6.3.2.3 Using the HACH Pocket Colorimeter Chlorine Tester

The following procedure may be used to test for free chlorine in a sample taken from the truck:

.1 Rinse both 20 ml tubes in kit with distilled water.

.2 Obtain a sample of treated water from the water truck after it has been sitting for 20 minutes (the chlorine has had time to disinfect). The sample should be taken from the top hatch of the truck. A clean measuring cup or jar may be used for this purpose.

.3 Fill both tubes to the **10 mL** fill line (the first line) with sample water from the truck.

.4 Differentiate between the two sample tubes so they do not get mixed up. One cell is the "blank", the other will be the "sample".

.5 Put the blank cell in the slot of the Colorimeter with the diamond facing you. Cover the sample with the instrument cap. Press the "ZERO" key. The instrument will display 0.00. Remove the blank cell from the slot.

.6 Take a foil package marked FREE CHLORINE, and tear the top off. Carefully pour the contents (reagent) into the sample tube.

.7 Agitate the contents by shaking the capped tube for 15 to 20 seconds. The tube contents should start to turn to a pink, or magenta colour. If the contents **do turn to a pink colour, go to step 10.**

.8 If the sample does not turn colour at all or turns very little, the truck water is inadequately chlorinated, and should not be delivered to the residents unless its chlorine dosage is increased. You may manually add bleach to the truck to increase the dosage.

.9 If you do add additional bleach, another 20 minutes will be required for reaction time. 10 ml of bleach will raise the chlorination of 1000 litres of water by approximately 0.6 mg/l. If the truck size is 2500 litres, then 25 ml of bleach will also raise the chlorine content by approximately 0.6 mg/l. By adding bleach to under-chlorinated truck loads, you will not waste any truck loads by having to discard inadequately chlorinated water.

.10 If the sample turns pink or magenta, place the tube in the chlorine tester's slot, and cover the capped sample with the instrument cap.

.11 Press the "READ" key. The instrument will display the FREE CHLORINE result in mg/L or parts per million (ppm). It should read at 1.0 mg/l to be considered safe to deliver.

.12 Empty and rinse tubes after using.

6.3.2.4 Chlorine Injection Pump Adjustment

The chlorine injection pump is located beside the chlorine mixing tank. This pump can have both the rate of pumping and the length of the stroke adjusted to obtain the correct chlorine injection rate that will provide enough chlorine for disinfection in the water truck.

The chlorine pump will be set to provide 1.0 mg/l of residual chlorine in the water truck. It may be required to pump more than 1.0 mg/l of chlorine into the truckfill pipe to obtain a residual chlorine of 1.0 mg/l.

The test should be performed on a full truck. The filling of the truck will mix the water resulting in a test that shows the average chlorine residual of the water.

.1 **Location**: Inside the truckfill station beside the chemical pump.
Ensure the chemical pump is plugged into the receptacle labelled CHLORINE PUMP.

.2 Set the pump knobs to a rate of 80% and a stroke of 100%. This has been found to be a good starting place.

.3 **Location**: Outside at the truckfill arm.
Fill the truck per the instructions above in section 6.3.1.

.4 Allow the truck to sit for 20 minutes.

.5 Take a small sample in a measuring cup or some clean container from the fill hole in the top of the truck.

.6 Test the sample as per section 6.3.2.3, "Using the HACH Pocket Colorimeter Chlorine Tester".

.7 If the test result is below 1.0 mg/l, increase the stroke of the pump and/or the rate. However, the stroke and rate should always be between 30% and 100%.

.8 Empty the truck and repeat steps 3 to 7. Repeat the test until 1.0 mg/l residual chlorine is reached.

.9 If the test is above 1.0 mg/l, decrease the stroke and/or the rate. Follow the limits stroke and rate limits in step .7.

.10 Empty the truck and repeat steps 3 to 7. Repeat the steps until 1.0 mg/l residual chlorine is reached.

6.3.3 Intake Screen Backwashing

The intake screen has been sized such that cleaning should not ever be required. In the unlikely event that the screen is becoming plugged, the intake screen may be backwashed by recirculating water from the existing intake line through the casing. This procedure may help to remove some silt or material that otherwise plugs the screen. However, it is not a completely effective cleaning because the intake pump recirculates more than it will backwash. The only practical methods to completely clean the screen is to have divers unclog and clean the screen by hand, or by applying high pressure air from the inside of the screen.

