERS	U10-GMAX-9.55QIN
CLV9-521	MISC	Calibration Cylinder	PUSPPV200284	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	PRIMARY FLUID	PRIMARY FLUID	PV#2 10000
CLV9-531	MISC	Calibration Cylinder	TOLBGU16608	SULFURIC ACID DOSING SKID	PI001 SHEET 12	PRIMARY FLUID	PRIMARY FLUID	ACS#2-250-GWVF
CV15-011	VALVE	CHECK VALVE - CARRIER WATER	VANRPV302912	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	BTAD10EC
CV15-021	VALVE	CHECK VALVE - CARRIER WATER	VANRPV302912	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	BTAD10EC
CV9-591	VALVE	CHECK VALVE - LIQUID POLYMER	VANRPV200667	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMLINE	CHEMLINE	BTAD15EC
CV9-621	VALVE	CHECK VALVE - LIQUID POLYMER	VABLPV303191	HYDRAPOL 3500	PI001 SHEET 18	CHEMLINE	CHEMLINE	BTAD20EC
CV9-514	MISC	CALIBRATION CYLINDER	PUSPPV200288	COAGULANT DOSING SKID	PI001 SHEET 10	PRIMARY FLUID	PRIMARY FLUID	PV#2 4000
CV9-591	MISC	CALIBRATION CYLINDER	PUSPPV200288	KMnO4 DOSING SKID	PI001 SHEET 17	PRIMARY FLUID	PRIMARY FLUID	PV#2 4000
CV9-591-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A010EC,TYPE21
CV9-591-V002	VALVE	CLEANING VALVE	VABLPV200249	KMnO4 DOSING SKID	PI001 SHEET 11	CHEMLINE	CHEMLINE	21A005EC,TYPE21
CV9-621	MISC	CALIBRATION CYLINDER	PUSPPV200284	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	PRIMARY FLUID	PRIMARY FLUID	PV#2 10000
FCV4-011	VALVE	PINCH VALVE	ST-313-501	SLUDGE TANK	PI001 SHEET 04	DM VALVE	FLOWROX	PVEJAK150-601L-SBRT
F115-011	INSTRUMENT	VARIABLE AREA FLOWMETER	IMFWG301907	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	FS402500
F115-021	INSTRUMENT	VARIABLE AREA FLOWMETER	IMFWG301907	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	FS402500
F1T1-011	INSTRUMENT	FLOWMETER	ST-404-566	RAW WATER	PI001 SHEET 01	E&H	ENDRESS & HAUSER	50W6H-U1GA1RC2BAAW+1
F1T4-011	INSTRUMENT	FLOWMETER	ST-404-564	SLUDGE TANK	PI001 SHEET 04	E&H	ENDRESS & HAUSER	50W8D-U1GA1RC2BAAW+1
F1T5-011	INSTRUMENT	FLOWMETER	ST-404-565	RX75-2 SLUDGE TANK	PI001 SHEET 05	E&H	ENDRESS & HAUSER	50W50-U1GA1RC2BAAW+1
F1T5-012	INSTRUMENT	FLOWMETER	ST-404-565	RX75-2 SLUDGE TANK	PI001 SHEET 05	E&H	ENDRESS & HAUSER	50W50-U1GA1RC2BAAW+1
FMW9-591	FEEDER	DRY POLYMER AGITATOR	INCLUDED WITH FSW9-591	KMnO4 PREP SYSTEM	PI001 SHEET 16	WAM		

EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
FM9-621	FEEDER	DRY POLYMER AGITATOR	INCLUDED WITH F5M9-621	HYDRAPOL 3500	PID01 SHEET 18	WAM		
FSW9-591	FEEDER	FEEDER SREW	ST-999-001	Km04 PREP SYSTEM	PID01 SHEET 16	WAM		
FSW9-621	FEEDER	DREY FEEDER	CMSPGJ320682	HYDRAPOL 3500	PID01 SHEET 18	WAM		MRF 073 I20 4-5-D-E // 575V // NEMA BALDOR MOTORS
FSW9-621-0001	MISC	CONE BIG BAG	CMSPGJ320684	HYDRAPOL 3500	PID01 SHEET 18	WAM		SB8/Cone MS
FSW9-621-V001	VALVE	SLIDE GATE VALVE	CMSPGJ320683	HYDRAPOL 3500	PID01 SHEET 18	WAM		VL00250P3/CMG0250
J9-591	EDUCTOR	EDUCTOR	EJGUE200371	Km04 PREP SYSTEM	PID01 SHEET 16	SHUTTE&KOERTING		1.5"- Fig264 PVC Eductor
J9-621	EDUCTOR	EDUCTOR	EJGUE200372	HYDRAPOL 3500	PID01 SHEET 18	SHUTTE&KOERTING		2"- Fig264 PVC Eductor
INP-541	MISC	INJECTION QUILL	XXX	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	PRIMARY FLUID		
INP-591	MISC	INJECTION QUILL	XXX	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	PRIMARY FLUID		
J99-514	MISC	JUNCTION BOX	N/A	COAGULANT DOSING SKID	PID01 SHEET 10	VWTC AUTOMATION		
J99-524	MISC	JUNCTION BOX	N/A	ANIONIC POLYMER DOSING SKID	PID01 SHEET 15	VWTC AUTOMATION		
J99-621	MISC	CONTROL PANEL	N/A	CATIONIC POLYMER DOSING SKID	PID01 SHEET 19	VWTC AUTOMATION		
LES-013	INSTRUMENT	LEVEL SENSOR	INCLUDED WITH LITS-013	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H		
LES-023	INSTRUMENT	LEVEL SENSOR	INCLUDED WITH LITS-023	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H		
LITS-013	INSTRUMENT	LEVEL TRANSMITTER	ST-402-609	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H	ENDRESS & HAUSER	PMCT1-UBCF32DAAG-Z1
LITS-013-V001	VALVE	ISOLATION VALVE	VABLSS200270	RX75-2 SLUDGE TANK	PID01 SHEET 05	CFE		SS2-40 (11/2)
LITS-013-V002	VALVE	DRAIN VALVE	VABLSS204730	RX75-2 SLUDGE TANK	PID01 SHEET 05	PINACLE		316VTR205
LITS-023	INSTRUMENT	LEVEL TRANSMITTER	ST-402-609	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H	ENDRESS & HAUSER	PMCT1-UBCF32DAAG-Z1
LITS-023-V001	VALVE	ISOLATION VALVE	VABLSS200270	RX75-2 SLUDGE TANK	PID01 SHEET 05	CFE		SS2-40 (11/2)
LITS-023-V002	VALVE	DRAIN VALVE	VABLSS204730	RX75-2 SLUDGE TANK	PID01 SHEET 05	PINACLE		316VTR205
LSHH1-011	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	FLVGT		ENM-10 (6m)
LSHH4-011	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	SLUDGE TANK	PID01 SHEET 04	FLVGT		ENM-10 (6m)
LSHH5-011	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	RX75-2 SLUDGE TANK	PID01 SHEET 05	FLVGT		ENM-10 (6m)
LSHH5-021	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	RX75-2 SLUDGE TANK	PID01 SHEET 05	FLVGT		ENM-10 (6m)
LSHH6-011	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	CENTRIFUGE	PID01 SHEET 06	FLVGT		ENM-10 (6m)
LSHH6-021	INSTRUMENT	HIGH HIGH LEVEL SWITCH	IESWLE201155	CENTRIFUGE	PID01 SHEET 06	FLVGT		ENM-10 (6m)
LSH9-591	INSTRUMENT	HOPPER LOW LEVEL SWITCH	IESWLE504819	Km04 PREP SYSTEM	PID01 SHEET 16	E&H	ENDRESS & HAUSER	FT31-C6D811-A
LSB9-621	INSTRUMENT	HOPPER LOW LEVEL SWITCH	IESWLE504819	HYDRAPOL 3500	PID01 SHEET 18	E&H	ENDRESS & HAUSER	FT31-C6D811-A
LSL14-012	INSTRUMENT	LOW LOW LEVEL SWITCH	ST-451-507	SLUDGE TANK	PID01 SHEET 04	E&H	ENDRESS & HAUSER	FTL51-UGN2CB4E5A
LSL15-012	INSTRUMENT	LOW LEVEL SWITCH	ST-451-507	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H	ENDRESS & HAUSER	FTL51-UGN2CB4E5A
LSL15-022	INSTRUMENT	LOW LEVEL SWITCH	ST-451-507	RX75-2 SLUDGE TANK	PID01 SHEET 05	E&H	ENDRESS & HAUSER	FTL51-UGN2CB4E5A
LSL16-011	INSTRUMENT	HOPPER LOW LEVEL SWITCH	IESWLE201155	CENTRIFUGE	PID01 SHEET 06	FLVGT		ENM-10 (6m)
LSL16-021	INSTRUMENT	HOPPER LOW LEVEL SWITCH	IESWLE201155	CENTRIFUGE	PID01 SHEET 06	FLVGT		ENM-10 (6m)
LTS-591	INSTRUMENT	TANK LEVEL TRANSMITTER	IPOPS340482	Km04 PREP SYSTEM	PID01 SHEET 16	E&H	ENDRESS & HAUSER	PMCT1-UCC1E3RABAA
LTS-592	INSTRUMENT	TANK LEVEL TRANSMITTER	IPOPS340482	Km04 PREP SYSTEM	PID01 SHEET 16	E&H	ENDRESS & HAUSER	PMCT1-UCC1E3RABAA
M1-011	MIXER	MIXER EVGX6-5,575V,SS304,NORD,CCW	ST-632-RX75UN1	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	ENVIREQUIP		
M1-012	MIXER	MIXER EVGX6-5,575V,SS304,NORD,CW	ST-632-RX75DN1	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	ENVIREQUIP		
M1-013	MIXER	MIXER EVGX6-5,575V,SS304,NORD,CCW	ST-632-RX75UN1	RX75-3 PRECIPITATION REACTOR	PID01 SHEET 01	ENVIREQUIP		
M5-011	MIXER	MIXER EVGX6-5,575V,SS304,NORD,CW	ST-632-RX75DN1	RX75-2 SLUDGE TANK	PID01 SHEET 05	ENVIREQUIP		
M5-012	MIXER	MIXER EVGX6-5,575V,SS304,NORD,CW	ST-632-RX75DN1	RX75-2 SLUDGE TANK	PID01 SHEET 05	ENVIREQUIP		
M9-591	MIXER	MATURATION MIXER	CMSPM1319898	Km04 PREP SYSTEM	PID01 SHEET 16	ENVIREQUIP	ENVIREQUIP	HP500 (2016) // EVG01-0.5 // 304/575
M9-621	MIXER	MATURATION MIXER	CMSPM1319908	HYDRAPOL 3500	PID01 SHEET 18	ENVIREQUIP	ENVIREQUIP	HP3500 (2016) // EVG1-0.75 // 304/575
P2-011	PUMP	RECIRCULATION PUMP	ST-607-0808011x1	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	MCLANAHAN		SERIE IIR 80x80
P2-011-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	PRATT		60IN1-L/4"
P2-012	PUMP	RECIRCULATION PUMP	ST-607-0808011x1	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	MCLANAHAN		SERIE IIR 80x80
P2-012-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	PRATT		60IN1-L/4"
P2-014	PUMP	RECIRCULATION PUMP MULTIFLO	ST-607-107	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	MCLANAHAN		
P2-014-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 02	PRATT		60IN1-L/4"
P2-021	PUMP	RECIRCULATION PUMP	ST-607-0808011x1	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 03	MCLANAHAN		SERIE IIR 80x80
P2-021-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PID01 SHEET 03	PRATT		60IN1-L/4"

EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
P2-022	PUMP	RECIRCULATION PUMP	ST-607-08080811xx1	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	MCLEANHAN	MCLEANHAN	SERIE IIR 80x80
P2-022-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	PRATT	PRATT	60IN1-1/4"
P2-023	PUMP	RECIRCULATION PUMP MULTIFLO	ST-607-107	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	MCLEANHAN	MCLEANHAN	
P2-023-V001	VALVE	ISOLATION VALVE	ST-312-112	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	PRATT	PRATT	60IN1-1/4"
P5-011	PUMP	CENTRIFUGE FEEDING PUMP	ST-999-008	RX75-2 SLUDGE TANK	PI001 SHEET 05	SEEPX	SEEPX	
P5-012	PUMP	CENTRIFUGE FEEDING PUMP	ST-999-008	RX75-2 SLUDGE TANK	PI001 SHEET 05	SEEPX	SEEPX	
P6-011	PUMP	CENTRATE SUMP PUMP	ST-999-011	CENTRIFUGE	PI001 SHEET 06	Sulzer	Sulzer	
P6-021	PUMP	CENTRATE SUMP PUMP	ST-999-011	CENTRIFUGE	PI001 SHEET 06	Sulzer	Sulzer	
P9-513	PUMP	COAGULANT METERING PUMP	ST-999-004	COAGULANT DOSING SKID	PI001 SHEET 10	PULSAFEEDER		
P9-513-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-513-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-513-V003	VALVE	CLEANING VALVE	VABLPV200249	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-513-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-513-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-514	PUMP	COAGULANT METERING PUMP	ST-999-004	COAGULANT DOSING SKID	PI001 SHEET 10	PULSAFEEDER		
P9-514-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-514-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-514-V003	VALVE	CLEANING VALVE	VABLPV200249	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-514-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-514-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-514-V006	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200249	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-514-V007	VALVE	CLEANING VALVES	VABLPV200249	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-524	PUMP	ANIONIC POLYMER METERING PUMP	ST-999-007	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
P9-524-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0155C,TYPE21
P9-524-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-524-V003	VALVE	CLEANING VALVE	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-524-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-524-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-525	PUMP	ANIONIC POLYMER METERING PUMP	ST-999-007	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
P9-525-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0155C,TYPE21
P9-525-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-525-V003	VALVE	CLEANING VALVE	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-525-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-525-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-526	PUMP	ANIONIC POLYMER METERING PUMP	ST-999-007	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
P9-526-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0155C,TYPE21
P9-526-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-526-V003	VALVE	CLEANING VALVE	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-526-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0105C,TYPE21
P9-526-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200249	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMLINE	CHEMLINE	21A0056C,TYPE21
P9-531	PUMP	SULFURIC ACID METERING PUMP	ST-999-002	SULFURIC ACID DOSING SKID	PI001 SHEET 12	GRUNDFOS		
P9-531-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-531-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-531-V003	VALVE	ISOLATION VANNE (DISCHARGE)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-531-V004	VALVE	ISOLATION VANNE (DISCHARGE)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-531-V005	VALVE	CLEANING VALVE	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-532	PUMP	SULFURIC ACID METERING PUMP	ST-999-002	SULFURIC ACID DOSING SKID	PI001 SHEET 12	GRUNDFOS		
P9-532-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-532-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-532-V003	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-532-V004	VALVE	ISOLATION VALVE (SUCTION)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1
P9-532-V005	VALVE	ISOLATION VANNE (DISCHARGE)	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+12x121005-4K8N-1

EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
P9-532-V004	VALVE	ISOLATION VANNE (DISCHARGE)	VABLP2027828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+(2x)21005-4K8N-1
P9-532-V005	VALVE	CLEANING VALVE	VABLP2027828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+(2x)21005-4K8N-1
P9-591	PUMP	KMnO4 METERING PUMP	ST-999-003	KMnO4 DOSING SKID	PI001 SHEET 17	PULSAFEEDER		
P9-591-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V003	VALVE	CLEANING VALVE	VABLPV200249	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V005	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V006	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-592	PUMP	KMnO4 METERING PUMP	ST-999-003	KMnO4 DOSING SKID	PI001 SHEET 17	PULSAFEEDER		
P9-592-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-592-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-592-V003	VALVE	CLEANING VALVE	VABLPV200249	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-592-V004	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-621	PUMP	CAVITY PROGRESSIVE PUMP	ST-999-006	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEPEX	SEPEX	
P9-621-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0J15EC,TYPE21
P9-621-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-621-V003	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-621-V004	VALVE	CLEANING VALVE	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-621-V005	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEPEX	SEPEX	
P9-622	PUMP	CAVITY PROGRESSIVE PUMP	ST-999-006	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEPEX	SEPEX	
P9-622-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0J15EC,TYPE21
P9-622-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-622-V003	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-622-V004	VALVE	CLEANING VALVE	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-622-V005	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEPEX	SEPEX	
P9-623	PUMP	CAVITY PROGRESSIVE PUMP	ST-999-006	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEPEX	SEPEX	
P9-623-V001	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0J15EC,TYPE21
P9-623-V002	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-623-V003	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-623-V004	VALVE	CLEANING VALVE	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-623-V005	VALVE	CLEANING VALVE	VABLPV200249	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-514	MISC	PULSATION DAMPENER	PUSPPV200278	COAGULANT DOSING SKID	PI001 SHEET 10	PRIMARY FLUID	ACCU-PULSE	APH-PVC-N-2
P9-514-V001	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-514-V002	VALVE	CLEANING VALVES	VABLPV200249	COAGULANT DOSING SKID	PI001 SHEET 10	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-531	MISC	PULSATION DAMPENER	PUSPP200270	SULFURIC ACID DOSING SKID	PI001 SHEET 12	PRIMARY FLUID	ACCU-PULSE	API-PDVF-V-1-F
P9-531-V001	VALVE	ISOLATION VALVE	VABLP2027828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+(2x)21005-4K8N-1
P9-531-V002	VALVE	CLEANING VALVE	VABLP2027828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMLINE	CHEMLINE	21K005VCF+(2x)21005-4K8N-1
P9-591	MISC	PULSTAOON DAMPENER	PUSPPV304128	KMnO4 DOSING SKID	PI001 SHEET 17	PRIMARY FLUID	ACCU-PULSE	APH-PVC-E-2
P9-591-V001	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200250	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P9-591-V002	VALVE	CLEANING VALVE	VABLPV200249	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0D0EC,TYPE21
P115-041	INSTRUMENT	SERVICE WATER PRESSURE GAUGE	IMPSGG300380	KMnO4 PREP SYSTEM	PI001 SHEET 16	TECKNO VALVE	ASHCROFT	25-1009SWL-02L-160PSIG
P118-031	INSTRUMENT	SERVICE WATER PRESSURE GAUGE	IMPSGG300380	HYDRAPOL 3500	PI001 SHEET 16	TECKNO VALVE	ASHCROFT	25-1009SWL-02L-160PSIG
P12-011	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-413-359	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	TECKNO VALVE	ASHCROFT	45-1009SL-04L-60H-XAL C/W SEAL 50-1015S-04T-XCG
P12-011-V001	VALVE	ISOLATION VALVE	VABLS200267	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	OFF	CFF	SS2-15 (1/2)
P12-011-V002	VALVE	ISOLATION VALVE	VABLS200267	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	OFF	CFF	SS2-15 (1/2)
P12-012	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-413-359	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	TECKNO VALVE	ASHCROFT	45-1009SL-04L-60H-XAL C/W SEAL 50-1015S-04T-XCG
P12-012-V001	VALVE	ISOLATION VALVE	VABLS200267	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	OFF	CFF	SS2-15 (1/2)
P12-012-V002	VALVE	ISOLATION VALVE	VABLS200267	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	OFF	CFF	SS2-15 (1/2)
P12-021	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-413-359	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	TECKNO VALVE	ASHCROFT	45-1009SL-04L-60H-XAL C/W SEAL 50-1015S-04T-XCG

EQUIPMENT LIST

EQPM# TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
P12-021-V001	VALVE	ISOLATION VALVE	VABLS2020267	ACTIFLO RECIRCULATION LINE MODIFICATION	P1001 SHEET 03	CFF	CFF	SS2-15 (1/2)
P12-021-V002	VALVE	ISOLATION VALVE	VABLS2020267	ACTIFLO RECIRCULATION LINE MODIFICATION	P1001 SHEET 03	CFF	CFF	SS2-15 (1/2)
P12-022	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-413-359	ACTIFLO RECIRCULATION LINE MODIFICATION	P1001 SHEET 03	TECKNO VALVE	ASHCROFT	45-1009S1-04L-60H-XAL C/W SEAL 50-1015S-04T-XCG
P12-022-V001	VALVE	ISOLATION VALVE	VABLS2020267	ACTIFLO RECIRCULATION LINE MODIFICATION	P1001 SHEET 03	CFF	CFF	SS2-15 (1/2)
P12-022-V002	VALVE	ISOLATION VALVE	VABLS2020267	ACTIFLO RECIRCULATION LINE MODIFICATION	P1001 SHEET 03	CFF	CFF	SS2-15 (1/2)
P14-011	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-413-359	SLUDGE TANK	P1001 SHEET 04	TECKNO VALVE	ASHCROFT	45-1009S1-04L-60H-XAL C/W SEAL 50-1015S-04T-XCG
P14-011-V001	VALVE	ISOLATION VALVE	VABLS2020267	SLUDGE TANK	P1001 SHEET 04	CFF	CFF	SS2-15 (1/2)
P14-011-V002	VALVE	ISOLATION VALVE	VABLS2020267	SLUDGE TANK	P1001 SHEET 04	CFF	CFF	SS2-15 (1/2)
P15-011	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-434-501	RX75-2 SLUDGE TANK	P1001 SHEET 05	ONXY VALVE	ONXY VALVE	Size 4" Series PSW
P15-012	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	ST-434-501	RX75-2 SLUDGE TANK	P1001 SHEET 05	ONXY VALVE	ONXY VALVE	Size 4" Series PSW
P19-514	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-514	COAGULANT DOSING SKID	P1001 SHEET 10	CHEMLINE		
P19-524	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-524	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE		
P19-525	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-525	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE		
P19-526	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-526	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE		
P19-531	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-532	SULFURIC ACID DOSING SKID	P1001 SHEET 12	CHEMLINE		
P19-532	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH PD9-531	SULFURIC ACID DOSING SKID	P1001 SHEET 12	PRIMARY FLUID		
P19-591	INSTRUMENT	BACKPRESSURE VALVE GAUGE	INCLUDED WITH BPV9-591	KM104 DOSING SKID	P1001 SHEET 17	CHEMLINE		
P19-621	INSTRUMENT	PRESSURE GAUGE	INCLUDED WITH PRV9-621	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE		
P19-622	INSTRUMENT	PRESSURE GAUGE	INCLUDED WITH PRV9-622	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE		
P19-623	INSTRUMENT	PRESSURE GAUGE	INCLUDED WITH PRV9-623	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE		
P19-513	VALVE	RELIEF VALVE	VARFPV207282	COAGULANT DOSING SKID	P1001 SHEET 10	CHEMLINE	CHEMUNE	S812A010EU
P19-514	VALVE	RELIEF VALVE	VARFPV207282	COAGULANT DOSING SKID	P1001 SHEET 10	CHEMLINE	CHEMUNE	S812A010EU
P19-524	VALVE	RELIEF VALVE	VARFPV207282	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE	CHEMUNE	S812A010EU
P19-525	VALVE	RELIEF VALVE	VARFPV207282	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE	CHEMUNE	S812A010EU
P19-526	VALVE	RELIEF VALVE	VARFPV207282	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	CHEMLINE	CHEMUNE	S812A010EU
P19-532	VALVE	RELIEF VALVE	VARFPD200193	SULFURIC ACID DOSING SKID	P1001 SHEET 12	CHEMLINE	CHEMUNE	S812A005VCF+(2x)S8005-17K8N-1
P19-531	VALVE	RELIEF VALVE	VARFPD200193	SULFURIC ACID DOSING SKID	P1001 SHEET 12	CHEMLINE	CHEMUNE	S812A005VCF+(2x)S8005-17K8N-1
P19-591	VALVE	RELIEF VALVE	VARFPV207282	KM104 DOSING SKID	P1001 SHEET 17	CHEMLINE	CHEMUNE	S812A010EU
P19-592	VALVE	RELIEF VALVE	VARFPV207282	KM104 DOSING SKID	P1001 SHEET 17	CHEMLINE	CHEMUNE	S812A010EU
P19-621	VALVE	RELIEF VALVE	VARFPV348512	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE	CHEMUNE	S812A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. L, U)
P19-622	VALVE	RELIEF VALVE	VARFPV348512	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE	CHEMUNE	S812A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. L, U)
P19-623	VALVE	RELIEF VALVE	VARFPV348512	CATIONIC POLYMER DOSING SKID	P1001 SHEET 19	CHEMLINE	CHEMUNE	S812A010EU + SGA-005-002-P-G + P025-160-BM (CONFIG. L, U)
PSL15-041	INSTRUMENT	SERVICE WATER PRESSURE SWITCH	IEPOPS201955	KM104 PREP SYSTEM	P1001 SHEET 16	LUMEN	ALLEN BRADLEY	836T-T253J
PSL18-031	INSTRUMENT	SERVICE WATER PRESSURE SWITCH	IEPOPS201955	HYDRAPOL 3500	P1001 SHEET 18	LUMEN	ALLEN BRADLEY	836T-T253J
PSL5-011	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	INCLUDED WITH P15-011	RX75-2 SLUDGE TANK	P1001 SHEET 05	TECKNO VALVE		
PSL5-012	INSTRUMENT	DIAPHRAGM PRESSURE GAUGE	INCLUDED WITH P15-012	RX75-2 SLUDGE TANK	P1001 SHEET 05	TECKNO VALVE		
SM9-591	MIXER	STATIC MIXER	FMMPV202516	KM104 PREP SYSTEM	P1001 SHEET 16	KOFLO	KOFLO	1.5-40C-4-6-2
SM9-621	MIXER	STATIC MIXER	IEGUSP300707	HYDRAPOL 3500	P1001 SHEET 18	KOFLO	KOFLO	2-40C-4-6-2
SP9-531	MISC	SECONDARY CONTAINMENT	XXX	SULFURIC ACID DOSING SKID	P1001 SHEET 12	ACO		
SV15-011	ON/OFF VALVE - CARRIER WATER	VASDS351509	VASDS351509	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	TECKNO VALVE	ASCO	8210G089-120VAC
SV15-021	ON/OFF VALVE - CARRIER WATER	VASDS351509	VASDS351509	ANIONIC POLYMER DOSING SKID	P1001 SHEET 15	TECKNO VALVE	ASCO	8210G089-120VAC
SV15-042	SOLENOID VALVE - FEEDER	VASDBR352337	VASDBR352337	KM104 PREP SYSTEM	P1001 SHEET 16	TECKNO VALVE	ASCO	EF8346G001-120VAC
SV15-042	SOLENOID VALVE - DRIVING WATER	VASDBR352337	VASDBR352337	KM104 PREP SYSTEM	P1001 SHEET 16	TECKNO VALVE	ASCO	EF8346G001-120VAC
SV18-031	SOLENOID VALVE - FEEDER	VASDBR352337	VASDBR352337	HYDRAPOL 3500	P1001 SHEET 18	TECKNO VALVE	ASCO	EF8346G001-120VAC
SV18-032	SOLENOID VALVE - DRIVING WATER	VASDBR352337	VASDBR352337	HYDRAPOL 3500	P1001 SHEET 18	TECKNO VALVE	ASCO	EF8346G001-120VAC
SV19-591	SOLENOID VALVE - DRIVING WATER	ST-304-102	ST-304-102	KM104 PREP SYSTEM	P1001 SHEET 15	TECKNO VALVE	ASCO	8210G094 120VAC
T1-011-V001	VALVE	DRAIN VALVE	ST-312-112	RX75-3 PRECIPITATION REACTOR	P1001 SHEET 01	DM VALVE	PRATT	60IN1-L/4"
T5-011-V004	VALVE	DRAIN VALVE	ST-312-112	RX75-2 SLUDGE TANK	P1001 SHEET 05	DM VALVE	PRATT	60IN1-L/4"
T5-012-V004	VALVE	DRAIN VALVE	ST-312-112	RX75-2 SLUDGE TANK	P1001 SHEET 05	DM VALVE	PRATT	60IN1-L/4"
T9-531	TANK	STORAGE TANK	XXX	SULFURIC ACID DOSING SKID	P1001 SHEET 12	ACO		

EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
T9-591	TANK	MATURATION TANK	FATAHP205320	KMnO4 PREP SYSTEM	PI001 SHEET 16	Davidson		
T9-591-V001	VALVE	DRAIN VALVE	VABLPV200253	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	21AO15EC,TYPE21
T9-591-V002	VALVE	Actuated Transfer Valve	VABFPV352256	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	57AO20DAEL-A / ER20.12
T9-592	TANK	STORAGE TANK	FATAHP205331	KMnO4 PREP SYSTEM	PI001 SHEET 16	Davidson		
T9-592-V001	VALVE	DRAIN VALVE	VABLPV200253	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	21AO15EC,TYPE21
T9-592-V002	VALVE	ISOLATION VALVE - TANK OUTLET	VABLPV200253	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	21AO15EC,TYPE21
T9-621	TANK	MATURATION TANK	FATAHP205328	HYDRAPOL 3500	PI001 SHEET 18	Davidson		
T9-621-V001	VALVE	ISOLATION VALVE - TANK DRAIN	VABLPV303543	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	21AO30ES,TYPE21
T9-621-V002	VALVE	Actuated Transfer Valve	VASDBR330455	HYDRAPOL 3500	PI001 SHEET 18	ASCO		8345G001-120VAC
T9-622	TANK	STORAGE TANK	FATAHP205339	HYDRAPOL 3500	PI001 SHEET 18	Davidson		
T9-622-V001	VALVE	ISOLATION VALVE - TANK DRAIN	VABLPV303543	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	21AO30ES,TYPE21
T9-622-V002	VALVE	ISOLATION VALVE - TANK OUTLET	VABLPV303543	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	21AO30ES,TYPE21
TSE5-011	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P5-011	RX75-2 SLUDGE TANK	PI001 SHEET 05	SEEPX		
TSE5-012	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P5-012	RX75-2 SLUDGE TANK	PI001 SHEET 05	SEEPX		
TSE9-524	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-524	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
TSE9-525	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-525	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
TSE9-526	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-526	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	SEEPX		
TSE9-621	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-621	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEEPX		
TSE9-622	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-622	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEEPX		
TSE9-623	INSTRUMENT	HIGH TEMPERATURE	INCLUDED WITH P9-623	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	SEEPX		
TT15-001	INSTRUMENT	TEMPERATURE ANALYZER	INCLUDED WITH AE1-012	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	HACH		
UNIT 0101	TANK	TANK	N/A	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	VWTC		
UNIT 0501	TANK	STORAGE TANK	T5-011	RX75-2 SLUDGE TANK	PI001 SHEET 05	ACIER ROGER		
V15-011	VALVE	GLOVE VALVE - CARRIER WATER	VAGLPV207831	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	GVA0105
V15-012	VALVE	GLOVE VALVE - CARRIER WATER	VAGLPV207831	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	GVA0105
V15-021	VALVE	GLOVE VALVE - CARRIER WATER	VAGLPV207831	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	GVA0105
V15-022	VALVE	GLOVE VALVE - CARRIER WATER	VAGLPV207831	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	GVA0105
V15-041	VALVE	ISOLATION VALVE - DRIVING WATER	VABLPV200251	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	21AO10EC,TYPE21
V15-042	VALVE	METERING VALVE - WETTING CONE	VABLPV346917	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	SM2AO005ES
V15-043	VALVE	METERING VALVE - WETTING CONE	VABLPV346917	KMnO4 PREP SYSTEM	PI001 SHEET 16	CHEMUNE	CHEMUNE	SM2AO005ES
V18-031	VALVE	ISOLATION VALVE - DRIVING WATER	VABLPV200253	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	21AO15EC,TYPE21
V18-032	VALVE	METERING VALVE - WETTING CONE	VABLPV346917	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	SM2AO005ES
V18-033	VALVE	METERING VALVE - WETTING CONE	VABLPV346917	HYDRAPOL 3500	PI001 SHEET 18	CHEMUNE	CHEMUNE	SM2AO005ES
V2-010	VALVE	DRAIN VALVE	VABLS5204735	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	PINACLE	PINACLE	316VTR22
V2-011	VALVE	DRAIN VALVE	VABLS5204735	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	PINACLE	PINACLE	316VTR22
V2-012	VALVE	DRAIN VALVE	VABLS520268	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	CFF	CFF	SS2-20 (3/4)
V2-013	VALVE	DRAIN VALVE	VABLS520268	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 02	CFF	CFF	SS2-20 (3/4)
V2-020	VALVE	DRAIN VALVE	VABLS5204735	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	PINACLE	PINACLE	316VTR22
V2-021	VALVE	DRAIN VALVE	VABLS5204735	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	PINACLE	PINACLE	316VTR22
V2-022	VALVE	DRAIN VALVE	VABLS520268	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	CFF	CFF	SS2-20 (3/4)
V2-023	VALVE	DRAIN VALVE	VABLS520268	ACTIFLO RECIRCULATION LINE MODIFICATION	PI001 SHEET 03	CFF	CFF	SS2-20 (3/4)
V9-518	VALVE	ISOLATION VALVE	VABLS520267	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CFF	CFF	SS2-15 (1/2)
V9-522	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	21AO15EC,TYPE21
V9-523	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	21AO10EC,TYPE21
V9-524	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	21AO10EC,TYPE21
V9-525	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	21AO10EC,TYPE21
V9-526	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	ANIONIC POLYMER DOSING SKID	PI001 SHEET 15	CHEMUNE	CHEMUNE	21AO10EC,TYPE21
V9-536	VALVE	DRAIN VALVE	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMUNE	CHEMUNE	21K005VCF+(2x)21005-4K8N-1
V9-537	VALVE	ISOLATION VALVE	VABLPD207828	SULFURIC ACID DOSING SKID	PI001 SHEET 12	CHEMUNE	CHEMUNE	21K005VCF+(2x)21005-4K8N-1
V9-541	VALVE	ISOLATION VALVE	VABLS520267	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CFF	CFF	SS2-15 (1/2)

EQUIPMENT LIST

EQUIPT TAG	EQUIPMENT TYPE	DESCRIPTION	EQUIPMENT CODE	LOCATION	P&ID	SUPPLIER	MANUFACTURER	MODEL NUMBER
V9-542	VALVE	ISOLATION VALVE	VABLS2020267	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CFF	CFF	SS2-15 (1/2)
V9-591	VALVE	ISOLATION VALVE (COMMON SUCTION)	VABLPV200251	KMnO4 DOSING SKID	PI001 SHEET 17	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
V9-592	VALVE	ISOLATION VALVE	VABLS2020267	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CFF	CFF	SS2-15 (1/2)
V9-593	VALVE	ISOLATION VALVE	VABLS2020267	RX75-3 PRECIPITATION REACTOR	PI001 SHEET 01	CFF	CFF	SS2-15 (1/2)
V9-622	VALVE	ISOLATION VALVE (SUCTION)	VABLPV200253	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A015EC,TYPE21
V9-623	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
V9-624	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
V9-625	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
V9-627	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
V9-628	VALVE	ISOLATION VALVE (DISCHARGE)	VABLPV200251	CATIONIC POLYMER DOSING SKID	PI001 SHEET 19	CHEMLINE	CHEMLINE	21A0100EC,TYPE21
VAC9-591	MISC	PNEUMATIC CONVEYER	INCLUDED WITH VCM9-591	KMnO4 PREP SYSTEM	PI001 SHEET 15	HAPMAN		
VCM9-591	MISC	CONVEYER MOTOR	ST-999-010	KMnO4 PREP SYSTEM	PI001 SHEET 16	HAPMAN		
Z59-591	INSTRUMENT		INCLUDED WITH VCM9-591	KMnO4 PREP SYSTEM	PI001 SHEET 16	HAPMAN		

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

4 – DETAILED TECHNICAL DOCUMENTATION

4.2 – PRODUCT DATA SHEETS

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	A	B	C	D	E	F	G	H	J	
11						VWT DOC#		PDS_0001_RX_VWT		
12						PROJECT No		5000218009		
13						Date		3/2/2018		
14						REACTOR STAGE 1				
15	CLIENT	REV	DESCRIPTION			DATE	By:	CHKD	APP.	
16	AEM	1	For Information			3/2/2018	L.J.	G.P.	C.B.	
17		2	As noted by client			3/21/2018	L.J.			
18	PROJECT	3								
19	AMARUK, NU	4								
20		5								
21		6								
22		7							REV	
23	GENERAL INFORMATION		Technology			-	Metal PRECIPITATION Reactor			
Number of trains			-	1						
Type			-	Prefab. Reaction tank						
TAG										
Model			RX75-3							
Number of units			-	1						
29	ENVIRONMENT CONDITIONS		Equipment Location			-	Indoor			
Altitude (if blower)			m	N/A						
Min. Temperature- WATER			°C	1						
Max. Temperature- WATER			°C	25						
Min. Temperature- AIR			°C	7						
Max. Temperature- AIR			°C	35						
Max. Humidity			%	100						
Corrosive atmosphere			-	Non Hazardous Area,Non corrosive						
37	COMPONENTS APPROVAL AND CERTIFICATIONS		NSF-61			-	NO			
CSA / UL			-	YES						
Others			-	N/A						
42	SAFETY		Electrical Classification (according to NFPA 820)			-	N/A			
Province				NUNAVUT						
44	REQUIRED PERFORMANCE		Application			-	INDUSTRIAL			
Design Capacity			Day of 12hr , 2 ACP of 1000m3/hr each.	m³/d	24000					
Retention time at design capacity winter			Winter capacity = 84 m³/hr	min	127.5	or 2hr7.5min.				
Retention time at design capacity (incl. recirculation)			AT 1600m³/hr+4x56m³/hr = 1824 6m³/hr	min	5.8					
Volume			one tank = 29.53m³ x 3tanks =	m³	TOTAL VOLUME 179m³ at 3.25m Height					
Effluent Quality				Specs reference (specify)	N/A					
53	TECHNICAL DESCRIPTION		T a n k # 1	Basin Dimensions	Length	in (mm)	168.5 in (4 280mm)			
Width					in (mm)	168.5 in (4 280mm)				
Water Depth					in (mm)	128 in. (3250 mm)				
CONTACT TIME nominal					min.	2.3 to 9.4				
Manufacturer				-	ENVIREQUIP W.T.E.M. INC					
Model				-	Envirequip MIX-TECH EVGX-6-5,0					
Power				HP	5 HP					
Weigth				Kg	1415 lb (642 kg)					
Rotation/direction of thrust				-	ccw up					
Material and Grade				-	304 stainless steel					
63			T a n k # 2	Basin Dimensions	Length	in (mm)	168.5 in (4 280mm)			
Width					in (mm)	168.5 in (4 280mm)				
Water Depth					in (mm)	128 in. (3250 mm)				
CONTACT TIME					min.	2.3 to 9.4				
Manufacturer				-	ENVIREQUIP W.T.E.M. INC					
Model				-	Envirequip MIX-TECH EVGX-6-5,0					
Power				HP	5 HP					
Weigth				Kg	1415 lb (642 kg)					
Rotation/direction of thrust				-	cw down					
Material and Grade				-	304 stainless steel					
73			T a n k # 3	Basin Dimensions	Length	in (mm)	168.5 in (4 280mm)			
Width					in (mm)	168.5 in (4 280mm)				
Water Depth					in (mm)	128 in. (3250 mm)				
CONTACT TIME					min.	2.3 to 9.4				
Manufacturer				-	ENVIREQUIP W.T.E.M. INC					
Model				-	Envirequip MIX-TECH EVGX-6-5,0					
Power				HP	5 HP					
Weigth				Kg	1415 lb (642 kg)					
Rotation/direction of thrust				-	ccw up					
Material and Grade				-	304 stainless steel					
83	Chemical Dosage			Chemical Product	-	TBD				
Dosage min/average/max				mg/L						
Chemical Product				-						
Dosage min/average/max				mg/L						

