

Chapter 8 CERTIFICATIONS

8.1 TESTING/TRAINING SHEET

SIFEC NORTH INC.
COMMISSIONING TRAINING

Revision Sifec – Rev 12-07-2018

Training and Communication

Record of Training

The purpose of this training is to ensure that plant operators are familiar with the functional operations of the equipment/process of a new plant and have demonstrated competency.

Community: IGLOOLIK – TRUCKFILL STATION	Date Trained - Commissioned:
Persons Being Trained - Name and Surname: 	Signatures:

(To be signed when all training has been completed)

Training Day #	Equipment/Process	Reference Material/Notes O&M	Trainers Name Can be the contractor/supplier for equipment and the Project manager for processes	Trainers Signature	Date Completed Needs to reflect the actual day of training
1	Stand-By Genset - MTU Overview of the unit <ul style="list-style-type: none"> • Prestart up checks • Start • Rated and on line • Unload • Shutdown Filters and change out system				
1	Ventilation <ul style="list-style-type: none"> • Furnace Maintenance • Furnace Troubleshooting • T775 Controller • Damper • Actuators 				
1	Fuel <ul style="list-style-type: none"> • Fuel Pumps 				

	<ul style="list-style-type: none"> Fuel Control Panel Fuel Filter Fuel Level Switch 				
1	Oil <ul style="list-style-type: none"> Oil filling system Oil emptying system 				
1	Electrical <ul style="list-style-type: none"> Battery Charger Transfer Switch Breaker Locations Power Distribution Lighting Emergency Lighting 				
1	Electrical Unit Heater <ul style="list-style-type: none"> Operation Troubleshooting Maintenance				
1	Electrical Heat Trace <ul style="list-style-type: none"> Operations Replace Alarm Power Connections				
	=====	=====	=====	=====	=====
	=====	=====	=====	=====	=====
1 - 2	Raw Water Submersibles Pumps <ul style="list-style-type: none"> Operations Pump Sequencer Replace Alarm Power Connections				
1-2	Harmsco Strainers <ul style="list-style-type: none"> Clean Strainers Daily 				
1-2	Water Filter – Harmsco Stainless Steel Housing <ul style="list-style-type: none"> Differential Pressure 				

	<ul style="list-style-type: none"> • Replace 20 Microns Filters (5) • Replace 5 Microns Filters (5) • Replace LT2 Filters (8) • Consumables 				
1 - 2	Chlorine Mixer MC4-50 <ul style="list-style-type: none"> • Operation • Hooper Insert • Briquette Maintenance 				
2-3	CHLORINATION DOSING PUMPS (CP1 to CP4) <ul style="list-style-type: none"> • Operation • Maintenance 				
2 - 3	CHLORINE CONTROLLER (Microchem 2) <ul style="list-style-type: none"> • Operation • Maintenance • Probe Replacement • Probe Calibration • Control 				
2 t o 2 8	PH Probe Replacement <ul style="list-style-type: none"> • Operation • Maintenance • Probe Replacement • Probe Calibration • Control 				
2 to 28	Free Chlorine Probe Replacement <ul style="list-style-type: none"> • Operation • Maintenance • Probe Replacement • Probe Calibration • Control 				
2 t o	Hand Pocket Hach (Free Chlorine) <ul style="list-style-type: none"> • Operation 				

2 8	<ul style="list-style-type: none"> • Maintenance • Consumables 				
2 to 28	PH Pocket Tester <ul style="list-style-type: none"> • Operation • Maintenance • Consumables 				
2 - 2 8	DATA RECORDER (Nanodac) <ul style="list-style-type: none"> • Modem Troubleshooting • Programming • Recording • Maintenance 				
3	FLOW METER <ul style="list-style-type: none"> • Operation • Troubleshooting • Maintenance 				
3 t o 2 8	RE-CIRCULATION PUMPS (P2 & P3) <ul style="list-style-type: none"> • Operation • Troubleshooting • Maintenance 				
3 to 28	RE-CIRCULATION PUMPS (PS1 & PS2) <ul style="list-style-type: none"> • Operation • Troubleshooting • Maintenance 				
4 to 28	CONTROL PANEL (SV-1 to SV-4 and MV-1 to MV-4) <ul style="list-style-type: none"> • Operation • Alarm • Troubleshooting • Maintenance 				
4	SUMP PUMP and WASTE WATER PIT <ul style="list-style-type: none"> • Operation 				