6.3.4 Heat Trace System

There is a heat trace system installed against the intake pipe inside the intake casing. The electric heat trace cables in the casing will prevent freezing and aid in thawing of the pipe should it ever become frozen.

The heat trace cables are operated by a dual temperature monitor and controller called the Accutron TS 202a.

Use of the heat trace during summer is not required. The controller will be enabled, but the heat trace cables will not be activated during warmer weather.

The heat trace controller has been set to perform optimally. However, should power to the controller be disrupted for a long period, the controller may require reprogramming. See the TS-202 Programming Manual in Section 9.11 for programming details. The following identifies the general steps to setup the controller as well as some settings found to be specific for the truckfill station.

.1 **Location**: The Heat Trace Controller is inside the truckfill station above the intake pipe coming into the building.

Open the cover on the controller panel. When the unit is powered up, a power loss alarm will occur. This is normal. Press the ACK on the controller to acknowledge the alarm. You will also need to acknowledge this alarm on the main control panel (horn, strobe, and buzzer in panel) by pushing the BLACK acknowledge button, and the red ACK button on the panalarm.

.2 Press the SHIFT key to enter the TS 202 programming mode.

.3 Press the MAINTAIN TEMP key to set the operating temperature. Enter '12' which sets the operating temperature to 12°C.

.4 Press the DEAD BAND key. The DEAD BAND is defined as the number of degrees above the setpoint at which the tracer is de-energized. Set to 1°C. Whenever the intake water temperature is above 13°C the heat trace cables will be turned off.

.5 Press the AUTO TEST key. The controller will perform diagnostic tests on the circuit at preset time intervals. Enter the YES key. Set the CYCLE HOURS to 24. This will automatically test the circuits once/day. Set this alarm so that it is timed to check during normal delivery hours.

.6 Press the CURRENT ALARM key. The TRIP ON HIGH AMPS will be displayed. Enter NO for this option. This will ensure power is maintained in the heat trace cables during a high amp alarm condition. The alarm must be cleared, and the problem attended to, even though the heat traces will remain in operation.

.7 Press the NEXT key. The LOW TRACER CURRENT ALARM function option is displayed. This value should be left at the default value, unless an electrician or heat trace expert recommends it be changed.

.8 Press the NEXT key. The HIGH TRACER CURRENT ALARM function option is displayed. This value should be left at the default value, unless an electrician or heat trace expert recommends it be changed.

.9 Press the NEXT key. The TRIP ON HI AMPS TRIP TRACER function option is displayed. This value should be left at the default value, unless an electrician or heat trace expert recommends it be changed.

.10 Press the HI GND CURRENT key. The GND FAULT MILLIAMPS function option is displayed. This value should be left at the default value, unless an electrician or heat trace expert recommends it be changed.

.11 Press the HI GND CURRENT key, then the NEXT key. The TRIP ON HI GND TRIP TRACER function option is displayed for tracer #1. Set this value to NO. This will enable heat tracing even with ground current leakage. An alarm will sound, and the problem must be remedied as soon as possible to ensure safe operation.

.12 Press the NEXT key. The TRIP ON HI GND TRIP TRACER function option is displayed for tracer #2. Set this value to NO. This will enable heat tracing even with ground current leakage. An alarm will sound, and the problem must be remedied as soon as possible to ensure safe operation.

.13 Press the ENABLE TRACER key. The ENABLE TRACER #1 CHANGE function option is displayed for tracer #1. Set this value to YES. This will enable heat tracing, and monitoring for tracer #1. Press the NEXT key. The ENABLE TRACER #2 CHANGE function option is displayed for tracer #2. Set this value to YES. This will enable heat tracing, and monitoring for tracer #2.

.14 Press the UNITS key. The SETTINGS IN DEG C CHANGE function option is displayed. Leave this value at NO. This will display units in degrees Celsius.

.15 Press the HI TEMP SEEN key. The #1 RTD HI=???.? C RESET function option is displayed. YES will reset the present high temperature being measured as the new value. NO will retain the high temperature read previously. Normally leave the setting at NO.

.16 Press the HI TEMP SEEN key, then the NEXT key. The #1 LOW=???.? C RESET function option is displayed. YES will reset the present temperature being measured as the new low value. NO will retain the low temperature read previously. Normally leave the setting at NO.