	A	B	C	D	E	F	G	H	J
87				Recirculation flow	Origin	-	NA		
88					Dosage min/average/max	m3/h			
89	OTHERS CONSTRUCTION MATERIALS			Inside Walls (if applicable)			Painted Steel		
90				Anti-rotation Baffle (if applicable)		-	304 stainless steel (std)		
91				Others		-	NA		
92				Hardware (immersed)		-	304 stainless steel (std)		
93				Hardware (non-immersed)		-	Galvanized Steel		
94	CONNECTIONS			Inlet diameter		in (mm)	24 in (600 mm)		
95				Drain Diameter		in (mm)	4 in (100 mm)		
96				Outlet diameter		in (mm)	2 X 20 in (500 mm)		
97	VALVES				Manufacturer	-	N/A		
98				Inlet modulating Valve	Valve Type	-	N/A		
99					Model Diam.	-	N/A		
100					Quantity	-	N/A		
101					Manufacturer	-	PRATT (former MILLIKEN)		
102					Valve Type	-	ECCENTRIC PLUG CI.125		
103		X		Isolation valve - Drain	Model Diam.	-	601N1-L	100 mm	
104					Quantity	-	1		
105					Manufacturer	-	TBD		
106					Model Diam.	-	TBD		
107	INSTRUMENTATION			Raw water Flowmeter	Quantity	-	TBD		
108				Zone : Non Hazardous	Manufacturer	-	TBD		
109				Level Switch (High High)	Model Diam.	-			
110				Zone : Non Hazardous	Quantity	-	TBD		
111					Manufacturer	-	TBD		
112				pH Clarified Water	Model Diam.	-	TBD		
113				Zone : Non Hazardous	Quantity	-	TBD		
114					Manufacturer	-	TBD		
115				pH Clarified Water Controller	Model Diam.	-	TBD		
116				Zone : Non Hazardous	Quantity	-	TBD		
117					Manufacturer	-	NA		
118				Turbidimeter Clarified Water	Model Diam.	-	NA	NA	
119				Zone : Non Hazardous	Quantity	-	NA		
120					Manufacturer	-	NA		
121				Turbidity Controller (specify of common controller)	Model Diam.	-	NA	NA	
122				Zone : Non Hazardous	Quantity	-	NA		
123					Manufacturer	-	NA		
124				Pressure transmitter (recirculation)	Model Diam.	-	NA	NA	
125				Zone : Non Hazardous	Quantity	-	NA		
126					Manufacturer	-	NA		
127				Pressure gauge (recirculation)	Model Diam.	-	NA	NA	
128				Zone : Non Hazardous	Quantity	-	NA		2
129					Manufacturer	-	NA		2
130				Others (specify)	Model Diam.	-	NA		2
131					Quantity	-	NA		2
132				Comments		-	NA	NA	
133	METAL WORKS			Grating	Dimensions/Type	-	FIBERGRATE Square Mesh 1½ x 1½ x 1½		
134					Material	-	FRP		
135				Handrails	Dimensions/Type	-	Square Tubing 1½"		
136					Material	Safety Yellow	Painted Steel		
137				Access (ladder/stairs)	Dimensions/Type	-	by the Actiflo tank		
138					Material	-	Other		
139	POWER FEED			Others		-	N/A		
140				-		-	-		
141				Motors		V/ph/Hz	575/3/60		
142	OTHER			Panels		V/ph/Hz	575/3/60		
143				Others		V/ph/Hz	NA		
144				Tank height		in (mm)	143.7 in (3650 mm)		
145				Recommended Headroom		in (mm)	Refer to GA dwg		
146				Recommended overall width		in (mm)	Refer to GA dwg		
147				Recommended overall length		in (mm)	Refer to GA dwg		
148				Weight (dry)		Lbs (Kg)	47 300 lbs (21 500 Kg)		
149				Weight (full of water)		Lbs (Kg)	510 840 lbs (232 200 Kg)		
150	COMMENTS			TANK INSTALL ON A TBD mm HEIGHT for hydraulic					
151									

	A	B	C	D	E	F	G	H	J	
11						VWT DOC#		PDS_0002_RX_VWT		
12						PROJECT No		5000218009		
13						Date		3/19/2018		
14						Sludge Recirculation				
15	CLIENT		REV	DESCRIPTION		DATE	By:	CHKD	APP.	
16	AEM		1	For Information		3/19/2018	L.J.	G.P.	C.B.	
17			2							
18	PROJECT		3							
19			4							
20	AMARUK, NU		5							
21			6							
22			7						REV	
23	GENERAL INFORMATION		Technology			-	Sludge Recirculation Reactor			
24			Number of trains			-	1			
25			Type			-	Prefab. Reaction tank			
26			TAG							
27			Model				RX75-2			
28			Number of units			-	1			
29	ENVIRONMENT CONDITIONS		Equipment Location			-	Indoor			
30			Altitude (if blower)			m	N/A			
31			Min. Temperature- WATER			°C	1			
32			Max. Temperature- WATER			°C	25			
33			Min. Temperature- AIR			°C	7			
34			Max. Temperature- AIR			°C	35			
35			Max. Humidity			%	100			
36			Corrosive atmosphere			-	Non Hazardous Area,Non corrosive			
37			Freeze conditions			-	Maintain above freezing temperature			
38			Comments			-	-			
39	COMPONENTS APPROVAL AND CERTIFICATIONS		NSF-61		yes/no	-	NO			
40			CSA / UL		yes/no	-	YES			
41			Others			-	N/A			
42	SAFETY		Electrical Classification (according to NFPA 820)			-	N/A			
43			Province			NUNAVUT				
44	REQUIRED PERFORMANCE		Application			-	INDUSTRIAL			
45			Design Capacity			m³/d	4320			
46			Nominal capacity per unit			m³/d				
47			Retention time at design capacity (incl. recirculation)			180 m³/hr	min	19.8	by tank	
48			Volume				m³	VOLUME 59m³X 2tank at 3.25m Height		
49										
50			Effluent Quality				Specs reference (specify)	N/A		
51										
52										
53	TECHNICAL DESCRIPTION		T a n k # 1	Basin Dimensions	Length	in (mm)	168.5 in (4 280mm)			
54					Width	in (mm)	168.5 in (4 280mm)			
55					Water Depth	in (mm)	128 in. (3250 mm)			
56					CONTACT TIME for 180 m3/hr	min.	19.80			
57				Mixers	Manufacturer	-	ENVIREQUIP W.T.E.M. INC			
58					Model	-	Envirequip MIX-TECH EVGX-6-5,0			
59					Power	HP	5 HP			
60					Weigth	Kg	1415 lb (642 kg)			
61					Rotation/direction of thrust	-	cw down			
62					Material and Grade		304 stainless steel			
63			T a n k # 2	Length	in (mm)	168.5 in (4 280mm)				
64				Width	in (mm)	168.5 in (4 280mm)				
65				Water Depth	in (mm)	128 in. (3250 mm)				
66				CONTACT TIME	min.	19.80				
67				Manufacturer	-	ENVIREQUIP W.T.E.M. INC				
68				Model	-	Envirequip MIX-TECH EVGX-6-5,0				
69				Power	HP	5 HP				
70				Weigth	Kg	1415 lb (642 kg)				
71				Rotation/direction of thrust	-	cw down				
72				Material and Grade	-	304 stainless steel				
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83			Chemical Dosage			Chemical Product	-	TBD		
84						Dosage min/average/max	mg/L			
85						Chemical Product	-			
86						Dosage min/average/max	mg/L			

	A	B	C	D	E	F	G	H	J
87				Recirculation flow	Origin	-	NA		
88					Dosage min/average/max	m3/h			
89	OTHERS CONSTRUCTION MATERIALS			Inside Walls (if applicable)			Painted Steel		
90				Anti-rotation Baffle (if applicable)		-	304 stainless steel (std)		
91				Others		-	NA		
92				Hardware (immersed)		-	304 stainless steel (std)		
93				Hardware (non-immersed)		-	Galvanized Steel		
94	CONNECTIONS			Inlet diameter		in (mm)	10 in (2500 mm) to 6"		
95				Drain Diameter		in (mm)	4 in (100 mm)		
96				Outlet diameter		in (mm)	6 in (150 mm) or 10"		
97	VALVES				Manufacturer	-	N/A		
98				Inlet modulating Valve	Valve Type	-	N/A		
99					Model Diam.	-	N/A		
100					Quantity	-	N/A		
101					Manufacturer	-	PRATT (former MILLIKEN)		
102				X Isolation valve - Drain	Valve Type	-	ECCENTRIC PLUG CI.125		
103					Model Diam.	-	601N1-L	100 mm	
104					Quantity	-	1		
105					Manufacturer	-	TBD		
106				N/A Raw water Flowmeter	Model Diam.	-	TBD		
107				Zone : Non Hazardous	Quantity	-	TBD		
108					Manufacturer	-	TBD		
109				X Level Switch (High High)	Model Diam.	-			
110				Zone : Non Hazardous	Quantity	-	TBD		
111					Manufacturer	-	TBD		
112				X pH Clarified Water	Model Diam.	-	TBD		
113				Zone : Non Hazardous	Quantity	-	TBD		
114					Manufacturer	-	TBD		
115				pH Clarified Water Controller	Model Diam.	-	TBD		
116				Zone : Non Hazardous	Quantity	-	TBD		
117					Manufacturer	-	NA		
118	INSTRUMENTATION			N/A Turbidimeter Clarified Water	Model Diam.	-	NA	NA	
119				Zone : Non Hazardous	Quantity	-	NA		
120					Manufacturer	-	NA		
121				Turbidity Controller (specify of common controller)	Model Diam.	-	NA	NA	
122				Zone : Non Hazardous	Quantity	-	NA		
123					Manufacturer	-	NA		
124				N/A Pressure transmitter (recirculation)	Model Diam.	-	NA	NA	
125				Zone : Non Hazardous	Quantity	-	NA		
126					Manufacturer	-	NA		
127				N/A Pressure gauge (recirculation)	Model Diam.	-	NA	NA	
128				Zone : Non Hazardous	Quantity	-	NA		2
129					Manufacturer	-	NA		2
130				x Others (specify)	Model Diam.	-	NA		2
131					Quantity	-	NA		2
132				Comments		-	NA	NA	
133	METAL WORKS			Grating	Dimensions/Type	-	FIBERGRATE Square Mesh 1½ x 1½ x 1½		
134					Material	-	FRP		
135				Handrails	Dimensions/Type	-	Square Tubing 1½"		
136					Material	Safety Yellow	Painted Steel		
137				Access (ladder/stairs)	Dimensions/Type	-	by the Actiflo tank		
138					Material	-	Other		
139				Others		-	N/A		
140				-		-	-		
141	POWER FEED			Motors		V/ph/Hz	575/3/60		
142				Panels		V/ph/Hz	575/3/60		
143				Others		V/ph/Hz	NA		
144	OTHER			Tank height		in (mm)	143.7 in (3650 mm)		
145				Recommended Headroom		in (mm)	Refer to GA dwg		
146				Recommended overall width		in (mm)	Refer to GA dwg		
147				Recommended overall length		in (mm)	Refer to GA dwg		
148				Weight (dry)		Lbs (Kg)	46 560 lbs (21 160 Kg)		
149				Weight (full of water)		Lbs (Kg)	352 550 lbs (160 250 Kg)		
150	COMMENTS			TANK INSTALL ON A TBD mm HEIGHT for hydraulic					
151									

1					VWT CANADA #		PSDS_0004_PCH			
2					Project #		5000218009			
3					Date		2018-03-27			
4					SULFURIC ACID WINTER / SUMMER DOSING SKID					
5	CLIENT	REV	DESCRIPTION		DATE	By	Chkd	App.		
6		0								
7	AGNICO EAGLE MINES	1	For approval		2018-03-28	G.H.	G.P.	C.B.		
8		2	Name revised, flow rate revised & flange connection		2018-04-12	G.H.	G.P.	C.B.		
9	PROJECT	3								
10		4								
11	AEM AMARUQ	5								
12		6								
13		TAG:						REV		
14	GENERAL	Dosed Chemical		Sulfuric Acid - (H2SO4)						
15		Number of skids		1						
16		Pumps type		Solenoid Driven Diaphragm Pump						
17		Model Serie		Grundfos						
18		Total number of pumps		2						
19		Number of pumps in duty		1						
20		Number of pumps in standby		1						
21		Number of dosing points		1						
22	PROCESS REQUIREMENT	Min Flowrate		lph	0.17			2		
23		Avg Flowrate		lph	9					
24		Max Flowrate		lph	17			2		
25	ENVIRONMENT	Equipment Location		Indoor						
26		Min. Temperature		°C	5					
27		Max. Temperature		°C	30					
28		Max. Humidity		%	95					
29		Corrosive Atmosphere		Non Corrosive						
30		Freeze		N/A						
31		Comments								
32	SAFETY	Electrical Classification		Non Hazardous						
33		Province/State		Nunavut						
34	PUMP(S) CAPACITY	Max Flowrate		lph	17			2		
35		Min Flowrate		lph	0.17			2		
36	TECHNICAL DESCRIPTION	Skid Frame	Material	Polypropylene						
37			Type	Stand Alone						
38			Option #1	Safeguarding Shield						
39			Option #2							
40		Pump	X	Dosing Pumps	DDA 17-7 AR-PV/T/C-F-31U7U7BG					
41				Variable Frequency Drive	N/A					
42		Components	Valves		Foot valve c/w flexible hose					
43				x	Isolation Valves (common suction)	Chemline	21K005VCf		1	
44				x	Isolation Valves (suction)	Chemline	21K005VCf		2	
45				x	Isolation Valves (discharge)	Chemline	21K005VCf		4	
46				x	Backpressure Valves	Chemline	SB12K005VCfx (BPVG)		1	
47				x	C/w Isolator & Press. Gauge	Chemline	SGK-005-002-P-G + P025-160-BM	Config. L-U	0	
48				x	Relief Valves	Chemline	SB12K005VCfx (RV)		2	
49					W/o Press. Gauge	N/A	N/A	N/A		
50					Globe Valve - Carrier water	Chemline	N/A		0	
51					Check Valves - Carrier water	Chemline	N/A		0	
52					ON/OFF Valves - Carrier water	ASCO	N/A	N/A	0	
53				x	Cleaning valves	Chemline	21K005VCf		4	
54				Misc.	x	Calibration Cylinder	PFS	ACS#2-250-GKV-F	250 ml	1 2
55						Variable Area Flowmeter	Chemline	N/A		0
56			Flow switch		N/A			0		
57			Flowmeter		N/A			0		
58		Piping	x	Pulsation Dampener	PFS	API-PVDF-V-1-F	10 in3	1 2		
59				VWS Piping spec code	A073C					
60				Pipe Material	PFA Tubing					
61				Common Suction Nominal Pipe Size	in	1/2"				
62		UTILITIES	Service Water for Chemical Transport		Flowrate (per injection line)	lph	N/A			
63					Pressure	psig	N/A			
64				Transport Water Nominal Pipe Size	in	N/A				