	<ul style="list-style-type: none"> • Troubleshooting • Maintenance 				
4	DOMESTIC WATER PUMP and WATER TANK <ul style="list-style-type: none"> • Operation • Troubleshooting • Maintenance 				

Notes:

Project Manager Verification

Name:	Signature:
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(To be signed when all training has been completed)

8.2

CONSUMMABLES LIST NECESSARY FOR 3 MONTHS OPERATION

Quantity	Product	Supplier
2	P/N 924595 - Injection Valve ½" x 3/8" x ½: MNPT, PVC/Viton -	Provan or Metcon
2	P/N 10-4002 – Maintenance Kit:	Provan or Metcon
2	P/N 29263 – Preventive Maintenance Kit:	Provan or Metcon
1	P/N 23183 – Chlorine Probe 2ppm:	Provan or Metcon
2	pH probe (part # 26189)	Provan or Metcon
1	H2635300_H2635300 - SpechCheck Secondary Gel Standards Set, DPD	Hach
3	H2105528_H2105528 - DPD Free Chlorine Reagent powder pillow	Hach
3	H2105628_H2105628 - DPD Total Chlorine reagent powder pillows 10ml	Hach
3	H2601300_H2601300 - pH Paper, 0 - 14 pH Range	Hach
5	H2427606_H2427606 - Sample Cell 25x60mm 10ml pk/6, w/cap used with pocket colorimeter	Hach
4	SAP340_SAP340 – Latex gloves Medium	Tenaquip
8	SAP341_SAP341 – Latex Gloves Large	Tenaquip
1	JB896_JB896 Garbage Bag	Tenaquip
36	PM1345751_PM1345751 – Industrial Paper towels - absorbent - resistant	Patrick Morin
7	ACG12_ACG12 - Hypochlorite de sodium 55litres	Distributions J.Y. St-Pierre Inc.
18	MultiFold Paper Towel Bounty S-16501 (Case of 8)	U-Line
15	HC17020WHF_HC17020WHF - Hurricane Fltr Cart	Dyna-Pro
15	HC1705WHF_HC1705WHF - Hurricane Fltr Cart	Dyna-Pro
24	HC170LT2_HC170LT2 - Hurricane Fltr Cart	Dyna-Pro

8.3 SPARE PARTS

Quantity	Make	Model	Description
2	Square D	QOB115	15A Breakers Bolt-on
2	Square D	QOB120	20A Breakers
2	Square D	QOB130	30A Breakers
10	Ferraz	GGC3	Fuses
10	Ferraz	GGM3	Fuses
10	Ferraz	GGC5	5A Fuses
4	GF	1A-30	Furnace Oil Filter
12	DAFCO	DAFSC16251	Furnace Air Filters
1	DELAVAN	DEL55X60W	Nozzle 0,55 gph for Becket NX 70lhhs
1	MTU	X57536400006	Generator Fuel Filter
1	MTU	ECB105002 DC168G A	Air Filter
1	MTU	OM924la	Generator Oil Filter #234644 PNR: 2084415371 AENT : A1153625
4	Willsup Gasket	custom	Gaskets 6" ring 1/8"
2	Willsup Gasket	custom	Gaskets 4" Ring 1/16"
1	Willsup Gasket	custom	Gaskets 2" Ring 1/16"
1	Ipex		Ball Valve 3/8" PVC SCH80
2	Ipex		Ball Valves 1/2" C-PVC SCH80
2	Ipex		Ball Valves 1" PVC SCH80
2	Ipex		Ball Valves 2" PVC SCH80
2	Ipex		Ball Valve 2" SCH40 PVC