.17 Press the DATA HIGHWAY key, then the NEXT key. The DATA HIGHWAY ON ENABLE function option is displayed. Set this option to NO, unless connecting to a computer.

.18 Press the HI TEMP ALARM key. The #1 HI TEMP ALARM SET function option is displayed. This value should be left at the default value, unless consistent false alarms are occurring. Try increasing the setting to reduce false alarms.

.19 Press the HI TEMP ALARM key, then the NEXT key. The #1 HI TEMP ALARM TRIP TRACER function option is displayed. This value should be set to YES. This will shut off the heat trace if the set HI TEMP is exceeded. Tripping the tracer could prevent possible melting through the intake pipe.

.20 Press the HI TEMP ALARM key, then the NEXT key twice. The #1 RTD FAILURE TRIP TRACER function option is displayed. This value should be set to NO. This will enable heat tracing even with a failing RTD sensor. An alarm will sound, and the problem must be remedied as soon as possible to ensure safe operation.

.21 Repeat the programming of steps .18 through .20 for tracer #2 by using the NEXT key.

.23 Press the TRACER CURRENT key. The CURRENT CLAMPING #1 ENABLE function option is displayed for tracer #1. Normally set this value to NO. This setting will not restrict amperage allowed to the heat trace.

Any alarm conditions that occur with either tracer, the TS 202 will illuminate the ALARM ON indicator and alternate the Main Operations Display with the ALARM CODE display and corresponding tracer circuit. Any alarms can be acknowledged by pressing the ACK key on the heat trace controller. The alarm will also have to be acknowledged on the Panalarm in the main control panel. Acknowledging an alarm does not clear its condition.

For TRIP ALARMS, the alarm must be acknowledged before automatic control of the heat trace system is restored. Consult section 9.11 Appendix A of the TS202 programming manual for details on alarm messages.

6.3.5 Heating System

Heat is supplied to the truckfill station by two electric radiant heaters mounted on the ceiling. Each heater is controlled by a thermostat and a proportional controller.

The thermostat for each heater controls the room temperature. They should be both set to the same value. The normal setting is 16°C. This temperature is above the low temperature alarm setting of 13°C and below the high temperature alarm setting of 35°C. The setting should always be between the high and low alarm temperatures. There should not normally be a need to change the thermostat settings.

The amount of heat provided by the heaters is controlled by the proportional controllers located beside each thermostat. These controllers can be set from MIN to MAX which determines the time that the heater is turned on per cycle. If the heaters are failing to maintain room temperature, the controller settings can be increased. In warmer weather, the controller settings can be reduced.

For fast warmup of the building, adjust the proportional controllers to MAX (100%). This is recommended if personnel are going in and out of the pumphouse frequently in cold weather, i.e. servicing.

6.4 SPECIAL PROCEDURES

6.4.1 Truckfill Pump Removal

If the truckfill pump, or other equipment within the intake casing, fails, the intake pipe and all attached equipment can be removed from inside the truckfill station. DO NOT attempt to remove the pump unless an electrician is present to disconnect the power cables.

It has been found that the winch for removal of the intake pipe is useful for the initial start, but that a loader or truck connected to the cable reduces the time required for removal. Care must be taken when using a vehicle to assist removal to ensure that the cable is not snapped which could cause injury, and make the remaining pump removal extremely difficult.

Water from the pumphouse will not be available during the pump removal and replacement.

Location: All of the following procedure can be completed within the truckfill station or just outside the door.

.1 **Location**: At the main breaker panel.
Turn off the breakers for the truckfill pump and the heat trace controllers.

.2 **Location**: At the UPS controller.
Turn the UPS controller switch to OFF. This will turn off the control panels.

.3 **Location**: At the intake casing.
Turn the truckfill pump starter to the OFF position.

.4 Disconnect the truckfill pump power cable from the starter. This MUST be done by a certified electrician.

.5 Unplug the heat trace cables from the receptacle.

.6 Disconnect one of the victaulic fittings on the truckfill pipe closest to the intake casing.

.7 Move the truckfill pipe out of the way. More fittings may need to be removed to accommodate the pump removal.

.8 Remove the outer set of bolts on the intake casing flange.

.9 Loosen the inner set of four bolts on the flange which loosens the rubber plug.