1					VWT CANADA #		PSDS_0004_PCH		
2					Project #		5000218009		
3					Date		2018-03-27		
4					SULFURIC ACID WINTER / SUMMER DOSING SKID				
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.		
6		0							
7	AGNICO EAGLE MINES	1	For approval	2018-03-28	G.H.	G.P.	C.B.		
8		2	Name revised, flow rate revised & flange connection	2018-04-12	G.H.	G.P.	C.B.		
9	PROJECT	3							
10		4							
11	AEM AMARUQ	5							
12		6							
13		TAG:						REV	
65	DESIGN CRITERIA	Design Pressure		psig	100				
66		Design Temperature		°C	35				
67		Operating Pressure		psig	50				
68		Test Pressure		psig	150				
69		Test duration		min	60				
70		Test Fluid		-	Air				
71	CONNECTIONS	Inlet	Diameter (NPS)	in	1/2"				
72			Type		Socket union				
73		Outlet	Diameter (NPS)	in	1/2"				
74			Type		Socket union				
75		Transport Water	Diameter (NPS)	in	N/A				
76			Type		N/A				
77	ELECTRICITY	Main Power			120V/1Ph/60 Hz				
78		Controls	(by others)		4-20 mA (direct)				
79		Frame Grounding							
80		Wiring	Pre wired (Y or N details)		Prewired / NEMA 4X JB				
81			Cable Type						
82		Anchors	Qty		4				
83			Supply		No				
84	CODE, APPROVAL & CERTIFICATIONS	Design Code			ASME B31.3 Non Certified				
		Glueing			Glueing B31.3 non certified / Non Certified Shop				
85		Mandatory Registration			No				
87									
88	OVERALL DIMENSIONS AND WEIGHT	Weight (dry)	Final	kg	Refer to GA drawing				
89		Overall Length		mm	Refer to GA drawing				
90		Overall Width	Final	mm	Refer to GA drawing				
91		Overall Height		mm	Refer to GA drawing				

1					VWT CANADA #		PDS_0005_HYDP		
2					Project #		5000218009		
3					Date		2018-03-08		
4					HYDRA-POL CATIONIC POLYMER				
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.		
6		1	For Approval	2018-03-08	G.H.	G.P.	C.B.		
7	AGNICO EAGLE MINES	2	Revised Process Requirement section	2018-03-12	G.H.	G.P.	C.B.		
8		3	Revised Process Requirement section	2018-03-28	G.H.	G.P.	C.B.		
9	PROJECT	4	24 Volt Instruments & Valves, Name revised	2018-04-12	G.H.	G.P.	C.B.		
10	AEM AMARUQ	5							
11		6							
12		7							
13		TAG:	APPLICATION : Polymer System Preparation					REV	
14	GENERAL	Manufacturer			VEOLIA WATER TECHNOLOGIES CANADA				
15		Model Serie			HP3500				
16		VEOLIA Model Number			HP3500-CT-MBF-BF025F-AB575T-S2B-AAS-SSCEP-Z6Z				
17	PROCESS REQUIREMENT	Polymer Type		-	Cationic			2	
18		Liquid Polymer Concentration		%	0.50%			3	
19		Polymer Density		kg/L	0.8				
20		Recommended Maturation Time		min	60				
21		Min Flowrate		lph	60			3	
22		Avg Flowrate		lph	300			3	
23	ENVIRONMENT	Max Flowrate		lph	1600			3	
24		Equipment Location			Indoor				
25		Min. Temperature		°c	2				
26		Max . Temperature		°c	38				
27		Max. Humidity		%	95				
28		Corrosive Atmosphere			Non Corrosif				
29	SAFETY	Freeze			N/A				
30		Comments							
31		Electrical Classification			Non Hazardous Area				
32	OPERATING CONDITIONS	Province			Nunavut				
33		Batch size		L	3200				
34		Kg / batch		Kg	16.00				
35		Feeder cap/rev		Kg/rev	0.099				
36		Feeder rpm		rpm	86.8				
37		Mass Flowrate		kg/min	8.56				
38		Pre-rinsing time		min	11.6				
39		Dosing time		sec	82.8				
40		Maturing time (incl transf)		min	60				
41		Emptying time		min	3.26				
42		Total time		min	69.7				
43		TECHNICAL DESCRIPTION	Mechanical Components	Skid Frame	Manufacturer Model	- -	VWTC	LATIS#	
44	Material			-	Painted Carbon Steel				
45	Color			-	Blue Grey RAL 7031				
46	Dry Polymer Storage Type			-	Bulk Bag Frame with a Yoke for Fork Lift				
47	-			-	- -				
48	-			-	- -				
49	Dry Feeder			Manufacturer Model	- -	WAM	MBF 073 I:20 4-5-D-		
50				Motor's Manufacturer Type	-	Baldor	NEMA		
51				Horsepower	HP	0.75	0.5		
52	Eductor			Manufacturer Model	- -	SHUTTE&KOERTING	2"- Fig264 PVC Eductor		
53				Material	-	PVC			
54	Maturation Mixer			Manufacturer Model	- -	ENVIREQUIP / NORD	EVG1-0.75		
55				Motor's Manufacturer Type	-	NORD			
56				Horsepower	HP	0.75			
57	Maturation Tank			Manufacturer Model	- -	VWTC			
58				Material Nominal Capacity	- L	304L S.S.	3 502		
59				Transfer Type	-	Stacked Maturation Tank			
60	Storage Tank			Manufacturer Model	- -	VWTC			
61				Material Nominal Capacity	- L	304L S.S.	3 502		
62	Tanks Location / Feeder					Right (Standard)			
63	Isolation Valve - Driving Water			Manufacturer Model	-	CHEMLINE	21A015EC		
64				Diameter Quantity	-	1 1/2"	1		
65	Solenoid Valve - Driving Valve			Manufacturer Model	120 VAC	ASCO	8210G022-120VAC	4	
66				Diameter Quantity	-	1 1/2"	1		
67	Metering Valve- Wetting Cone			Manufacturer Model	-	CHEMLINE	SM2A005ES		
68				Diameter Quantity	-	1/2"	2		
69	Solenoid Valve - Feeder			Manufacturer Model	120 VAC	ASCO	8345G001-120VAC	4	
70				Diameter Quantity	-	1/4"	1		
71	Actuated Transfer Valve			Manufacturer Model	120VAC	CHEMLINE	57A020AEL-A / ER20.12	4	
72				Diameter Quantity	-	2"	1		
73	Check Valve- Liquid Polymer			Manufacturer Model	-	CHEMLINE	BT A020EC		
74				Diameter Quantity	-	2"	1		
75	Isoaltion Valve- Tank Outlet			Manufacturer Model	-	CHEMLINE	21A030ES		
76				Diameter Quantity	-	3"	1		
77	Isolation Valves- Tanks Drains			Manufacturer Model	-	CHEMLINE	21A030ES		
78				Diameter Quantity	-	3"	2		
79	Static Mixer			Manufacturer Model	-	KOFLO	2-40C-4-6-2		
80				Diameter Quantity	-	2"	1		
81	Tuyauterie			VWTC Piping Class Code	-	A050C			
82				Pipe Material	-	PVC sh80			
83				Design Pressure	psig	60			
84				Design Temperature	°C	38			
85				Operating Pressure	psig	65			
86				Test Pressure	psig	90			
87				Test duration	min	60			
88				Test Fluid	-	Water			

1						VWT CANADA #		PDS_0005_HYDP			
2						Project #		5000218009			
3						Date		2018-03-08			
4						HYDRA-POL CATIONIC POLYMER					
5	CLIENT	REV	DESCRIPTION			DATE	By	Chkd	App.		
6		1	For Approval			2018-03-08	G.H.	G.P.	C.B.		
7	AGNICO EAGLE MINES	2	Revised Process Requirement section			2018-03-12	G.H.	G.P.	C.B.		
8		3	Revised Process Requirement section			2018-03-28	G.H.	G.P.	C.B.		
9	PROJECT	4	24 Volt Instruments & Valves, Name revised			2018-04-12	G.H.	G.P.	C.B.		
10	AEM AMARUQ	5									
11		6									
12		7									
13		TAG:	APPLICATION : Polymer System Preparation						REV		
89	TECHNICAL DESCRIPTION	ELECTRICITY, INSTRUMENTATION & CONTROLS	INSTRUMENTS	Hopper Low Level Switch	Manufacturer Model	24 VDC	Endress&Hauser	FTE31-C6DB11-A			
90					Diameter Quantity		MNPT 1-1/2	1			
91				Service Water Pressure Switch	Manufacturer Model	24 VDC	Allen-Bradley	836T-T253J			
92					Diameter Quantity		3/8"	1			
93				Service Water Pressure Gauge	Manufacturer Model		Ashcroft 2.5"	25-1009SWL-02L-0/160PSIG + Glycerine			
94					Diameter Quantity		1/2"	1			
95				Tanks Level Transmitter	Manufacturer Model	24 VDC	Endress&Hauser (Pressure)	PMC131-C22F1D12			
96					Diameter Quantity		1/2"	2			
97											
98			CONTROL PANEL	PLC	Manufacturer Model		Scheinder	M340			
99				HMI	Manufacturer Model		Scheinder	HMI-STU655			
100					HMI Screen Size		6"				
101				Panel Enclosure	Material Enclosure Rating		Fiberglass	NEMA-4X			
102			ELECTRICITY	Power Supply	Voltage Amps		575V/3Ph/60Hz	15 Amps			
103				Frame Grounding			By others				
104				Wiring	Pre wired (Yes/No)		Yes				
105					Cable Type		TECK 90-Armoured Cable				
106	UTILITIES	Service Water for Chemical Transport	Required Driving Water Flowrate		m³/h	8					
107			Min. Pressure (in operation at Qmax)		psig	70					
108			Residual Chlorine Concentration		mg Cl₂/L	<0.5 mg Cl₂/L					
109			Driving Water Temperature Range		Deg C	10 deg C <T<25 deg C					
110	CONNECTIONS	Driving Water Inlet	Diameter (NPS)		in	1-1/2"					
111			Type			Socket Union					
112		Storage Tank Outlet	Diameter (NPS)		in	2"					
113			Type			Socket Union					
114		Drain	Diameter (NPS)		in	3"					
115			Type			Socket Union					
116		Overflow	Diameter (NPS)		in	4"					
117			Type			By others					
118		Anchors	Qty			See General Arrangement DWG					
119			Supply			By others					
120	CODE, APPROVAL & TESTS	Piping Design Code				ASME B31.3 Non Certified					
121		Control Panel Approval				CSA/CUL					
122											
123	OVERALL DIMENSIONS AND WEIGHTH	Weight (dry)			kg	See General Arrangement DWG					
124		Overall Length			mm						
125		Overall Width			mm						
126		Overall Height			mm						