DAILY LOG SHEET

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Chlorine Type: liquid

Igloodik Log Sheet for SIFEC

Date: 23 October 2018 Stroke #: 6080

Serial Number	Time	Truck Number	Inside the Water Plant			After filling the Truck		Turbidity		Reading at Garage			Name of the operator	Strokes per Minute
			Free Chlorine, mg/L (Probe)	Free Chlorine, mg/L (Pocket Hatch)	Total Chlorine mg/L	Free chlorine mg/L	Total Chlorine mg/L	Raw Water NTU	Treated water after 20 minutes Contact time NTU	Time	Free Chlorine, mg/L (ppm)	Total Chlorine, mg/L (ppm)		
1	9:09	75	0.798	0.74	1.04	0.85	1.01	1.60	1.30	9:25	0.72	1.10	FS	68
2	9:29	13	0.568	0.53	0.83	0.75	0.98	1.81	1.42	9:45	0.81	1.02	FS	68
3	10:36	63	0.665	0.68	0.87	0.74	0.93	1.60	1.32	10:55	0.72	0.98	FS	68
4	10:58	75	0.698	0.73	0.96	0.78	1.00	1.72	1.38	11:10	0.80	1.01	FS	68
5	11:19	13	0.789	0.80	1.03	0.81	1.04	1.51	1.31	11:30	0.87	1.01	FS	68
6	12:55	63	0.660	0.66	0.89	0.63	0.93	1.66	1.31	13:10	0.75	0.99	FS	68
7	13:20	75	0.642	0.70	0.92	0.75	0.96	1.68	1.30	13:35	0.74	0.96	FS	68
8	13:40	13	0.760	0.68	1.07	0.83	0.92	1.30	1.36	13:55	0.65	0.94	FS	68
9	14:23	63	0.690	0.64	1.14	0.80	0.97	1.72	1.34	14:35	0.73	0.94	FS	68
10	15:24	13	0.667	0.69	0.87	0.63	0.98	1.52	1.69				FS	68
11	15:44	75	0.675	0.66	0.95	0.71	0.97	1.75	1.42				Steve	68
12	16:10	63	0.737	0.70	0.98	0.72	0.99	1.54	1.41				Steve	68
13	16:31	13	0.753	0.68	0.95	0.67	0.99	1.67	1.16				Steve	68
14	17:11	75	0.643	0.58	0.91	0.65	0.95	1.51	1.12				Steve	68
15	19:46	75	0.573	0.49	0.85	0.85	0.89	1.56	1.14				Steve	68
16	21:50	75	0.601	0.56	0.86	0.53	0.88	2.03	1.14				Steve	68
17														
18														
19														
20														
21														
22														
23														

Repair of exit water line done 8:15 am see photo report.

11:30 bleeders system drained CIP-1 line

8:30 Kevin 5 minutes in morning
11:00 Kevin 5 minutes
16:00 Steve shift night

NANODAC ACCESS PROCEDURE



To transfer file from nanodac,

1. download the file: <http://ftp.sifec.biz/>

- [] 6xxxTools5p7p1.exe ---- this is the program to view chart in the nanodac
- [] TeamViewer_Setup.exe -----team viewer is an application for remote assistance
- [] WinSCP-5.13.3-Setup.exe --- this is a free FTP application to transfer file .