.10 Pull the flange and plug out of the casing.

.11 Remove the four bolts from the flange.

.12 Remove the flange and plug.

.13 Set the winch stand pipe in the hole in the floor.

.14 Wind the intake pull cable onto the winch.

.15 Winch out the intake pipe, carefully supporting the pipe and cables. Once the pipe is a meter or so out of the casing it may be easier to connect the cable to a loader to continue pulling.

.16 Carefully support the pipe and cables during pulling. Watch for snags, and any wedging that may occur during removal.

.17 The pipe is approximately 80 metres long and will go out the door.

.18 Once the pipe is pulled, the pump, heat trace RTD sensors, or heat trace cables can be maintained, repaired or replaced.

.19 Reverse the above procedures to replace the pump and pipe.

6.5 TROUBLE SHOOTING PROCEDURES

6.5.1 Alarm System

The alarm system for the Clyde River pumphouse consists of an external horn and a flashing strobe beacon to indicate the alarm. There is a ten alarm annunciator set into the front of the main control panel, even though all ten positions are not occupied by an alarm. The record drawings and control panel schematics in Section 4 show the physical layout of the annunciators within the panel. Alarms are indicated by a red light flashing on the annunciator. Alarms sound the outside horn and the strobe beacon flashes.

The alarm annunciators each have four control buttons: ACK, FLRST, RST, and TEST. The TEST button causes each alarm light to illuminate while it is pressed. The FLRST (flash reset) button is not used with the operating mode the annunciators are programmed for in this facility. The ACK (acknowledge) button stops the flashing and horn, but the alarm light remains lit. The RST (reset) button cancels all alarms. However, if a device continues to send an alarm to the annunciator, the RST button will not reset that alarm.

The alarms are emergency conditions which may result in a failure of the facility to deliver treated water as required or may result in damage to the facility or persons. Therefore, these alarms are to be treated as emergencies and must be corrected immediately. To ensure that alarms are corrected immediately, the alarm annunciator is connected to an external horn and strobe beacon.

The alarms are listed, along with the response to each alarm condition.

Alarms

.1 Low Building Temperature

This alarm is transmitted from the low temperature alarm thermostat. It indicates that the building temperature is lower than the set point (initially set at 10 °C) and may indicate a heater failure. THIS ALARM MUST BE DEALT WITH PROMPTLY TO ENSURE THAT THE FACILITY AND INTERNAL EQUIPMENT DOES NOT FREEZE. Freezing of water within the facility may cause very severe damage to the piping, UPS batteries, and chlorine injector..

One of the following conditions may be causing the alarm:

- The building thermostat may have failed and the infrared heater is not operating.
  - Acknowledge the alarm annunciator (ACK). Increase the setting on the building thermostat to above room temperature, and turn on the infrared heaters. Have an electrician repair the heating system if the heaters do not turn on.

- The building thermostat may be set too low.
  - Acknowledge the alarm annunciator (ACK). Increase the setting on the building thermostat to above the low temperature alarm thermostat setting. Wait a few hours for the building to warm. The

alarm light should turn off when the room temperature rises above the alarm thermostat setting.

- The low temperature alarm thermostat may be set too high.
  - Acknowledge the alarm annunciator (ACK). Decrease the setting to approximately 10 °C. The alarm light should turn off as long as the room temperature is above 10 °C.

- The low temperature alarm thermostat may have failed.
  - Acknowledge the alarm annunciator (ACK). Check the thermostat for function by decreasing the setting to below the room temperature. The alarm light should turn off. If the thermostat fails to operate properly, have an electrician repair the heating system.

- The outside temperature may be very low and doors or vents may be open. Therefore, the heaters may not be able to heat the building to the thermostat setting.
  - Acknowledge the alarm annunciator (ACK). Ensure the door is not open, and look for major air leaks. Seal up the building as well as possible.

.1 High Building Temperature

This alarm is transmitted from the high temperature alarm thermostat. It indicates that the building temperature is higher than the set point (initially set at 32 °C). THIS ALARM MAY INDICATE A FIRE IN THE BUILDING.

Upon determining that the high building temperature alarm is on, look for signs of fire within the facility, or excess heat output. Small fires may be controlled with the fire extinguishers located at each exterior door. Larger fires will require the assistance of the Clyde River fire crew.