1					VWT CANADA #		PDS_0006_HYDP			
2					Project #		5000218009			
3					Date		2018-03-26			
4					HYDRA-POL KMnO4					
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.			
6		1	For Approval	2018-03-26	G.H.	G.P.	C.B.			
7	AGNICO EAGLE MINES	2	Revised model #	2018-04-12	G.H.	G.P.	C.B.			
8		3								
9	PROJECT	4								
10	AEM AMARUQ	5								
11		6								
12		7								
13		TAG:	APPLICATION : KMnO4 System Preparation						REV	
14	GENERAL	Manufacturer		VEOLIA WATER TECHNOLOGIES CANADA						
15		Model Serie		HP500						
16		VEOLIA Model Number		HP500-CT-MBF-VC100F-AB575T-B2B-AAS-SSCEP-SC6Z						
17	PROCESS REQUIREMENT	Powder Type		-	KMnO4					
18		Liquid Concentration		%	1.00%					
19		Powder Density		kg/L	1.52					
20		Recommended Maturation Time		min	30					
21		Min Flowrate		lph	30					
22		Avg Flowrate		lph	300					
23		Max Flowrate		lph	320					
24	ENVIRONMENT	Equipment Location			Indoor					
25		Min. Temperature		°C	10					
26		Max . Temperature		°C	35					
27		Max. Humidity		%	95					
28		Corrosive Atmosphere			Non Corrosif					
29		Freeze			N/A					
30		Comments								
31	SAFETY	Electrical Classification		Non Hazardous Area						
32		Province		Nunavut						
33	OPERATING CONDITIONS	Batch size		L	470					
34		Kg / batch		Kg	4.70					
35		Feeder cap/rev		Kg/rev	0.187					
36		Feeder rpm		rpm	24.8					
37		Mass Flowrate		kg/min	3.48					
38		Pre-rinsing time		min	2.6					
39		Dosing time		sec	108.4					
40		Maturing time (incl transf)		min	40					
41		Emptying time		min	0.69					
42		Total time		min	43.7					
43	TECHNICAL DESCRIPTION	Mechanical Components	Skid Frame		Manufacturer Model	- -	VWTC	LATIS#		
44			Material		-	SS304				
45			Color		-	Grey Blue				
46			Dry Polymer Storage Type		-	Vacuum Conveyor & Hopper				
47			Vacuum Conveyor	Manufacturer Model	- -	Hapman	16" pneumatic receiver		2	
48			-	Manufacturer Model	- -					
49			Dry Feeder	Manufacturer Model	- -	WAM	MBF 073 I:70 4-5-D-			
50				Motor's Manufacturer Type	-	Baldor	NEMA			
51				Horsepower	HP	0.75	0.5			
52			Eductor	Manufacturer Model	- -	SHUTTE&KOERTING	1,5"- Fig264 PVC Eductor			
53				Material	-	PVC sh80				
54			Maturation Mixer	Manufacturer Model	- -	ENVIREQUIP / NORD	BALDOR	EVG01-0.5		
55				Motor's Manufacturer Type	-					
56				Horsepower	HP	0.5				
57			Maturation Tank	Manufacturer Model	- -	VWTC				
58				Material Nominal Capacity	- L	304L S.S.	508			
59				Transfer Type	-	Stacked Maturation Tank				
60			Storage Tank	Manufacturer Model	- -	VWTC				
61				Material Nominal Capacity	- L	304L S.S.	508			
62			Tanks Location / Feeder			Right (Standard)				
63			Isolation Valve - Driving Water	Manufacturer Model	-	CHEMLINE	21A010EC			
64				Diameter Quantity	-	1"	1			
65			Solenoid Valve - Driving Valve	Manufacturer Model	120 VAC	ASCO	EF8210G004-120VAC		2	
66				Diameter Quantity	-	1"	1			
67			Metering Valve- Wetting Cone	Manufacturer Model	-	CHEMLINE	SM2A005ES			
68				Diameter Quantity	-	1/2"	2			
69			Solenoid Valve - Feeder	Manufacturer Model	120 VAC	ASCO	EF8345G001-120VAC		2	
70				Diameter Quantity	-	1/4"	1			
71			Actuated Transfer Valve	Manufacturer Model	120 VAC	CHEMLINE	57A020AEL / ER20.12		2	
72				Diameter Quantity	-	2"	1			
73			Check Valve- Liquid Polymer	Manufacturer Model	-	CHEMLINE	BTA015EC			
74				Diameter Quantity	-	11/2"	1			
75			Isolation Valve- Tank Outlet	Manufacturer Model	-	CHEMLINE	21A015EC			
76				Diameter Quantity	-	11/2"	1			
77			Isolation Valves- Tanks Drains	Manufacturer Model	-	CHEMLINE	21A015EC			
78				Diameter Quantity	-	1 1/2"	2			
79			Static Mixer	Manufacturer Model	-	KOFLO	1,5-40C-4-6-2			
80				Diameter Quantity	-	1.5"	1			
81			Tuyauterie	VWTC Piping Class Code		-	A050C			
82				Pipe Material		-	PVC sh80			
83				Design Pressure		psig	60			
84				Design Temperature		°C	35			
85				Operating Pressure		psig	65			
86				Test Pressure		psig	90			
87				Test duration		min	60			
88				Test Fluid		-	Eau			

1						VWT CANADA #		PDS_0006_HYDP		
2						Project #		5000218009		
3						Date		2018-03-26		
4						HYDRA-POL KMnO4				
5	CLIENT	REV	DESCRIPTION			DATE	By	Chkd	App.	
6		1	For Approval			2018-03-26	G.H.	G.P.	C.B.	
7	AGNICO EAGLE MINES	2	Revised model #			2018-04-12	G.H.	G.P.	C.B.	
8		3								
9	PROJECT	4								
10	AEM AMARUQ	5								
11		6								
12		7								
13		TAG:	APPLICATION : KMnO4 System Preparation						REV	
89	TECHNICAL DESCRIPTION	ELECTRICITY, INSTRUMENTATION & CONTROLS	INSTRUMENTS	Hopper Low Level Switch	Manufacturer Model	24 VDC	Endress&Hauser	FTE31-C6DB11-A	2	
90					Diameter Quantity		MNPT 1-1/2	1		
91				Service Water Pressure Switch	Manufacturer Model	24 VDC	Allen-Bradley	836T-T253J		
92					Diameter Quantity		3/8"	1		
93				Service Water Pressure Gauge	Manufacturer Model		Ashcroft 2.5"	25-1009SWL-02L-0/160PSIG + Glycerine		
94					Diameter Quantity		1/2"	1		
95				Tanks Level Transmitter	Manufacturer Model	24 VDC	Endress&Hauser (Pressure)	PMC71-UCC1E3RABAA	2	
96					Diameter Quantity		1/2"	2		
97										
98			CONTROL PANEL	PLC	Manufacturer Model		Schneider	M241 (TM241CE24T)		
99				HMI	Manufacturer Model		Schneider	HMI-STU655		
100					HMI Screen Size		6"			
101			ELECTRICITY	Panel Enclosure	Material Enclosure Rating		Custom	NEMA-4X		
102				Power Supply	Voltage Amps		575V/3Ph/60Hz	15 Amps		
103				Frame Grounding			By others			
104							Yes			
105				Wiring	Pre wired (Yes/No)		TECK 90-Armoured Cable			
				Cable Type						
106	UTILITIES	Service Water for Chemical Transport	Required Driving Water Flowrate		m ³ /h	5.2				
107			Min. Pressure (in operation at Qmax)		psig	70				
108			Residual Chlorine Concentration		mg Cl ₂ /L	<0.5 mg Cl ₂ /L				
109			Driving Water Temperature Range		Deg C	10 deg C <T<25 deg C				
110	CONNECTIONS	Driving Water Inlet	Diameter (NPS)		in	1"				
111			Type			Socket Union				
112		Storage Tank Outlet	Diameter (NPS)		in	1-1/2"				
113			Type			Socket Union				
114		Drain	Diameter (NPS)		in	1-1/2"				
115			Type			Socket Union				
116		Overflow	Diameter (NPS)		in	2"				
117			Type			By others				
118	Anchors	Qty			See General Arrangement DWG					
119		Supply			By others					
120					ASME B31.3 Non Certified					
121	CODE, APPROVAL & TESTS	Piping Design Code				CSA/CUL				
122		Control Panel Approval								
123										
124	OVERALL DIMENSIONS AND WEIGHTH	Weight (dry)			kg	See General Arrangement DWG				
125		Overall Length			mm					
126		Overall Width			mm					
127		Overall Height			mm					

1					VWT CANADA #		PSDS_0007_PCH			
2					Project #		5000218009			
3					Date		2018-03-26			
4					KMnO4 SUMMER / WINTER DOSING SKID					
5	CLIENT	REV	DESCRIPTION		DATE	By	Chkd	App.		
6		0								
7	AGNICO EAGLE MINES	1	For approval		2018-03-26	G.H.	G.P.	C.B.		
8		2	Name revised, min flow rate		2018-04-12	G.H.	G.P.	C.B.		
9	PROJECT	3								
10		4								
11	AEM AMARUQ	5								
12		6								
13		TAG:						REV		
14	GENERAL	Dosed Chemical			Potassium permanganate (KMnO4)					
15		Number of skids			1					
16		Pumps type			Mechanical Diaphragm Pump					
17		Model Serie			Shadow					
18		Total number of pumps			2					
19		Number of pumps in duty			1					
20		Number of pumps in standby			1					
21		Number of dosing points			1					
22	PROCESS REQUIREMENT	Min Flowrate			lph	30				
23		Avg Flowrate			lph	250				
24		Max Flowrate			lph	320				
25	ENVIRONMENT	Equipment Location			Indoor					
26		Min. Temperature			°C	5				
27		Max. Temperature			°C	25				
28		Max. Humidity			%	95				
29		Corrosive Atmosphere			Non Corrosive					
30		Freeze			N/A					
31		Comments								
32	SAFETY	Electrical Classification			Non Hazardous					
33		Province/State			Nunavut					
34	PUMP(S) CAPACITY	Max Flowrate			lph	400				
35		Min Flowrate			lph	15				
36	TECHNICAL DESCRIPTION	Skid Frame		Material	Polypropylene					
37				Type	Stand Alone					
38				Option #1	N/A					
39				Option #2	N/A					
40		Pump	X	Dosing Pumps		Shadow 55BF-EZ000234U1				
41			X	Motors	N/A	Baldor Class 2 Div 1 Gr. F & G				
41			X	Variable Frequency Drive	N/A	See electrical package				
42		Components	Valves		Foot valve c/w flexible hose					
43				X	Isolation Valves (common suction)	Chemline	21A010EC		1	
44				X	Isolation Valves (suction)	Chemline	21A010EC		4	
45				X	Isolation Valves (discharge)	Chemline	21A010EC		4	
46				X	Backpressure Valves	Chemline	SB12A010EU (BPVG)		1	
				X	C/w Isolator & Press. Gauge	Chemline	SGA-005-002-P-G + P025-160-BM	Config. L-U	0	
47				X	Relief Valves	Chemline	SB12A010EU (RV)		2	
					W/o Press. Gauge	N/A	N/A	N/A		
48					Globe Valve - Carrier water	Chemline	N/A		0	
49					Check Valves - Carrier water	N/A	N/A		0	
50				ON/OFF Valves - Carrier water	ASCO	N/A	N/A	0		
51			X	Cleaning valves	Chemline	21A005EC		4		
52			Misc.	X	Calibration Cylinder	PFS	PV#2-4000	4000 ml	1	
53					Variable Area Flowmeter	Chemline	N/A		0	
54					Flow switch	N/A			0	
55					Flowmeter	N/A			0	
56			X	Pulsation Dampener	PFS	APII-PVC-E-2	85 in3	1		
57		Piping	VWS Piping spec code			A050C				
58			Pipe Material			PVC Sh 80 ASTM D1784				
59			Common Suction Nominal Pipe Size			in	1"			
60			Suction Pipe Nominal Pipe Size			in	1"			
61			Discharge Pipe Nominal Pipe Size			in	1"			
62		UTILITIES	Service Water for Chemical Transport		Flowrate (per injection line)	N/A				
63	Pressure				0					
64	Transport Water Nominal Pipe Size				in	N/A				

1					VWT CANADA #		PSDS_0007_PCH	
2					Project #		5000218009	
3					Date		2018-03-26	
4					KMnO4 SUMMER / WINTER DOSING SKID			
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.	
6		0						
7	AGNICO EAGLE MINES	1	For approval	2018-03-26	G.H.	G.P.	C.B.	
8		2	Name revised, min flow rate	2018-04-12	G.H.	G.P.	C.B.	
9	PROJECT	3						
10		4						
11	AEM AMARUQ	5						
12		6						
13		TAG:						REV
65	DESIGN CRITERIA	Design Pressure		psig	80			
66		Design Temperature		°C	35			
67		Operating Pressure		psig	50			
68		Test Pressure		psig	120			
69		Test duration		min	60			
70		Test Fluid		-	Water			
71	CONNECTIONS	Inlet	Diameter (NPS)	in	1"			
72			Type		Flange			
73		Outlet	Diameter (NPS)	in	1"			
74			Type		Flange			
75		Transport Water	Diameter (NPS)	in	N/A			
76			Type		N/A			
77	ELECTRICITY	Main Power			575V/3Ph/60 Hz			
78		Controls			VFD c/w 4-20 mA			
79		Frame Grounding			By-others			
80		Wiring	Pre wired (Y or N details)		Prewired / NEMA 4X JB			
81			Cable Type		Teck 90			
82		Anchors	Qty		4			
83			Supply		No			
84	CODE, APPROVAL & CERTIFICATIONS	Design Code			ASME B31.3 Non Certified			
		Glueing			Glueing B31.3 non certified / Non Certified Shop			
85		Mandatory Registration			No			
87								
88	OVERALL DIMENSIONS AND WEIGHTH	Weight (dry)	Final	kg	Refer to GA Drawing			
89		Overall Length		mm	Refer to GA Drawing			
90		Overall Width	Final	mm	Refer to GA Drawing			
91		Overall Height		mm	Refer to GA Drawing			