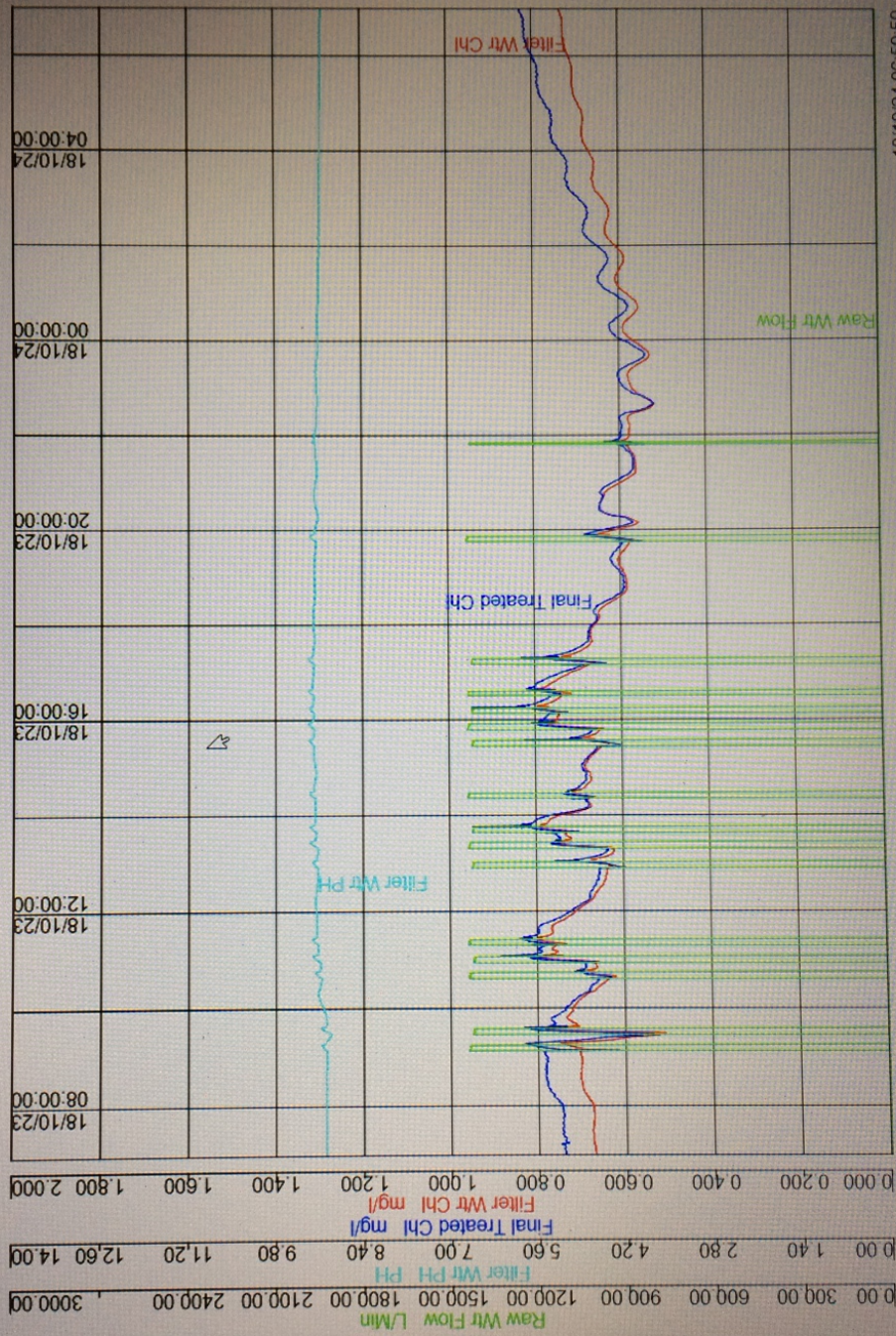
the address of the nanodac is : Pang-wtp.dyndns.org

in FTP , user: history

password: 100

this is the video to make it work, Review is not an easy application

https://www.youtube.com/watch?v=_bfw2SAxWWY



8.7 **WARRANTY LETTER**



October 29, 2018

C/O Greg Morash
Senior Administrative Officer
P.O. Box 30
Igloolik, Nunavut X0A 0L0
Tel: (867) 934-8830
Fax: (867) 934-8757
SAO@Igloolik.ca

Subject: Water and Wastewater Infrastructure Upgrade, Igloolik, NU
Substantial Completion Date – October 26, 2018

Dear Mr. Morash:

SIFEC NORTH INC. guarantees the mechanical and electrical systems as well as any related equipment according to **Contract #15230-00278** for a one (1) year period effective as of the date of the substantial completion, in this case as of October 26, 2018.

Best regards,

Rhea Fauteux, P.Eng.
Project Manager

RF/jp