If fire is not the cause of the high temperature alarm, then one of the following conditions may be causing the alarm:

- The high temperature alarm thermostat may be set too low.
  - Acknowledge the alarm annunciator (ACK). Increase the setting to approximately 32 °C. The alarm light should turn off.

- The high temperature alarm thermostat may have failed.
  - Acknowledge the alarm annunciator (ACK). Check the thermostat for function by increasing the setting to above the room temperature. The alarm light should turn off.

- The building thermostat may be set too high.
  - Acknowledge the alarm annunciator (ACK). Reduce the setting on the building thermostat to below the high temperature alarm thermostat setting. Wait a few hours for the building to cool. The alarm light should turn off when the room temperature drops below the alarm thermostat setting.

- The temperature control thermostats may have failed and the infrared heaters are not turning off.
  - Acknowledge the alarm annunciator (ACK). Reduce the setting on the building thermostat to below room temperature, and turn the heaters' controls off. Have an electrician repair heating system if controls are not functioning properly.

- The outside temperature is very high and, therefore, the building is overheated. This would be indicated by both an outside temperature and a building temperature above the high temperature alarm thermostat setting the alarm off. Adjust the high thermostat alarm setting to a temperature higher than the room temperature.

.3 Heat Trace Alarm

An alarm will be activated when the heat trace controller sends an alarm signal to the control panel. Consult the TS202 Programming Manual, Appendix A for specific alarm messages, and potential problems. Also refer to section 6.3.4 and the TS202 Programming Manual for programming details if required.

The heat trace alarm on the control panel can be cleared by taking the following actions:

- Acknowledge the alarm on the heat trace controller by pushing the ACK button.
- Acknowledge the alarm on the control panel by pushing the black ACK button on the panel, and then the red ACK button on the panalarm.
- Determine the cause of the alarm.
- After resolving the problem, press the RST button on the Panalarm to clear the alarm.

.4 Hydro Power Alarm

An alarm will be activated if the hydro power fails. The UPS will be engaged and the alarm will continue until the main power is restored.

The hydro power alarm on the control panel can be cleared by taking the following actions:

- Acknowledge the alarm on the control panel by pushing the red ACK button on the panalarm.

- Restore the main power to the pumphouse.

- Press the RST button on the Panalarm to clear the alarm.

.5 Uninterruptible Power System Fails with Power On

An alarm will be activated if the Uninterruptible Power System (UPS) fails but the main building power is present, or the main building power and UPS fail simultaneously . This is serious because if the main power fails, there will be no backup power system.

- Turn the switch above the UPS to bypass the UPS.

- Acknowledge the alarm (ACK) on the alarm annunciator in the main control panel. The alarm light should turn off.

- Attend to the UPS' own alarm sounding from the UPS itself. There are a number of UPS alarms that may be causing the alarm on the main control panel to activate. Consult the Best Ferrups User Manual p.15. If the problem cannot be remedied by the operator, an appropriate technician or electrician must be contacted for servicing.

- If the problem can be remedied by the operator, return the switch above the UPS to the UPS on position.

7.0 MAINTENANCE PROCEDURES

7.1 General

Section 7 contains tables describing the periodic maintenance tasks to be performed in the plant. The tables are organized By Schedule and By Equipment and contain cross references to Sections 4 and 9. For detailed descriptions of each maintenance task, refer to the manufacturers' manuals in Section 9.

Tables for spare parts and miscellaneous equipment are included in this section.

Finally, a clear plastic sleeve contains maintenance, chlorination, and consumable logs. Make copies as required. **DO NOT USE THE LAST COPY** before making more copies. Keep a clean copy in the sleeve. The logs are an important part of facility operation. They should be filled out immediately following maintenance. They are critical to trouble shooting when problems arise, determining "rules of thumb" for operation, and are used for designing changes to the facility when required.

Consumables and spare parts are provided for convenient and fast maintenance, thereby causing very little down time. When consumables are used be sure to record the usage on the consumables log. Order replacement consumables with plenty of lead time so no disruption in water delivery occurs.