1					VWT CANADA #		PSDS_0008_PCH			
2					Project #		5000218009			
3					Date		2018-03-27			
4					COAGULANT WINTER / SUMMER DOSING SKID					
5	CLIENT	REV	DESCRIPTION		DATE	By	Chkd	App.		
6		0								
7	AGNICO EAGLE MINES	1	For approval		2018-03-28	G.H.	G.P.	C.B.		
8		2	Revised name		2018-04-12	G.H.	G.P.	C.B.		
9	PROJECT	3								
10		4								
11	AEM AMARUQ	5								
12		6								
13		TAG:						REV		
14	GENERAL	Dosed Chemical		Ferric Sulfate - (Fe2(SO4)3)						
15		Number of skids		1						
16		Pumps type		Mechanical Diaphragm Pump						
17		Model Serie		Shadow						
18		Total number of pumps		2						
19		Number of pumps in duty		1						
20		Number of pumps in standby		1						
21		Number of dosing points		1						
22	PROCESS REQUIREMENT	Min Flowrate		lph	36					
23		Avg Flowrate		lph	225					
24		Max Flowrate		lph	450					
25	ENVIRONMENT	Equipment Location		Indoor						
26		Min. Temperature		°C	10					
27		Max. Temperature		°C	30					
28		Max. Humidity		%	95					
29		Corrosive Atmosphere		Non Corrosive						
30		Freeze		N/A						
31		Comments								
32	SAFETY	Electrical Classification		Non Hazardous						
33		Province/State		Nunavut						
34	PUMP(S) CAPACITY	Max Flowrate		lph	500					
35		Min Flowrate		lph	36					
36	TECHNICAL DESCRIPTION	Skid Frame	Material	Polypropylene						
37			Type	Stand Alone						
38			Option #1	N/A						
39			Option #2	N/A						
40		Pump	X	Dosing Pumps	Shadow 55BF-EZ000234U6					
41			x	Variable Frequency Drive	N/A	See Electrical Package				
42		Components	Valves	Foot valve c/w flexible hose						
43				x	Isolation Valves (common suction)	Chemline	21A010EC		1	
44				x	Isolation Valves (suction)	Chemline	21A010EC		4	
45				x	Isolation Valves (discharge)	Chemline	21A010EC		5	
46				x	Backpressure Valves	Chemline	SB12A010EU (BPVG)		1	
47				x	C/w Isolator & Press. Gauge	Chemline	SGA-005-002-P-G + P025-160-BM	Config. L-U	0	
48				x	Relief Valves	Chemline	SB12A010EU (RV)		2	
49					W/o Press. Gauge	N/A		N/A		
50					Globe Valve - Carrier water	Chemline	N/A		0	
51					Check Valves - Carrier water	Chemline	N/A		0	
52					ON/OFF Valves - Carrier water	ASCO	N/A	Brass	0	
53				x	Cleaning valves	Chemline	21A005EC		4	
54				Misc.	x	Calibration Cylinder	PFS	PV#2-4000	4000 ml	1
55						Variable Area Flowmeter	Chemline	N/A		0
56			Flow switch		N/A			0		
57			Flowmeter		N/A			0		
58		Piping	x	Pulsation Dampener	PFS	APII-PVC-N-2	85 in3	1		
59			VWS Piping spec code		A050C					
60			Pipe Material		PVC Sh 80 ASTM D1784					
61			Common Suction Nominal Pipe Size		in	1"				
62		UTILITIES	Service Water for Chemical Transport	Flowrate (per injection line)		lph	N/A			
63				Pressure		psig	N/A			
64	Transport Water Nominal Pipe Size			in	N/A					

1					VWT CANADA #		PSDS_0008_PCH		
2					Project #		5000218009		
3					Date		2018-03-27		
4					COAGULANT WINTER / SUMMER DOSING SKID				
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.		
6		0							
7	AGNICO EAGLE MINES	1	For approval	2018-03-28	G.H.	G.P.	C.B.		
8		2	Revised name	2018-04-12	G.H.	G.P.	C.B.		
9	PROJECT	3							
10		4							
11	AEM AMARUQ	5							
12		6							
13		TAG:						REV	
65	DESIGN CRITERIA	Design Pressure		psig	80				
66		Design Temperature		°C	35				
67		Operating Pressure		psig	50				
68		Test Pressure		psig	120				
69		Test duration		min	60				
70		Test Fluid		-	Water				
71	CONNECTIONS	Inlet	Diameter (NPS)	in	1"				
72			Type		Socket union				
73		Outlet	Diameter (NPS)	in	1"				
74			Type		Socket union				
75		Transport Water	Diameter (NPS)	in	N/A				
76			Type		N/A				
77	ELECTRICITY	Main Power			575V/3Ph/60 Hz				
78		Controls	(by others)		VFD c/w 4-20 mA				
79		Frame Grounding							
80		Wiring	Pre wired (Y or N details)		Prewired / NEMA 4X JB				
81			Cable Type		Teck 90				
82		Anchors	Qty		4				
83			Supply		No				
84	CODE, APPROVAL & CERTIFICATIONS	Design Code			ASME B31.3 Non Certified				
		Glueing			Glueing B31.3 non certified / Non Certified Shop				
85			Mandatory Registration		No				
87									
88	OVERALL DIMENSIONS AND WEIGHT	Weight (dry)	Final	kg	Refer to GA drawing				
89		Overall Length		mm	Refer to GA drawing				
90		Overall Width	Final	mm	Refer to GA drawing				
91		Overall Height		mm	Refer to GA drawing				

1						VWT CANADA #		PSDS_0010_PCH		
2						Project #		5000218009		
3						Date		2018-03-29		
4						ANIONIC POLYMER WINTER / SUMMER CENTRIFUGE				
5	CLIENT	REV	DESCRIPTION			DATE	By	Chkd	App.	
6		0								
7	AGNICO EAGLE MINES	1	For approval			2018-03-29	G.H.	GP	C.B.	
8		2	Revised name & min flow rate			2018-04-12	G.H.	GP	C.B.	
9	PROJECT	3								
10	AEM AMARUQ	4								
11		5								
12		6								
13		TAG:							REV	
14	GENERAL	Dosed Chemical			Polymer					
15		Number of skids			3					
16		Pumps type			Cavity Progressive Pump					
17		Model Serie			Seepex BN					
18		Total number of pumps			1					
19		Number of pumps in duty			1					
20		Number of pumps in standby			1					
21		Number of dosing points			1					
22	PROCESS REQUIREMENT	Min Flowrate			lph	60				
23		Avg Flowrate			lph	300				
24		Max Flowrate			lph	600				
25	ENVIRONMENT	Equipment Location			Indoor					
26		Min. Temperature			°c	10				
27		Max . Temperature			°c	30				
28		Max. Humidity			%	95				
29		Corrosive Atmosphere			Non Corrosive					
30		Freeze			N/A					
31		Comments								
32	SAFETY	Electrical Classification			Non Hazardous					
33		Province/State			Nunavut					
34	PUMP(S) CAPACITY	Max Flowrate			lph	670				
35		Min Flowrate			lph	30		2		
36	TECHNICAL DESCRIPTION	Skid Frame			Material		Stainless Steel			
37					Type		Stand Alone			
38					Option #1		N/A			
39					Option #2					
40		Pump		X	Dosing Pumps		SEEPLEX BN			
41				x	Variable Frequency Drive	N/A	See Electrical Submittal Package			
42		Components	Valves		Foot valve c/w flexible hose					
43				x	Isolation Valves (common suction)		Chemline	21A015ES		1
44				x	Isolation Valves (suction)		Chemline	21A015ES		3
45				x	Isolation Valves (discharge)		Chemline	21A010EC		5
46				Backpressure Valves		Chemline	N/A			0
47				W/o Press. Gauge		N/A	N/A			0
48				x	Relief Valves		Chemline	SB12A010EU (RVG)		3
49				x	C/w Isolator & Press. Gauge		Chemline	SGA-005-002-P-G + P025-160-BM	Config. L-U	
50				x	Globe Valve - Carrier water		Chemline	GVA010S		2
51				x	Check Valves - Carrier water		Chemline	BTA010EC		2
52				x	ON/OFF Valves - Carrier water		ASCO	8210G089	304 SS	2
53				x	Cleaning valves		Chemline	21A005EC		6
54		Misc.	x	Calibration Cylinder		PFS	PV#2-10000	10000 ml	1	
55			x	Variable Area Flowmeter		Chemline	FSA02500		2	
56			Flow switch		N/A				0	
57			Flowmeter		N/A				0	
58		Piping	Pulsation Dampener		PFS	N/A			0	
59			VWS Piping spec code				A050C			
60			Pipe Material				PVC Sh 80 ASTM D1784			
61			Common Suction Nominal Pipe Size		in	1 1/2"				
62			Suction Pipe Nominal Pipe Size		in	1 1/2"				
63	UTILITIES	Service Water for Chemical Transport		Discharge Pipe Nominal Pipe Size		in	1"			
64				Flowrate (per injection line)		lph	1800			
				Pressure		psig	65			
		Transport Water Nominal Pipe Size		in	1"					

1					VWT CANADA #		PSDS_0010_PCH		
2					Project #		5000218009		
3					Date		2018-03-29		
4					ANIONIC POLYMER WINTER / SUMMER CENTRIFUGE				
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.		
6		0							
7	AGNICO EAGLE MINES	1	For approval	2018-03-29	G.H.	GP	C.B.		
8		2	Revised name & min flow rate	2018-04-12	G.H.	GP	C.B.		
9	PROJECT	3							
10		4							
11	AEM AMARUQ	5							
12		6							
13		TAG:					REV		
65	DESIGN CRITERIA	Design Pressure		psig	80				
66		Design Temperature		°C	35				
67		Operating Pressure		psig	50				
68		Test Pressure		psig	120				
69		Test duration		min	60				
70		Test Fluid		-	Water				
71	CONNECTIONS	Inlet	Diameter (NPS)	in	1 1/2"				
72			Type		Socket union				
73		Outlet	Diameter (NPS)	in	1"				
74			Type		Socket union				
75		Transport Water	Diameter (NPS)	in	N/A				
76			Type		N/A				
77	ELECTRICITY	Main Power			575V/3Ph/60 Hz				
78		Controls	(by others)		VFD c/w 4-20 mA				
79		Frame Grounding							
80		Wiring	Pre wired (Y or N details)		Prewired / NEMA 4X JB				
81			Cable Type		Teck 90				
82		Anchors	Qty		6				
83			Supply		No				
84	CODE, APPROVAL & CERTIFICATIONS	Design Code			ASME B31.3 Non Certified				
		Glueing			Glueing B31.3 non certified / Non Certified Shop				
85		Mandatory Registration			No				
87									
88	OVERALL DIMENSIONS AND WEIGHT	Weight (dry)	Final	kg	Refer to GA drawings				
89		Overall Length		mm	Refer to GA drawings				
90		Overall Width	Final	mm	Refer to GA drawings				
91		Overall Height		mm	Refer to GA drawings				

1				VWT CANADA #		PSDS_0010_PCH				
2				Project #		5000218009				
3				Date		2018-03-29				
4				ANIONIC POLYMER SUMMER DOSING SKID						
5	CLIENT	REV	DESCRIPTION		DATE	By	Chkd	App.		
6		0								
7	AGNICO EAGLE MINES	1	For approval		2018-03-29	G.H.	G.P.	C.B.		
8		2	Revised name & min flow rate			G.H.	G.P.	C.B.		
9	PROJECT	3								
10		4								
11	AEM AMARUQ	5								
12		6								
13		TAG:						REV		
14	GENERAL	Dosed Chemical		Polymer						
15		Number of skids		3						
16		Pumps type		Cavity Progressive Pump						
17		Model Serie		Seepex BN						
18		Total number of pumps		1						
19		Number of pumps in duty		1						
20		Number of pumps in standby		1						
21		Number of dosing points		1						
22	PROCESS REQUIREMENT	Min Flowrate		lph	60					
23		Avg Flowrate		lph	300					
24		Max Flowrate		lph	600					
25	ENVIRONMENT	Equipment Location		Indoor						
26		Min. Temperature		°C	10					
27		Max . Temperature		°C	30					
28		Max. Humidity		%	95					
29		Corrosive Atmosphere		Non Corrosive						
30		Freeze		N/A						
31		Comments								
32	SAFETY	Electrical Classification		Non Hazardous						
33		Province/State		Nunavut						
34	PUMP(S) CAPACITY	Max Flowrate		lph	670					
35		Min Flowrate		lph	30			2		
36	TECHNICAL DESCRIPTION	Skid Frame	Material	Stainless Steel						
37			Type	Stand Alone						
38			Option #1	N/A						
39			Option #2							
40		Pump	X	Dosing Pumps		SEEPEX BN				
41			x	Variable Frequency Drive	N/A	See Electrical Submittal Package				
42		Components	Valves	Foot valve c/w flexible hose						
43				x	Isolation Valves (common suction)	Chemline	21A015ES		1	
44				x	Isolation Valves (suction)	Chemline	21A015ES		3	
45				x	Isolation Valves (discharge)	Chemline	21A010EC		5	
46				x	Backpressure Valves	Chemline	SB12A010EU (BPVG)		3	
47				x	C/w Isolator & Press. Gauge	Chemline	SGA-005-002-P-G + P025-160-BM	Config. L-U	0	
48				x	Relief Valves	Chemline	SB12A010EU (RV)		3	
49					W/o Press. Gauge	N/A	N/A	N/A		
50				x	Globe Valve - Carrier water	Chemline	GVA010S		2	
51				x	Check Valves - Carrier water	Chemline	BTA010EC		2	
52				x	ON/OFF Valves - Carrier water	ASCO	8210G089	304 SS	2	
53				x	Cleaning valves	Chemline	21A005EC		6	
54				Misc.	x	Calibration Cylinder	PFS	PV#2-10000	10000 ml	1
55					x	Variable Area Flowmeter	Chemline	FSA02500		2
56			Flow switch		N/A			0		
57			Flowmeter		N/A			0		
58		Piping		Pulsation Dampener	PFS	N/A		0		
59				VWS Piping spec code		A050C				
60				Pipe Material		PVC Sh 80 ASTM D1784				
61				Common Suction Nominal Pipe Size	in	1 1/2"				
62		UTILITIES	Service Water for Chemical Transport		Suction Pipe Nominal Pipe Size	in	1 1/2"			
63				Discharge Pipe Nominal Pipe Size	in	1"				
64				Flowrate (per injection line)	lph	1800				
			Pressure	psig	65					
			Transport Water Nominal Pipe Size	in	1"					

1					VWT CANADA #		PSDS_0010_PCH			
2					Project #		5000218009			
3					Date		2018-03-29			
4					ANIONIC POLYMER SUMMER DOSING SKID					
5	CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.			
6		0								
7	AGNICO EAGLE MINES	1	For approval	2018-03-29	G.H.	G.P.	C.B.			
8		2	Revised name & min flow rate		G.H.	G.P.	C.B.			
9	PROJECT	3								
10		4								
11	AEM AMARUQ	5								
12		6								
13		TAG:						REV		
65	DESIGN CRITERIA	Design Pressure		psig	80					
66		Design Temperature		°C	35					
67		Operating Pressure		psig	50					
68		Test Pressure		psig	120					
69		Test duration		min	60					
70		Test Fluid		-	Water					
71	CONNECTIONS	Inlet	Diameter (NPS)	in	1 1/2"					
72			Type		Socket union					
73		Outlet	Diameter (NPS)	in	1"					
74			Type		Socket union					
75		Transport Water	Diameter (NPS)	in	N/A					
76			Type		N/A					
77	ELECTRICITY	Main Power			575V/3Ph/60 Hz					
78		Controls	(by others)		VFD c/w 4-20 mA					
79		Frame Grounding								
80		Wiring	Pre wired (Y or N details)		Prewired / NEMA 4X JB					
81			Cable Type		Teck 90					
82			Qty		6					
83		Anchors	Supply		No					
84	CODE, APPROVAL & CERTIFICATIONS	Design Code			ASME B31.3 Non Certified					
85		Glueing			Glueing B31.3 non certified / Non Certified Shop					
87		Mandatory Registration			No					
88	OVERALL DIMENSIONS AND WEIGHTH	Weight (dry)	Final	kg	Refer to GA drawings					
89		Overall Length		mm	Refer to GA drawings					
90		Overall Width	Final	mm	Refer to GA drawings					
91		Overall Height		mm	Refer to GA drawings					



VWT CANADA #	5000218009_PSDS_0018_AU_VWT
Project #	5000218009
Date	2018-04-26

Automation System						
CLIENT	REV	DESCRIPTION	DATE	By	Chkd	App.
AEM Amaruq PROJECT	1	Initial release	2018-04-26	PLG	XM	CB
	2					
	3					
	4					
	5					
	6					

					REV	
General	Voltage		Volts	120		
	Panel Enclosure		Material	Nema 4	Carbon steel	
	Control Panel Approval			CSA		
	Wires color			Client specification		
	Junction boxes	Pre-wiring	Yes	Yes		
	Pre-Wire cable type			Teck 90		
	UPS			Yes		
	Motor control			Client MCC		
	Remote Access			N/A		
Environnement	Panel Location			Indoor		
	Min. Temperature		°C	5		
	Max . Temperature		°C	25		
	Max. Humidity		%	80 non-condensing		
	Corrosive Atmosphere			Non Corrosive		
	Freeze			No		
	Comments					
Safety	Electrical Classification			Non Hazardous		
	Province/State			Nunavut		
Process Controller	Brand			Schneider		
	Model			M580	BMEP582040	
	Memory					
	Estimated memory consumption			50%		
	Spare I/O			20%		
	Digital inputs cards			BMXDDI6402K	BMXDDI3202K	
	Digital outputs cards			BMXDDO6402K	BMXDDO3202K	
	Analog inputs cards			BMEAHI0812		
	Analog outputs cards			BMEAHO0412		
	Communication cards			BMENOC0301		
	Power supply			BMXCPS3500		
	Remote I/O		Model			
HMI	Brand			Schneider		
	Model			HMIDT732	HMIG3U	
	Size		in	15		
	Resolution		Pixels	1024x768		
SCADA Hardware	Brand			N/A		
	Model			N/A		
	Screen size	Screen Quantity	in	N/A		
	Resolution		Pixels	N/A		
	Printer			N/A		
	MS Office			N/A		
	Reporting			N/A		
Software	PLC Software	Version	PLC Software	Unity	12.00	
	HMI Software	Version		Vijeo Designer	6.20	
	SCADA Software	Version		N/A		

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OPERATION AND MAINTENANCE MANUAL
AMARUQ WTP – NUNAVUT
VEOLIA PROJECT: 5000 218 009

4 – DETAILED TECHNICAL DOCUMENTATION

4.3 – SHOP DRAWINGS

4.3.1 – PRECIPITATION REACTOR – RX75-3

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Project name: AMARUQ

Project#: 5000218009

Document #: SPK_0001_RX

by: LJ

chkd: GP

appvd: CB



SUBMITTAL PACKAGE

METAL PRECIPITATION REACTOR

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Project name: AMARUQ

Project#: 5000218009

Document #: SPK_0001_RX

by: LJ

chkd: GP

appvd: CB



METAL PRECIPITATION REACTOR

PROCESS DATASHEET

OIM manual section: 4.3.1.1

REFER TO 5000218009_PSDS_0001_RX_VWT

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Project name: AMARUQ
Project#: 5000218009
Document #: SPK_0001_RX
by: LJ
chkd: GP
appvd: CB



METAL PRECIPITATION REACTOR

GENERAL ARRANGEMENT DRAWING

OIM manual section: 4.3.1.2

REFER TO 5000218009_GA_0001_RX75-3_VWT

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Project name: AMARUQ

Project#: 5000218009

Document #: SPK_0001_RX

by: LJ

chkd: GP

appvd: CB



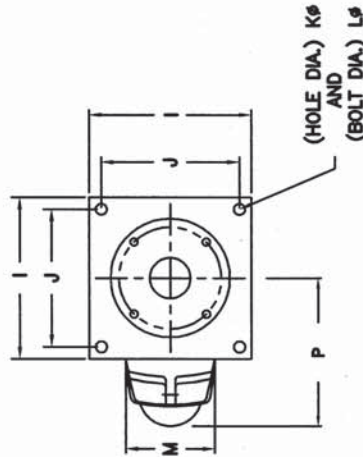
METAL PRECIPITATION REACTOR MIXER

OIM manual section: 4.3.1.3

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ITEM	DESCRIPTION	MATERIAL
1	Envirofoil Impeller (F-4) 2438.4 mm (96.0") ϕ $\bullet$ 22.0"	304L
2	Base 533.4 mm x 533.4 mm (21.0" x 21.0")	Steel
3	Pedestal c/w dry well (dry well)	
4	NORD reducer 21.72 RPM	
5	NORD 5.0 Hp motor, premium efficiency, 575/3/60, TEFC	
6	Shaft: (1) section 2430.8 mm (95.7") $\bullet$ 3.0"	304L
7	Three pos'n adjustment: 1/2D, 3/4D and 1.0D	

APPL'N: REACTOR (QTY 3)
MELANGEURS MIX-TECH
MODEL: EVGX6-5.0
3.73 kW $\bullet$ 21.72 RPM
S/N 04865-1, 2, 3
Reactor # 1
Rotation: Counter clockwise
Thrust: Up
Tag #: M1-011
Reactor # 2
Rotation: clockwise down
Thrust: Up
Tag #: M1-012
Reactor # 3
Rotation: Counter clockwise
Thrust: Up
Tag #: M1-013



"A-A"

TANK

NO	DATE	REVISION	P/B

PROJECT/PROJECT

AGNICO EAGLE - AMARUK

ENVIREQUIP

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Dorval, QC H9S 2A8
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WITEM INC.

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TITRE/TITLE

"MIX-TECH" Mixers
Veolia Water Technologies
EVGX SERIES

DESIGN: PJ
CHECKED: PJ
APPROVED: PJ

DATE: March 8, 2018
EN/SCALE: N.T.S.
PROJ: 04865
REV: 00

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Dimensions: Inches	A	B	C	D	E	E2	F	G	H	I	J	K	L	M	N2	P
MOD.: A	12.85	29.8	16.05	.875	95.7	—	—	96.0	3.0	21.0	18.0	1.0	.875	13.8	16.0	16.02
EVGX6	326.4	756.9	407.7	22.2	2430.8	—	—	2438.4	76.2	533.4	457.2	25.4	22.2	350.5	406.4	407.0

Dimensions: mm	A	B	C	D	E	E2	F	G	H	I	J	K	L	M	N2	P
MOD.: A	326.4	756.9	407.7	22.2	2430.8	—	—	2438.4	76.2	533.4	457.2	25.4	22.2	350.5	406.4	407.0
EVGX6	326.4	756.9	407.7	22.2	2430.8	—	—	2438.4	76.2	533.4	457.2	25.4	22.2	350.5	406.4	407.0

3650.0 mm
Tank bottom to mixer mounting

3450.0 mm
Side water depth

4280 mm
X 4280 mm

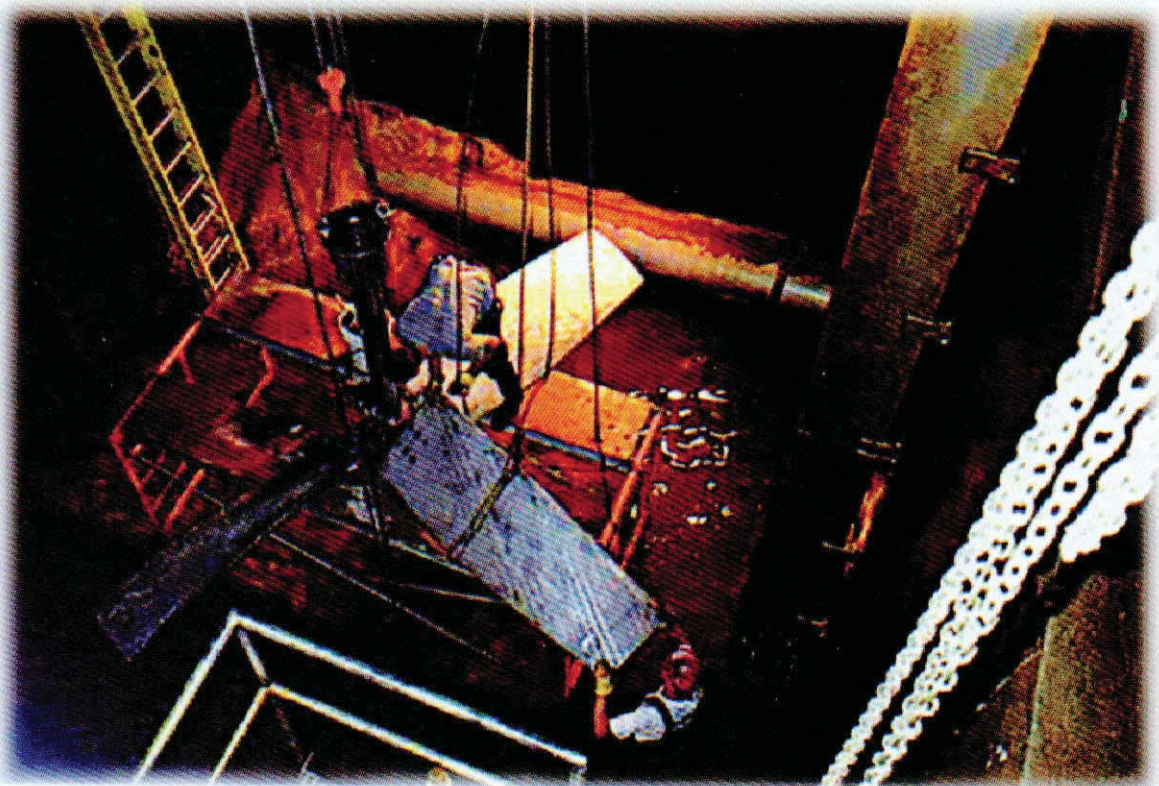
MINIMUM
OPENING
N2

1219.2 mm
OBC (.75D)

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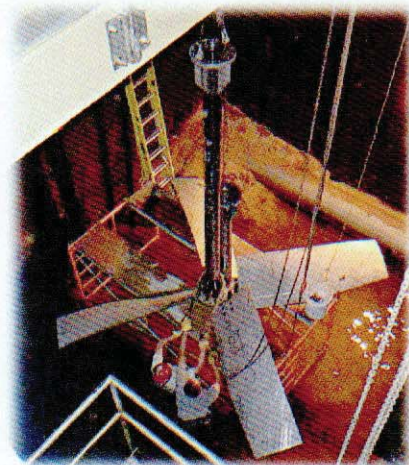
MIX-TECH

DYNAMIC MIXERS
EVG & EVG-FP SERIES
1/4 TO 200 HP



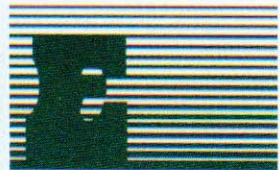
MIX-TECH FEATURES:

- Large service factors on gear drives - minimum 2.5.
- Shaft stress to 9000 psi maximum.
- Impeller / Hub / Coupling 6000 psi maximum.
- All drives are capable of reverse rotation.
- Optional pedestal with shaft catcher design, that allows removal of the gear drive without disturbing the wet end.
- "FP" Option: The reducer is totally isolated from the random hydraulic loads imposed by the shaft & impeller assembly.
- Large shaft capability operating at 65% of the shaft's 1st Harmonic frequency or Critical Speed.
- Mounting options: Steel base, pedestals and custom.
- Seal options: HPLRSB, LPSB, Lip seals, Single, Double, Dry-Running or Cartridge seals.
- Motor options: Nord integral Standard; Nema motors, hydraulic & pneumatic motors also available.
- Full range of impellers including **ENVIROFOIL**.



MIX-TECH... GOOD PEOPLE TO MIX WITH

ENVIREQUIP



W.T.E.M. INC.

EVG & EVG-FP SERIES 1/4 TO 200HP



MIX-TECH DYNAMIC MIXERS

FEATURES:

- Elegant parallel design shaft-helical gears.
- AGMA 13 on high speed gears and AGMA 11 minimum for other gears.
- Large service factors - minimum 2.5.
- Oversized roller bearings B10 life, 100,000 hours minimum.
- Double output shaft seals and leakproof dry-well design option.
- Available with hollow quill output shaft for easy maintenance.



Isolating the gear drive 100% from the random hydraulic loads generated by the mixer's shaft and impeller assembly.

MIX-TECH... GOOD PEOPLE TO MIX WITH