Sleeve	Contents: Chlorination Log, Maintenance Logs, and Consumables Usage/Reorder Log.
Table 7.1	Maintenance Tasks by Equipment
Table 7.2	Maintenance Tasks by Schedule
Table 7.3	Spare Parts and Miscellaneous Equipment

7.2 Maintenance Logs

The following tables are maintenance logs for facility operation. Please make copies from the clear sleeve, ensuring that a clean copy remains in the sleeve for future copying.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

CHLORINATION LOG

Date	Chlorine Stock Concentration (kg or liters of Calcium Hypochlorite) : (liters of water)	Injection Pump Stroke Length	Injection Pump Stroke Frequency	Water Flow Rate (liters/minute)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Other Comments	Initials

Notes:
1. The Total Chlorine parameter normally does not need to be tested. It is useful for determining water quality.
2. Other comments may include anything that is pertinent to affecting the water quality. Such notes may include: color, smell, taste, turbidity, malfunctioning equipment, or other tests that are not on this table.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

CHLORINATION LOG

Date	Chlorine Stock Concentration (kg or liters of Calcium Hypochlorite) : (liters of water)	Injection Pump Stroke Length	Injection Pump Stroke Frequency	Water Flow Rate (liters/minute)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Other Comments	Initials

Notes:

1. The Total Chlorine parameter normally does not need to be tested. It is useful for determining water quality.
2. Other comments may include anything that is pertinent to affecting the water quality. Such notes may include: color, smell, taste, turbidity, malfunctioning equipment, or other tests that are not on this table.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

DAILY MAINTENANCE LOG

Item	Date:						
1	Check Valves for smooth operation.						
2	Check Pipes and Valves for leaks.						
3	Feel Heat Trace Conduit for Warmth during Cold Weather.						
4	Check Operation of Heater, Proportional Input Controllers and Thermostats						
5	Record Accumulator Reading.						
6	Record Flow Rate for first Truckfill of Day						
7	Record Pressure Gauge Reading while in normal operation. (KPa)						
8	Record Water Temperature while in normal operation. (degrees C)						
9	Check Alarms and Control Panel for Messages, Lights, etc.						
9	Complete Chlorination Log						
10	Other Comments						
11							
12	Initials						

Note: Other checks may be added in blank row.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

DAILY MAINTENANCE LOG

Item	Date:						
1	Check Valves for smooth operation.						
2	Check Pipes and Valves for leaks.						
3	Feel Heat Trace Conduit for Warmth during Cold Weather.						
4	Check Operation of Heater, Proportional Input Controllers and Thermostats						
5	Record Accumulator Reading.						
6	Record Flow Rate for first Truckfill of Day						
7	Record Pressure Gauge Reading while in normal operation. (KPa)						
8	Record Water Temperature while in normal operation. (degrees C)						
9	Check Alarms and Control Panel for Messages, Lights, etc.						
9	Complete Chlorination Log						
10	Other Comments						
11							
12	Initials						

Note: Other checks may be added in blank row.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

WEEKLY MAINTENANCE LOG

Item #	Item	Action	Date:				
1	Emergency Light	Push To Test Button					
2	Calcium Hypochlorite Bottles, and Tanks	Inspect Containers For Leaks And Moisture					
3	Motor Starter for Submersible Pump	Test Switch in all Positions. Pilot Light Functions?					
4	Breaker Panel	Test Breakers					
5	Annunciator	Press Test Button. Alarms function? Horn? Strobe? Acknowledge, and reset alarm.					
6	Strobe Beacon and Buzzer	Check Operation					
7	Alarm Thermostats	Check Operation					
8	Building	Clean Floor, Benches, etc.					
9	Other Comments						
10							
11							
12							
13							
14	Initials						

Note: Other checks may be added in blank rows.

CLYDE RIVER TRUCKFILL
CLYDE RIVER, NT

WEEKLY MAINTENANCE LOG

Item #	Item	Action	Date:				
1	Emergency Light	Push To Test Button					
2	Calcium Hypochlorite Bottles, and Tanks	Inspect Containers For Leaks And Moisture					
3	Motor Starter for Submersible Pump	Test Switch in all Positions. Pilot Light Functions?					
4	Breaker Panel	Test Breakers					
5	Annunciator	Press Test Button. Alarms function? Horn? Strobe? Acknowledge, and reset alarm.					
6	Strobe Beacon and Buzzer	Check Operation					
7	Alarm Thermostats	Check Operation					
8	Building	Clean Floor, Benches, etc.					
9	Other Comments						
10							
11							
12							
13							
14	Initials						

Note: Other checks may be added in blank rows.